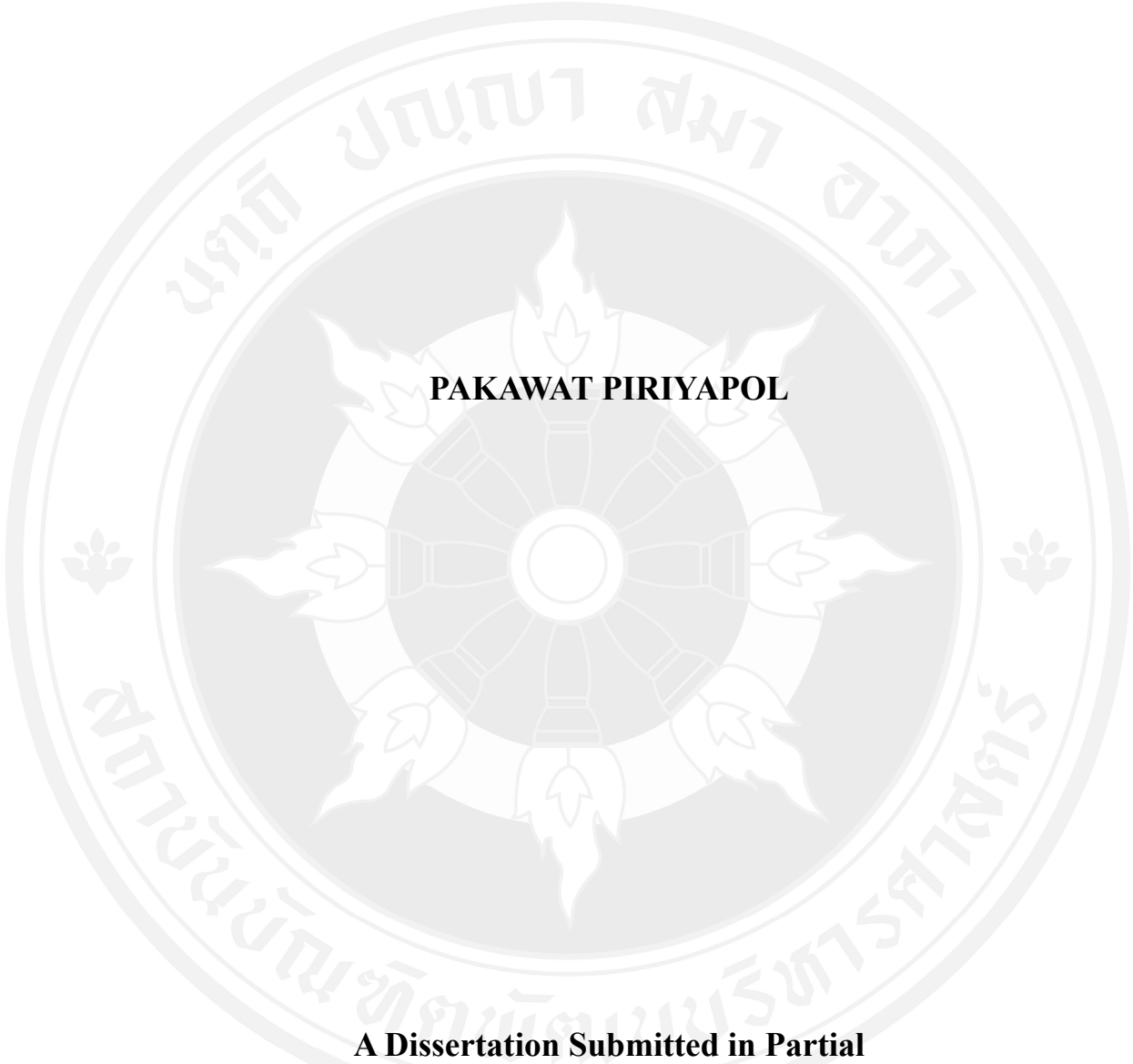


CRISIS LEADERSHIP THEORY DEVELOPMENT



PAKAWAT PIRIYAPOL

**A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
Doctor of Philosophy (Human Resource and Organization
Development)
School of Human Resource Development
National Institute of Development Administration
2024**

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PAKAWAT PIRIYAPOL
School of Human Resource Development

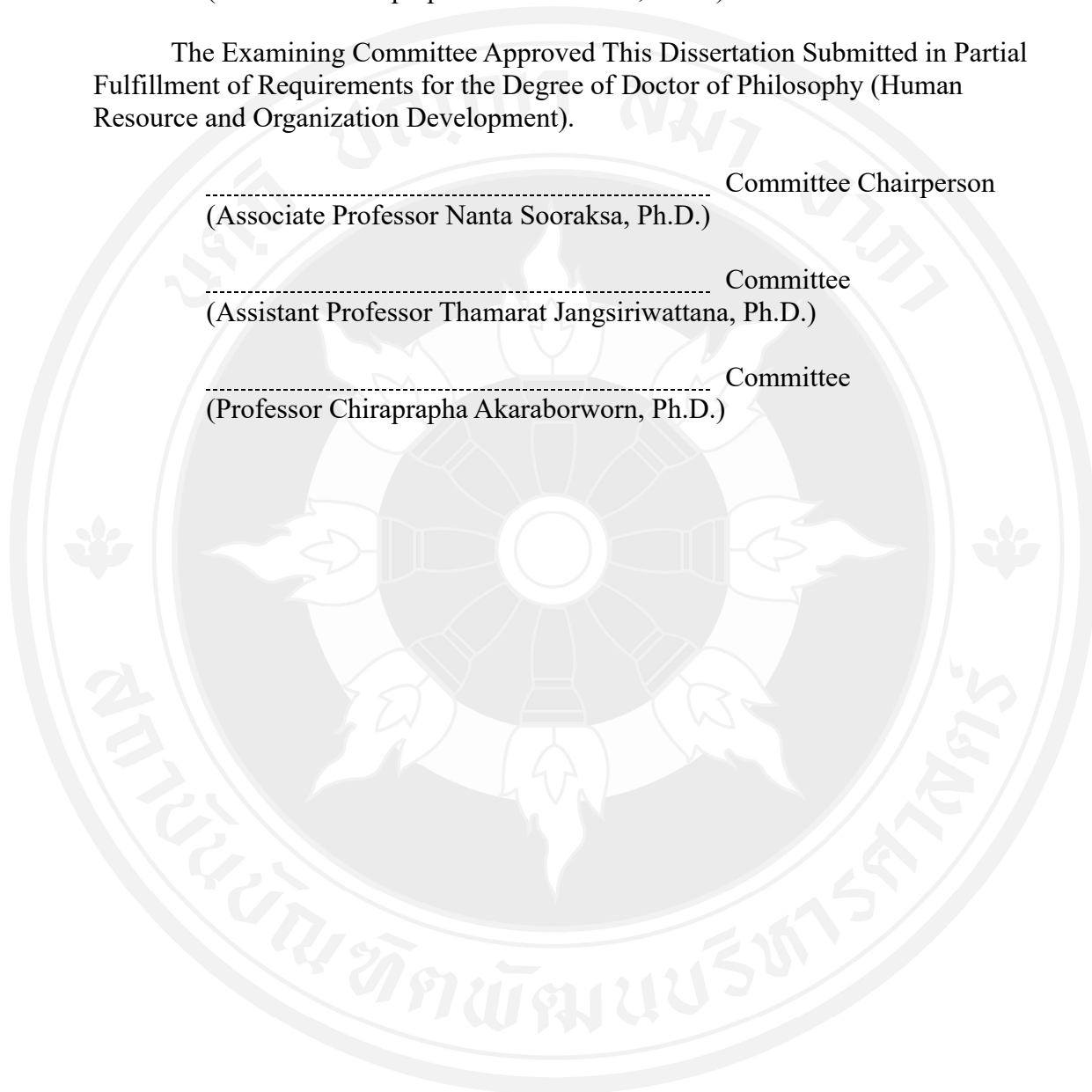
..... Major Advisor
(Professor Chiraprapha Akaraborworn, Ph.D.)

The Examining Committee Approved This Dissertation Submitted in Partial
Fulfillment of Requirements for the Degree of Doctor of Philosophy (Human
Resource and Organization Development).

..... Committee Chairperson
(Associate Professor Nanta Sooraksa, Ph.D.)

..... Committee
(Assistant Professor Thamarat Jangsiriwattana, Ph.D.)

..... Committee
(Professor Chiraprapha Akaraborworn, Ph.D.)



ABSTRACT

Title of Dissertation	CRISIS LEADERSHIP THEORY DEVELOPMENT
Author	Cdr. PAKAWAT PIRIYAPOL
Degree	Doctor of Philosophy (Human Resource and Organization Development)
Year	2024

Crises happen in this turbulent and rapid change era that managing and leading in the emerging situation are vital. This study points the gaps for theory development that the existing concepts are only practices, not explanations as a form of theory to explain how and why including the missing points on conditions related to crisis situations affecting humans and phenomenon reflecting leadership. By grounded theory research design as one of theory development methods, the researchers found 50 themes under 18 categories from 152 codes, organized by the timeframe of the crisis leadership phenomenon. The researchers summarized these findings to be 6 areas, reflecting the research objectives: Reactions, Controls, Thoughts and Actions, Happenings, Internal Factors, and External Factors. Then, a mechanism including elements and processes of crisis leadership was illustrated through storylines and models of crisis leadership phenomenon. Finally, this study proposed the statement and key model of Crisis Leadership Theory as the C model. The implications of the derived theory and model were emphasized on both academic and professional aspects.

ACKNOWLEDGEMENTS

Words cannot express my gratitude to many persons who supported this dissertation. Without them, this dissertation would not have been possible.

First, I would like to express my deep gratitude to my advisor, Prof. Dr. Chiraprapha Akaraborworn, who supported and gave me advice throughout the journey of pursuing a doctoral degree. She encouraged and cheered me up at every step during the process of writing this dissertation. In addition, she always supported me to learn and tried to bring out the best in me. Thank you for your time and your patience. I am so lucky that I had her as my advisor. She is the best. Besides my advisor, I would like to especially thank my dissertation committee, Assoc. Prof. Dr. Nanta Sooraksa and Asst. Prof. Dr. Thamarat Jangsiriwattana, for their time and support along the way.

Secondly, I would like to extend my heartfelt thanks to my PhD classmates in HROD at NIDA, Batch 8: Dr. Kehar Khan, Dr. Chararinchon Satian, and Dr. Thanaporn Buarod. I am also deeply grateful to Miss Jantrapa Pimchaikul, my best friend at NIDA, for her invaluable assistance during the research process.

Thirdly, this dissertation would not have been possible without the cooperation of the 33 participants who generously devoted their time to the interviews. I sincerely thank them for sharing their experiences and remarkable actions during crises, which provided valuable insights for this work.

Fourthly, and most importantly, I would like to thank my family, especially my mother, who consistently cheered me on and took care of me throughout my Ph.D. journey. Without her unwavering support, I might have given up at some point. I also honor the memory of my late father, who, although I had little time with him, I know would be proud of me today.

Thank you to my family for the emotional support and love that helped me accomplish this. Lastly, I extend my thanks and appreciation to everyone else who provided inspiration and encouragement during the most challenging times of the dissertation process, including my dear friends and colleagues. Thank you!

I dedicate this dissertation to my beloved family. Without them, I would not be where I am today. Thank you for your endless love, support, and encouragement. Finally, I dedicate this knowledge to the crisis leaders who guide and help people

through difficult times across various contexts and levels around the world.

PAKAWAT PIRIYAPOL

September 2024



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CHAPTER 1

INTRODUCTION

Under the rapid change, chaos, and disruption in this era, approaches to dealing with the crisis are the needs of the organization and human resource development practitioners in this era, along with the academic theory underlying those practices. The situations, background concepts for handling, and needs led to this research objectives and questions. Then, the appropriate methods were designed to achieve the goals contributing to the practical and academic significance of this study of crisis leadership theory development.

1.1 Rationale and Problem Statement

Nowadays, it has become normal to meet rapid changes and disruptions in societies and organizations due to globalization and digitalization (Johansen, 2017; Valenduc & Vendramin, 2017). D. Teece, Peteraf, and Leih (2016) emphasized that deep uncertainty is common in current interconnected and interdependent economics under rapid technological change as the era of the fourth industrial revolution (Schwab, 2017) and disruptive technologies (Abyad, 2019; Benazzouz, 2019; C. M. Christensen, 1997). Even if organizations already have standard operating procedures or quality practices, they are not able to completely cover potential threats. Thus, it is still inevitable to avoid accidental or unpredictable events under these turbulent environments due to the systems' complexity and interdependency (Perrow, 1984; B. A. Turner & Pidgeon, 1978). Organizations will potentially face some forms of disruptive crisis (Betta & Owczarzak-Skomra, 2019). A crisis is defined as, a “disruptive situation characterized by urgency of decision, large impacts, and system restructuring” (Shrivastava, 1993, p. 25) and “a situation faced by an individual, group or organization which they are unable to cope with by the use of normal routine procedure and in which stress is created by sudden change” (Simon, 1993, p. 402).

1.1.1 Emergence of Crisis, VUCA World, and Disruption

In the past, crises mostly meant natural disasters, international conflicts, or accidents (Weick, Sutcliffe, & Obstfeld, 2008) that B. A. Turner and Pidgeon (1978) defined as ‘man-made disasters.’ For the latter type, a crisis from errors has emerged continuously avoidably by socio-technological advancement during routine operations (Shrivastava, Mitroff, Miller, & Miclani, 1988), while humans have dealt with it persistently (Dekker, 2019), since mentioned by Perrow’s (1984) Normal Accident Theory (NAT) and Roberts (1990)’ High Reliability Organization (HRO) Theory in the 1980s, until nowadays as shown by up-to-date safety science research of organizational accidents in sociotechnical sophisticated systems such as accidents and errors in aviation (D. Kelly & Efthymiou, 2019; Kilic, 2019), maritime (Bye & Aalberg, 2018; Puisa, Lin, Bolbot, & Vassalos, 2018), healthcare (Canham, Jun, Waterson, & Khalid, 2018; A. Smith & Plunkett, 2019), gas and chemical industries (Fu, Xie, Jia, Tong, & Ge, 2020; Zarei, Yazdi, Abbassi, & Khan, 2019) and civil engineering (Harvey, Waterson, & Dainty, 2019), causing massive losses of lives and properties.

Furthermore, in this turbulent era other kinds of crises can be generated by various threats leading to physical, mental, and economic damage to society, such as natural disasters from climate change causing social and economic problems (Auffhammer, 2018; Vives, 2019), reputation crises on social media (Semaan & Mark, 2012), supply chain disruption from consumer demand’ rapid change and growth (Scheibe & Blackhurst, 2018), impacts of disruptive technologies on business (Kenney, Rouvinen, & Zysman, 2015; C. Millar, Lockett, & Ladd, 2018), and currently impacts of epidemics and the coronavirus 2019 (COVID-19) pandemic now (Alao & Gbolagade, 2020; Baker, Bloom, Davis, & Terry, 2020; Sheth, 2020). This outbreak started at the end of 2019 and has attacked the world’s economy, cultural exchanges, and people’s healthy lives. This is an example of the unknown unknowns (Pawson, Wong & Owen, 2011; Ramasesh & Browning, 2014) that people have to find effective methods for dealing with a crisis (Ding & Mao, 2020).

These increasing chaotic phenomena reflect environments known as the VUCA world. The term ‘VUCA world’, representing Volatility, Uncertainty, Complexity, and Ambiguity, was coined by the United States military at the end of

the Cold War in the 1990s (N. Bennett & G. J. Lemoine, 2014) to describe the chaotic and uncertain environment of Barber (1992). Professionals and scholars in other domains such as business and strategic management have adopted the term ‘VUCA’ world to describe and define their environment in the recent era (N. Bennett & G. J. Lemoine, 2014; Mack, Khare, Krämer, & Burgartz, 2015). Now, businesses and organizations still have experienced rapid and radical changes that cause them to face different kinds of crises (Gaultier Le Bris, Rouvrais, & Waldeck, 2019; Raja, 2021; Schoemaker, Heaton, & Teece, 2018). Ruksana and Ahmed (2019) stated that “today in this VUCA world is not going to disappear” (p. 17). The researcher found that the VUCA world (N. Bennett & G. J. Lemoine, 2014) with the disruption (C. M. Christensen, 1997), and the COVID-19 pandemic have been presented together in various literature to explain the current chaotic and unexpected phenomena in this era (Baran & Woznyj, 2020; Benazzouz, 2019; Friedman, 2020; C. Millar et al., 2018; C. C. Millar, Groth, & Mahon, 2018; Schoemaker et al., 2018; Watermeyer, Crick, Knight, & Goodall, 2020).

1.1.2 Crisis and Leadership

1.1.2.1 Crisis Management

From the situations and problems, the early and logical approach needed for crises is crisis management (Mitroff, Shrivastava, & Udwadia, 1987). Mitroff et al. (1987) mentioned that it is impossible to prevent all crises, hence organizations have to apply systematic and comprehensive perspectives to manage them effectively. Pearson and Clair (1998) defined that, “effective crisis management involves minimizing potential risk before a triggering event. In response to a triggering event, effective crisis management involves improvising and interacting with key stakeholders so that individual and collective sense-making, shared meaning, and roles are reconstructed. Following a triggering event, effective crisis management entails individual and organizational readjustment of basic assumptions, as well as behavioral and emotional responses aimed at recovery and readjustment” (p. 66). They further concluded that “crisis management efforts are effective when operations are sustained or resumed, organizational and external stakeholder losses are

minimized, and learning occurs so that lessons are transferred to future incidents” (pp. 60-61).

Roux-Dufort (2007) emphasized that “if crisis management still limits itself to the analysis of exceptional situations, it might never go beyond the sphere of exception management” (p. 105) and suggested that the management of the crisis has to explore the origins of an event and possible future after the event, not only focuses on accidents when they are occurring or only accepts the inevitability. This later became the difference between crisis as an event and as a process (Roux-Dufort, 2007; T. A. Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017). Furthermore, the keys to crisis management are also the understanding of crisis phases and crisis typologies for managing a crisis appropriately and timely (Mitroff et al., 1987; Roux-Dufort, 2007; Sapriel, 2003). Mitroff et al. (1987) illustrated a model of crisis management consisting of the proactive and reactive parts covering four phases: detection, crises, repair and assessment. Also, they presented typologies of types, causes, and preventive actions of crisis, based on four quadrants from internal or external emergence, and technical/economic or people/social/organizational which helps to precisely manage crises. Mitroff et al. (1987) mentioned that the purpose of this knowledge is “for managers, researchers, and consultants who are prepared to confront the problem directly” (p. 283). Also, crisis leadership has been studied by scholars, in parallel with crisis management (Boin et al., 2013; Jaques, 2012).

1.1.2.2 Managers and Leaders

Professionals and scholars agree that management and leadership are different. Thus, before focusing on crisis leadership, the question if crisis management and crisis leadership are the same or not, has to be discussed. From academic and practical discussions, there are differences between leadership and management functions or roles of leaders, and managers and both are needed for organizations. Bertocchi (2009) stated that “it is commonly accepted that managers deal with systems, processes, budgets, equipment, and things, while leaders deal with visions and people. In addition, anyone at any level can play a leadership role and need not be in a top management position to make a leadership contribution” (p.9). Management by roles of managers is to plan, organize, direct, and control people and systems, meanwhile, leadership from leaders, who could be managers or any individuals, is to align,

motivate, and inspire people including setting a direction and vision, employ credibility, anticipate change, and cope with change (Bertocci, 2009; Kotter, 1990; Stanley, 2006). While the management goals come from necessity rather than desire, the goals of leaders with leadership arise from a personal passion to infuse meaning into the world (Zaleznik, 1977).

Leaders, in other words, individuals who have leadership and not leaders by a position, would be solitary, proactive, intuitive, emphatic, and attracted. Leaders ‘do the right thing’, while managers ‘do things right’” (Stanley, 2006; Zaleznik, 1977). Leadership is a process involving influences, persuasion, motivation, direction setting, common goals, and interpersonal and political skills. Scholars agree that leadership is the influencing process, not a position or a role (Burns, 1978; Hart, 1980; Segal, 1981; Hersey & Blanchard, 1982; Jago, 1982; Clarke & Clarke, 1996; Northouse, 2001; Nissinen, 2001; Chemers, 2000; Moss & Barbuto, 2010). Vroom and Jago (2007) state that “leadership involves the process of influence...one or more followers... [and] potential or capacity to influence others” (p. 17). As discussed in the term ‘managers and leaders’, a leader means any individuals who have leadership and is not necessary to mean only any official positions such as executives, managers, or supervisors (Bass & Bass, 2009).

As a result, for the context of crisis interested in this study, Ruksana and Ahmed (2019) stated that “VUCA is complex and challenging that can allow true leadership talents to emerge at all levels of the organizations” (p.17). Therefore, rather than the practice of crisis management as mentioned above, this study will focus on crisis leadership which is different from crisis management or the roles of crisis managers. The focus is the emergence of crisis leadership phenomenon by any individuals induced by crises. Also, this study argued that previous crisis management and leadership concepts should not be only proposed for managers or positional leaders. Rather it has to include individuals who naturally present leadership. McFarland, Senn, and Childress (1993) supported themes for the twenty-first century that leaders are no longer the exclusive domain of bosses.

1.1.3 Needs for Crisis Leadership

As mentioned about crisis management and differences between management and leadership, the researcher found that there is a need for more exploration and emphasis in a study of crisis leadership in crisis studies. Leadership is also a vital approach to handling a crisis and VUCA environments in organizations, operations, systems, and teams (Friedman, 2020; Johansen, 2017; Schoemaker et al., 2018). Also, Scholars mentioned that crisis leadership is key to anticipating the chain of events and leading in a way to return balance to others in the organization (Boin, Kuipers, & Overdijk, 2013; Jaques, 2012; Klann, 2003). Nonetheless, there were various directions of research and practices claimed to be the studies of ‘crisis leadership’. From the literature review, there are two groups of literature. The first one seems to be the leadership in crisis management or leadership practices in crisis and the second is relevant leadership concepts and theories in crisis. Neither of them explains the phenomenon of ‘crisis leadership’. Therefore, it is the need for this research direction, to start this dissertation.

1.1.3.1 Leadership and Practices in Crisis Management, and Relevant Theories

The first group claimed the word ‘crisis leadership’ but the researcher found that they applied the concepts in crisis management principles to jobs and practices of leaders by positions such as executives or managers in organizations to manage the crisis. When crisis management literature mentions organizations, it means the managers mentioned as leaders in organizations are the ones who drive these managerial practices (R. Heifetz, Grashow, & Linsky, 2009; R. Heifetz & Linsky, 2017; Prewitt & Weil, 2014). Therefore, these researchers proposed tasks (Boin et al., 2013; Boin, Stern, & Sundelius, 2016; E. Stern, 2013), roles (Jaques, 2012), and strategies (Prewitt, Weil, & McClure, 2011) of crisis leadership that all were based on the phases and framework of crisis management (Mitroff et al., 1987). Some are the studies of leadership competencies (Wisittigars & Siengthai, 2019; Wooten & James, 2008)

Nevertheless, these findings of practices, competencies, and relevant theories provided significance in designing practices for professionals in organization development (OD), human resource development (HRD), and leadership

development. For example, Wooten and James (2008) encouraged the role of the HRD field to develop crisis leadership for “building organizational capabilities through crisis management activities” (p. 1). These studies and analyses of competencies were extended from management practices in crisis down to measurable and developable capabilities for each practice of individuals (R. Boyatzis, 2008); James & Wooten, 2005) which are under the framework of crisis management (Erika Hayes James & Wooten, 2005; Mitroff et al., 1987). Thus, even though literature proposed these crisis leadership practices (tasks, roles, or strategies), they seem to be practices of crisis management for managers as positional leaders (P. O'Connor, Carvalho, & White, 2014). Secondly, the other group consists of relevant leadership theories and concepts such as adaptive (R. A. Heifetz, Heifetz, Grashow, & Linsky, 2009), authoritative (Haddon, Loughlin, & McNally, 2015), reactive (Prewitt et al., 2011), agile (Kaul, Shah, & El-Serag, 2020) or resilient (Giustiniano & Lombardi, 2021) leadership that scholars brought to explain and analyze the appropriate theory in crisis time.

1.1.3.2 Leadership in Crisis, not Crisis Leadership

Nonetheless, these two directions as mentioned still do not reflect the different meanings between leaders in crisis and crisis leaders. Both tracks of leadership in crisis management and leadership concepts in crisis represent the meaning of leadership in crisis rather than the ‘crisis leadership’. Rather than leadership in crisis that presented practices and competencies as the aims for practical contributions by the existing literature (Muffet-Willett & Kruse, 2009; Prewitt et al., 2011; E. Stern, 2013), this study argued that the meanings of ‘crisis leadership’ should cover rationales and processes of individuals for their intuition, deliberation, and interaction with a crisis (Bargh & Chartrand, 1999; Dijksterhuis & Nordgren, 2006; H. Li, Huang, Zhang, & Ni, 2016; Sloman, 1996).

Critically, some scholars supported this by studying leadership beyond practices and competencies. Van der Merwe and Verwey (2007) mentioned that the nature of leadership is an inside-out approach. Thus, for studying and developing leadership, not only competencies such as behavioral indicators, skills, or characteristics, are needed, but also key motivation and cognitive abilities, so-called meta-competencies (Bogo et al., 2006). Competencies provide practical benefits for

leadership development but this concept might not capture the sense-making nature and how meaning emerges and change over time. It neglects the more subtle moral, emotional, and relational aspects of leadership (Bolden & Gosling, 2006). Bolden and Gosling (2006) mentioned the musical metaphor as “we should encourage people in leadership roles to not only develop their music reading and basic playing skills (i.e., competencies) but also their interpretation, improvisation, and performance abilities (i.e., emotion, intuition, moral judgment, and experience and so on)” (p. 160).

The rigorous rationale for why competency is not enough comes from the overlapping between scopes of competency and trait, considered by the explanations of competencies by McClelland (1973) and R. Boyatzis (2008) with a Model of Leader Attributes and Leader Performance by Zaccaro, Kemp, and Bader (2004). Competencies include only knowledge, skills, ability, and ability which are observable behaviors including some relevance of traits such as personalities and attributes (R. Boyatzis, 2008; McClelland, 1973). On the other hand, traits and attributes of leadership are constructed from personality, temperament, motives, cognitive abilities, skills, and expertise which are deeper than the practical level (Avolio, 2007; Zaccaro et al., 2004). Leadership performance is influenced by underlying proximal attributes which are social appraisal skills problem-solving skills, and tacit knowledge, based on the deeper level by distal attributes which are cognitive abilities, personality, and motives values (Zaccaro et al., 2004, p. 122). Avolio (2007) suggested that leadership theory-building consists of cognitive elements, individual and group behavior, historical context, proximal context, and distal context which are broader and deeper than managers' and leaders' practices.

Ruderman, Clerkin, and Connolly (2014) recommended the Beyond Competencies Model to extend from the focus solely on tangible and observable behavior, to the internal and automatic process underlying the surface such as experiences, emotions, or mindsets, including “structures, relationships, and dynamics necessary to enact leadership” (p. 4). Ruderman et al. (2014) were interested in “less visible forces such as leaders' physiological, emotional, and mental processes” (p.4), their model presents three elements of the inner world: circuitry, inner content, and conscious engagement, link to behavioral outcomes as a holistic lens for a robust and deep understanding of individuals in organizations. Circuitry means individuals'

physical, chemical, and neurological by the interconnected neurons' network in the nervous and brain systems. Secondly, the inner content of an individual's mind is raw emotions, gut reactions, and inner dialogue these inner experiences shape beliefs and emotional reactions for cognition in situations. Lastly, conscious engagement is the ability to observe, modify, and regulate mental processes (Ruderman et al., 2014).

1.1.4 Leadership Practices Are Not Theory

1.1.4.1 Meaning of Theory

Next, it is also vital to understand the meaning of 'theory' at this stage. For definitions, Richard J Torraco and Holton III (2002) collected tools and resources for theoretical products, finding 25 definitions of 'theory' in their review. For widely accepted meaning, Bacharach (1989) defined that "a theory is a statement of relations among concepts with a set of boundary assumptions and constraints. It is no more than a linguistic device used to organize a complex empirical world" (p. 496). Kerlinger (1977) defined a theory as "a systematic view of phenomena by specifying relations among variables, to explain and predict the phenomena" (p. 5) and Torraco (1997) stated "a theory simply explains what a phenomenon is and how it works" (p. 352), and also mentioned that a theory is "system for explaining a set of phenomena that specifies the key concepts that are operative in the phenomena and the laws that relate the concepts to each other" (p. 114). Furthermore, Abend (2008) elaborated that "this explanation should identify several 'factors' or 'conditions,' which individually should pass some sort of counterfactual test for causal relevance, and whose interaction effects should be somehow taken into account" (p. 178). In addition, Senge (2014) stated that "a theory is a fundamental set of propositions about how the world works, which has been subject to repeated tests and in which we have gained some confidence" (p. 29).

Furthermore, key scholars in theory construction such as Bacharach (1989), Sutton and Staw (1995), Weick (1995b), DiMaggio (1995), and Richard J Torraco (1997), are concerned with misunderstanding what is or is not the theory. A lack of agreement in the literature on theory construction can confuse researchers about what is model, typology, or theory (Sutton & Staw, 1995). Sutton and Staw (1995) pointed out that five separate elements as references, data, variables or

constructs, diagrams, and hypotheses or predictions are not enough to be a theory. Bacharach (1989) also explained that only data, typologies, and metaphors are not theory, whereas a theory has to be viewed as a system of variables and constructs that constructs' relation comes from propositions meanwhile variables' relation comes from hypotheses to be tested. Although Doty and Glick (1994) argued that typology can be a theory, they accepted that it has to meet the minimum criteria of a theory which are "(a) constructs must be identified, (b) relationships among these constructs must be specified, and (c) these relationships must be falsifiable" (p. 233). Sutton and Staw (1995) described this as the strong and weak theory. Furthermore, Frese (2005) suggested differences between grand theories and mid-range theories which come from the needs of researchers that might propose different scales to theorize. Frese (2005) stated that "grand theories are all-encompassing and, therefore, less precise" (p. 85), whereas a mid-range theory has limited variables and assumptions but the high specification of problems, depending on boundary set by the assumption of the researcher as a theorist (Weick, 1989).

Therefore, the researcher in this study adopted the meaning of 'theory' as 'the explanation of phenomenon as a conceptual proposition supported by the other contributing theories within a set of boundary assumptions and limitations provides understandings of what and how the phenomenon is, but, by what and how, it has to state its underlying constructs and their systematic interrelations and influences which come through any theory development research methods in generating and repeatedly testing' (Abend, 2008; Bacharach, 1989; Kerlinger, 1977; Senge, 2014; Sutton & Staw, 1995; Swanson, 2007; Torraco, 1994).

1.1.4.2 Meaning of Leadership Theory

The effort to move beyond the competencies of crisis leadership and the meanings of theory caused a question on crisis leadership concepts whether they are a theory or not. Through the lens of theory construction (Bacharach, 1989), there is no theoretical foundation in crisis leadership that explains what and how this individual and social phenomenon is (Torraco, 2005). Thus, this should be another direction that needs to be explored by this research as the starting point. A crisis leadership theory as expected is different from previous crisis leadership concepts because those concepts were focused on the practices or tasks that leaders should do in a crisis,

hence there is a lack of understanding of the causes, motivational factors, and mechanisms for emerging leadership traits and behaviors of individuals in crisis. Rather, this theory building will explore the constructs and constructs' relations within an individual who has this kind of leadership (Bacharach, 1989; Endres & Weibler, 2017). For example, it should be mentioned what makes individuals determined to take an action, how individuals can motivate or influence others to prepare for impending situations, and how individuals manage their stress levels at that period.

Furthermore, by the correct meaning of theory (Bacharach, 1989; Sutton & Staw, 1995; Richard J Torraco & Holton III, 2002), the concepts and practices of crisis leadership from the review are not a theory yet. According to scholars' discussion about a theory, the label 'theory' is meaningful for research, especially for this study as theory development research (Torraco, 2005). A scholar in theory construction such as Bacharach (1989) stated the importance of having "a set of ground rules and vocabulary to facilitate focused discussion about the structure of organization and management theories" (p. 496). For demonstrating this research problem, this study had to find meanings of the terms 'leadership' and 'leadership theory' because the previous concepts of crisis leadership were presented for managerial roles, hence some key explanations of leadership in the existing crisis leadership might be missing.

From researching, Vroom and Jago (2007) stated a generic definition of leadership is that "leadership involves the process of influence... one or more followers ... [and] potential or capacity to influence others" (p. 17). Lussier and Achua (2015) stated that "leadership is the influencing process between leaders and followers to achieve organizational objectives through change" (p. 5). Then, in searching for the term "leadership theory", the researcher cut out the results which contain the adjective words at the front, such as a type of leadership, or the rest of the sentence which are not explanations and meanings. As a result, the researcher did not get the result of this meaning from the search. Nevertheless, when differently searching by the terms "leadership theories are" with the same criteria, researchers then found Western Governors University (2020) and Naushad (2021) stated that "leadership theories are the explanations of how and why certain people become

leaders” (p. 226). Thus, this is critical meaning for this study to understand the expected term of theory for crisis leadership and confirm that this study aims to explore a theory with its correct meaning to be the goal of this dissertation. It will explore the meaning of Crisis Leadership Theory in the forms of variables, constructs, and their relationships, not its best practices.

Also, by adopting the lens of Ruderman et al. (2014) in looking beyond competencies, leadership would emerge by a function of circuitry, inner content, conscious engagement, and external behaviors. Ruksana and Ahmed (2019) proposed that the leadership characteristic is “oriented toward the interplay between internal elements (physiological, psychological, emotional, thoughts, memory) and external behavior and activity” (p. 5) that comes from “influences of state of mind and body, reflecting automatic processing emotions, thought patterns, past experiences, and level of self-awareness” (p. 5). Therefore, this study found this meaning is rich and deep enough to be an explanation and conceptual framework of a theory for the crisis leadership phenomenon.

1.1.4.3 No Theory of Crisis Leadership

In searching for literature, the researcher did not find literature mentioning the intent to research and develop a theory of crisis leadership. They were studied for uses directly in practices and involved with crisis management and communication (Boin & Hart, 2003; Coombs, 2014b), rather than building a theory for academic purposes (Lewin, 1951; Lynham, 2002; Storberg-Walker, 2003). This study agrees with Wisittigars and Siengthai (2019) that “crisis leadership has mainly been addressed from a pragmatic and functional perspective rather than long-term leadership perspectives” (p.882). On the other hand, instead of developing crisis leadership theory, scholars mentioned the other leadership concepts in crisis studies such as situational and reactive leadership (Prewitt et al., 2011; Wisittigars & Siengthai, 2019).

Furthermore, the researcher also found that no one defined a crisis leadership definition as well. Most of the literature mentioned only practices of crisis leadership but no one stated the definition of this term clearly. Only Christensen (2009) stated clearly that he tried to put the definitions of ‘crisis’ from Pearson and Clair (1998), and ‘leadership’ from Northouse (2001), together as a combined

definition as “crisis leadership is the process of responding to a low-probability, high-impact situation by influencing others to overcome or take advantage of the situation, regardless of its cause, optimizing the effect, in a timely framework” (p. 13). In academic systematic searching of “crisis leadership theory” in Google Scholars without specification of the time, the researcher found 20 accessible literatures, containing the word ‘crisis leadership theory’, starting from 2010. This is supported by Google Trends which is a worldwide data search collection including non-academic sources. When the researcher used the word ‘crisis leadership theory’, the result showed the line graph presenting this word searches have appeared since 2008. Nevertheless, when using only ‘crisis leadership’ in Google Trends as well, it showed there has been a continuous search as far as Google Trends is available since 2004, meanwhile, the academic research of Google Scholars found this word in papers of Clague (1975) about the political theory, and de Vries, (1977) in an organizational perspective.

From 20 academic papers with the word ‘crisis leadership theory’ since 2010, the researcher searched again inside each paper by using the function ‘Find’, to look for the words ‘crisis leadership theory’, ‘crisis leadership’, and ‘theory’ to prevent some missing results. Consequently, even though these papers contain the word ‘crisis leadership theory’, this word in some papers was found only in the references list, or in some parts of an article to be a language used for an overall idea of crisis leadership knowledge such as concepts or typologies (Davidoff, 2020; Dückers, Yzermans, Jong, & Boin, 2017; Gronberg, 2017; Gupta & Zhang, 2019; Mutch, 2015; Oubre, 2013). Besides, some were used by overclaiming from the previous literature which this study intensively investigated and found that they mentioned theories of crisis communication or crisis management (Gigliotti, 2017; Jin, Meng, & Berger, 2017; Zoogah, Quao, Musah, & Ahwireng, 2021). Bassarab (2010) and Casto (2014) presented crisis leadership as a name of the research field and Randall (2018) recommended crisis leadership for further research ((Littlefield & Quenette, 2017; Miraglia, 2013; Randall, 2018). There is no such theory of crisis leadership.

1.1.5 Research Gap in Knowledge

According to the mentioned practical and academic situations, these reasons reflect a research gap causing the researcher has set the objectives of this study. Among the seven types of research gaps of Miles (2017), this study identified this research gap as a knowledge gap for this dissertation project. The discovery of no theory of crisis leadership will present a knowledge gap for both academic and professional practitioners in this area. The existing crisis leadership concepts and practices have been essential for practices, but might not enough for scholars as mentioned in the criteria of theory (Bacharach, 1989; Suttan & Sutton, 1991). Therefore, this gap needs to be fulfilled logically by the theory development research for building the Crisis Leadership Theory.

Lack of knowledge is a vital gap that needs to be refilled for practices and research. Most applied disciplines make significant advancements in their field through this theory research in developing the theoretical foundation (Swanson, 1997). Also, this knowledge should be developed for building a theory as a good theory will provide a full understanding of the phenomenon back to practice (Lewin, 1951; Swanson, 2001; Torraco, 2005). In HRD, Swanson (1993) illustrated the model of the Theory-Research-Development-Practice cycle that a theory is at the center among the other three. Swanson (1997) mentioned that knowledge generation by research and practice initiates at any point along this cycle and can flow in any direction, hence each of them both informs and is informed by the others. This model demonstrates that all four domains link to each other and this “cycle serves to advance the HRD profession” (Swanson, 1997, p. 16). This model also puts the link to development that is the efforts of HRD when challenging situations stimulate HRD to advance the professions. Swanson (1997) stated that “research serves a dual role in advancing HRD knowledge: it provides knowledge that can be directly applied to the improvement of practice, and it is used to develop core theories of HRD” (p. 15). Also, Lynham (2002) mentioned the importance of theory-research and research-theory strategies and illustrated the Growth Cycle of Applied Theory-Building. This cycle is the reinforcing loop of theory, practice, and research. The research produces knowledge by acquiring experience and mastery from a phenomenon in practice and then they were developed through the process to be a theory systematizing as the

internal logic which further becomes logic-in-use to inform theorists and continuously was applied by professionals in practices.

Consequently, this is the key research gap that needs this dissertation to contribute to starting a process of the theory development for Crisis Leadership Theory. According to theory development such as Dubin (1976)'s theory-building method, Lynham (2002)'s general method, and Egan (2002)'s grounded theory-building research, this scope of study needs to be the initiation of theory development as part of theoretical model development from Dubin (1976)'s eight steps, the phase of conceptualization from Lynham (2002) 's five phases, or the proposed grounded theoretical framework (Egan, 2002). Furthermore, this study also has to adopt guidelines and frameworks from the meanings of theory (Bacharach, 1989; DiMaggio, 1995; Sutton & Staw, 1995; Weick, 1995b) and building a theory (Dubin, 1976; Egan, 2002; Lynham, 2002; Torraco, 2005) to be the leadership theory development framework for building Crisis Leadership Theory.

1.2 Research Objectives

Main Objective-To develop the Crisis Leadership Theory

Sub-Objectives

- 1) To explore the meaning of the crisis leadership phenomenon.
- 2) To understand the elements and process of crisis leadership phenomenon

1.3 Research Questions

From research problems, the researcher considered setting main research questions (RQ) and sub-questions (SQ) to achieve the research objectives in theory development by an initial inductive approach (Lynham, 2000), and to support the composition of theory explanation by exploring constructs and their interactions (Bacharach, 1989). Furthermore, this study in building a theory proposed SQ to find the results of both critical perspectives of data discovery (Glaser & Strauss, 1967) and researchers' construction (Charmaz, 2006) as the following.

RQ - What is the Crisis Leadership Theory?

SQ1 - What is the meaning of crisis leadership? (Discovery)

SQ2 - What is the internal mechanism of crisis leadership? (Discovery)

SQ3 - What is the external mechanism of crisis leadership? (Discovery)

SQ4 - What are the elements and processes of crisis leadership? (Construction)

1.4 Significance of the Study

For professionals, the research result will provide the meaning and understanding of crisis leadership that can explain a phenomenon, elements, and processes including underlying rationales and factors. Therefore, professionals in human resource development, organization development, leadership development, and crisis management can adopt this knowledge to design interventions for dealing and handling with a crisis and impacts from the turbulent environment of organizations and businesses in this era.

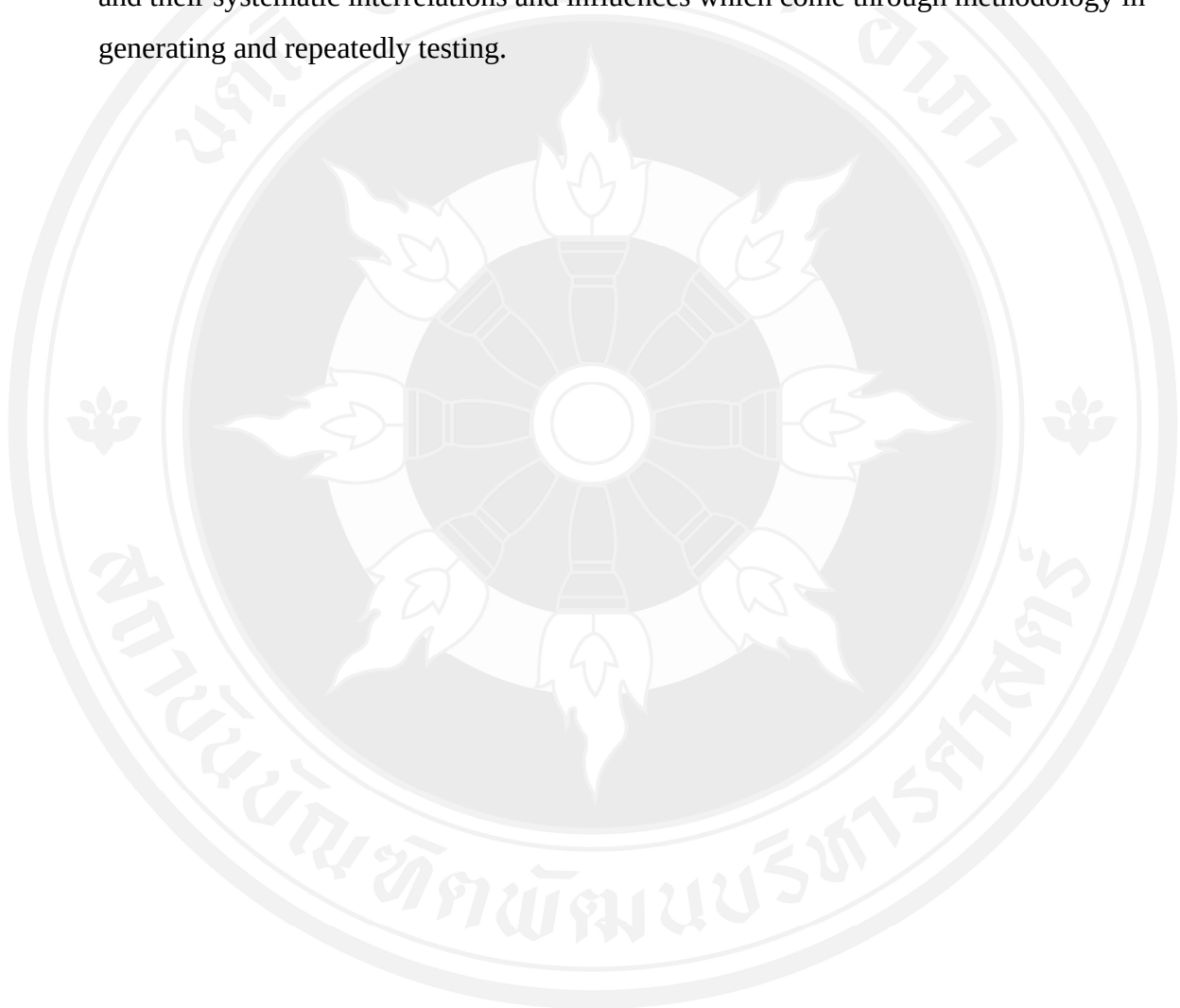
For academic significance, the emerging theory from this grounded theory methodology and theory building will be beneficial for scholars to apply this theory to be further refined or tested by future research in Crisis Leadership Theory from both qualitative and quantitative perspectives. Also, this research framework helps to structure the elements of leadership theories that scholars in leadership can apply to study other leadership phenomena in individuals such as proposing other types of leadership or deeply investigating the existing leadership concepts.

1.5 Definition of Key Terminology

Crisis-An occurrence from a combination of disruptive, turbulent, unexpected, and stressful situations or environments, that impacts and influences human or any systems' conditions through physical, mental, emotional, environmental, cultural, operational, organizational, or reputational aspects, which needs sensibility, predictability, urgent decision making, managerial actions, and resilience capability for anticipation, responses, mitigation, and containment, including restoration to normal conditions.

Leadership-a phenomenon of the individual influencing process that influences, persuades, and motivates others to follow him/her to achieve a goal through interpersonal political skills that emerge from personal desires and attributes, neither being forced by positional functions nor exercising authority.

Theory-The explanation of a phenomenon as a conceptual proposition within a set of boundary assumptions and limitations provides an understanding of what and how the phenomenon is, but, by what and how, it has to state its underlying constructs and their systematic interrelations and influences which come through methodology in generating and repeatedly testing.



CHAPTER 2

LITERATURE REVIEW

This chapter reviewed concepts and theories that relate to crisis, leadership, leadership in crisis, theory building and leadership theory building proposing research conceptual framework.

2.1 Crisis

2.1.1 Definition of Crisis

‘Crisis’ comes from Greek word ‘Krisis’ that means a moment of decision. In the Greek tragical history, crises were events that needed decision making, representing critical turning points where human choice could make fundamental differences to the future. In Greek era, a crisis was defined as a moment of truth when the significance of men and events were brought to light, and also used in Greek medicine as a meaning of the decision point for an illness (J. O'Connor, 1981; Shrivastava, 1993; Starn, 1971). Apart from this ancient definition, the traditional Marxist economic crisis theory with aspects of capitalism and politics (Jacoby, 1975; Shaikh, 1978) defined a crisis as an interruption of the accumulation of capital or can be concluded as an interruption of normative structures of action, social disintegration, social conflict, or class struggle (J. O'Connor, 1981; Shaikh, 1978). After that, the modern concept of crisis has reproduced again in literature of medicine (J. O'Connor, 1981) and industrial accident (Shrivastava et al., 1988). By this wave, social scientists have applied a theory of crisis to the concept machinery in describing social systems that crises are situational threats to the survival of the system (Shrivastava, 1993).

Definitions of the crisis have been stated from broad to specific ones (Jaques, 2009), and from meanings like disaster or catastrophic accident to the clear differentiated meanings (Alodhaibi, Burdett, & Yarlagadda, 2018). Rosenthal,

Charles, Hart, Kouzmin, and Jarman (1989) early defined a crisis is as “a situation in which there is a perceived threat against the core values or life-sustaining functions of a social system that requires urgent remedial action in uncertain circumstances” (p. 10). Pauchant and Mitroff (1992) stated that it is “a disruption that physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, and its existential core” (p. 15). Also, it was defined as, “disruptive situations characterized by urgency of decision, large impacts, and system restructuring” (Shrivastava, 1993, p. 25).

Since then, the definitions of crisis in social science such as the organizational perspective have been more opened, rather than only focused on the large events or massive losses. As the evolution of meaning and language (Fitch, 2010), the key characteristics of crisis have become the unexpected, unplanned, rapid change and stressful. By this perspective, Booth (1993) defined crisis as “a situation faced by an individual, group or organization which they are unable to cope with by the use of normal routine procedure and in which stress is created by sudden change” (p. 402). Fearn-Banks (1996) added that a crisis is “a major occurrence with a potentially negative outcome affecting an organization, company or industry as well as its publics, products, services or good name” (p. 1). Prewitt et al. (2011) suggested that “the failure to take note of the preliminary signals or tremors and recognize that our connection with the surroundings has changed is what leads us headlong into crisis” (p. 61).

Furthermore, Smith (2006) mentioned that a crisis is “a damaging event, or series of events, that display emergent property which exceeds an organization’s abilities to cope with the task demands” (p. 7). Crises emerge from both spatial and temporal dimensions and the impacts can be physical, financial, or reputational. Smith (2006) also stated that “crises will normally be ‘triggered’ by an incident or another set of circumstances, that exposes the inherent vulnerability that has been embedded within the ‘system’ over time” (p. 7). Therefore, these meanings of crisis were not limited to only a large scale or a massive lost, rather they have been adopted to levels of systems, organizations and operations especially in the era of turbulent time.

Then, characteristics of crisis show that crisis can emerge in the organizational arena. A crisis can have a devastating effect on an organization and requires both

immediate and urgent attention. Crises can arise from organizational mistakes, but others, such as the global financial crisis, resulting from external contingencies (Erika Hayes James, Wooten, & Dushek, 2011). Furthermore, the concept of crisis at this level originated from the industrial aspect also fits with the nature of an organization and business in this era which is uncertain and turbulent (Greve & Hodge, 2013). Pauchant and Mitroff (1992)'s stated that "crises are understood to be disruptive of the entire organization, unlike a minor, localized incident" (p. 3) and Pearson and Clair (1998) proposed that "an organizational crisis is a low probability, a high impact event that is perceived by critical stakeholders to threaten the viability of the organization that is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly" (p. 60).

In the organizational perspective, Coombs (2014) proposed that an organizational crisis can be categorized as an operational crisis and reputational crisis. Reputation became the other consideration for crisis in organizations. Ruff and Aziz (2016) practically defined that "a crisis is any incident or situation, either real, rumored or alleged, that can focus negative attention on a company or organization internally, in the media or before key audiences" (p. 3). Perception is critical for crisis as Mitroff (2004) simply defined that a crisis is reflective of what one interprets and perceives as a particular organizational disruption. Heath and Millar (2004) explained that both direct crisis consequences and reputation of organization impact stakeholders. According to this, the perception of crisis by others is as important symbolically as the crisis itself. Some definitions of the crisis include the phenomenon of perception of the event. For example, Coombs (2007b) differently defined an organizational crisis as the "perception of an unpredictable event that threatens important expectancies of stakeholders and can seriously impact an organization's performance and generate negative outcomes" (p. 3). T. Christensen, Lægreid, and Rykkja (2016) mentioned that "a crisis is a matter of perception and hence includes a subjective element. The outcome can be either good or bad" (p. 888). Therefore, when the crises occur, the responses have to be performed rapidly and firmly within limited options under some observations by others (Christensen et al., 2016).

On the other hand, Herbane (2013) stated that, operational crisis management “concerned with predictable risks and the challenges of running the day-to-day operations of the business” (p. 91) that which is different from the strategic one. In this study, the researcher defined an operational crisis as the disruptive and unexpected situation during organizational or systems’ operations that is characterized by the urgency of decision making, manageable action, and high consequences, faced by operational personnel that is unable to handle by whether routine standard practices or individuals’ sudden change of stress level. Meanwhile strategic activities require the direct involvement of top management to achieve successful crisis prevention such as early problem identification, risk assessment, issue management, and resource allocation, the tactical aspects of crisis preparedness and crisis response are typically delegated to operational levels. It is the capacity of management at operational levels to identify the warning signs that will precede to organizational crises (Mitroff, 2002).

Approaches for this level of crisis have to focus on predictable risks and unknown unknowns’ challenges to maintain high reliability including performing resilience for the restoration of normal day-to-day operations (Booth, 1993; Coombs, 2004; Haavik, Antonsen, Rosness, & Hale, 2019; Herbane, 2013; Shrivastava, 1993). Accordingly, the key handlers in leading and managing people in crisis are not always the top-level managers. Because of the nature of crises that can emerge in various scales, people at all levels might be key leaders at the certain time in anticipating and dealing with crises in day-to-day operations.

2.1.2 Roots and Studies of Crisis

Furthermore, there are various schools of thought that have been interested in crisis phenomena (Deverell, 2012). They presented a broad meaning of this term covering political, economic, social, cultural and technological aspects (Shrivastava, 1993). Each discipline focused on different areas of crisis which emerged upon various contexts. There are schools of thought in disaster studies, international relations, cognitive psychology, industrial accidents, organization studies, and high reliability organization studies. The implications of these roots of studies reflect wide range of knowledge and studies that can adopt to apply for crisis responses and

management including further benefits for crisis leadership studies. For example; cognitive aspect in decision making is important for leaders' internal process, and also the political aspect in international relations and public policy might reflect the essence of organizational politics and political skills in handling a crisis.

Furthermore, there are some key scholars have been focusing on specific areas under these schools of thought. Firstly, since the 1980s, Professor Paul Shrivastava has researched organizational and industrial crisis management (Shrivastava, 1983, 1993) led to the emergence of HRO theory (Roberts, 1990) in a field of organization studies. Professor Ajern Boin and Professor Paul Hart in public administration and sociology focused on crisis and emergency management, institution crisis, and public policy and leadership in crisis (Boin & Hart, 2003; Boin et al., 2013; Boin et al., 2016). Professor Timothy Coombs and Tony Jaques researched a crisis regarding communication studies. Jaques' studies included issue management, post-crisis, and crisis leadership at the executive level (Jaques, 2012), meanwhile, Coombs proposed the communication methods and theories for crisis responses (Coombs, 2014b). Furthermore, Edward Deverall, in political science and defense studies, was interested in crisis management during security crises (Deverell, 2012; Deverell & Olsson, 2009)). For HRD including business, organization and management studies, Professor Lynn Wooten working with Professor Erika Hayes James presented the competencies needed and the developmental practices (Erika Hayes James & Wooten, 2004; Wooten & James, 2008).

2.1.3 Crisis, Emergency, and Disaster

For this research context, it is critical to distinguish meanings among crisis, emergency and disaster is vital. In some specialized domain such as aviation or healthcare, situations regarding emergency are concerned and covered by numerous standard operating procedures (SOP) and practices. Therefore, it has to be distinguished between the emergency situation which has preparation and plans, and the crisis which is this research interest. Al-Dahash, Thayaparan, and Kulatunga (2016) conducted a comprehensive literature review from relevant research disciplines to distinguish these explanations of phenomena to point out the relationship among the terms 'crisis', 'emergency' and 'disaster' which have some

interconnection, interdependence, and overlaps. By the method of conceptual content analysis and cognitive mapping approaches (Busch et al., 2005), Al-Dahash et al. (2016) conducted qualitative data analysis technique in identifying and examining the presence of concepts and themes that were found in free-flowing texts. Al-Dahash et al. (2016) investigated 41 definitions of these three terms in 28 sources.

As a result, it showed that three terms overall have common features on the nature of the sudden event which causes damages. Nevertheless, crisis and disaster were found numerous shared common features, whereas emergency has some differences; for example, it is not always a sudden event. Not all disasters are preceded by an emergency (Lighthouse Readiness Group, 2015). Therefore, Al-Dahash et al. (2016) concluded that only crisis and disaster could be used interchangeably, meanwhile “both crisis and emergency would lead to disaster if the event were neglected or mismanaged” (p. 1191). Thus, this helps to understand the definition of crisis by preventing confusion from those terms. For example, some presented them as they are interchangeable or combinable such as ‘crisis and emergency management’ or ‘disaster crisis management’ (Alodhaibi et al., 2018).

2.1.4 Types of Crisis

Together with efforts to define a crisis and various aspects of crisis, there were some academic attempts to identify and categorize various types of crises. These categorizations would help develop the most appropriate response strategies of organizations. Gundel (2005) mentioned that “classifying crises is the first step to keep them under control since they can be named and analyzed..... The benefit of a typology can hence be seen in its capacity to facilitate the deduction of consolidated findings of crises and auxiliary counter-measures” (p. 106). For instance, Lerbinger (1997) defined seven categories that consist of crises from natural causes (disasters), technological crises, crises of malevolence, crises of skewed management values, crises of deception, crises of misconduct, and confrontation crises, meanwhile Coombs (1999) proposed five categories which are misdeeds, accidents, malevolence, natural disaster, and rumor. Furthermore, in forms of matrix, Hart and Boin (2001) proposed a typology of four patterns of crises, determined by the speed of development and the speed of termination as fast-burning, cathartic, slow-burning,

and long shadow. On the other hand, Gundel (2005) has explored a crisis typology from two dimensions which are predictability and influence possibilities. Meanwhile predictability is ability to expect the emergence of crisis, the criteria of influence possibilities is possibility to respond and manage a crisis. This crisis matrix represents a conventional crisis, unexpected crisis, intractable crisis, and fundamental crisis.

In addition, Wooten and James (2008) categorized crisis by the contexts which are different types of crisis consequences. From three types by Marcus and Goodman (1991), they added the fourth one and proposed four crisis types which are accident, scandal, product safety or health incident, and employee-center crisis. By identifying and understanding these types, it helps to guide the actions of leadership to address specific phenomena and involved stakeholders for each concerned crisis consequences.

2.1.5 Crisis Incubation in this ERA

In crisis studies, scholars had paid attention to crises since potentials for crisis were incubated or initiated so-called ‘crisis incubation’ (Elliott et al., 2005; Fischbacher-Smith, 2016; Smith, 1990; Turner, 1976). As stated as the problem and rationale for this dissertation, nowadays it becomes normal to meet rapid changes and disruptions in societies and organizations due to globalization and digitalization (Johansen, 2017; Møller, Gertsen, Johansen, & Rosenstand, 2017; Valenduc & Vendramin, 2017). D. J. Teece (2016) emphasized that deep uncertainty is common in current economics under rapid technological change and complexity as the era of the fourth industrial revolution (Schwab, 2017), VUCA (Gaultier Le Bris et al., 2019) and disruptive technologies (Abyad, 2019; Benazzouz, 2019; C. M. Christensen, 1997). These complexity and interdependency might induce a crisis to emerge (Perrow, 1984).

2.1.5.1 VUCA World

As started from military in 1990s, professionals and scholars in the other domains such as business and strategic management have adopted the term ‘VUCA’ world to describe and define their facing environment in the recent era (N. Bennett & G. J. Lemoine, 2014; Mack et al., 2015). Business and organizations still have experienced rapid and radical changes that cause them tend to face different

kinds of crisis (Gaultier Le Bris et al., 2019; Raja, 2021; Schoemaker et al., 2018). Ruksana and Ahmed (2019) stated that “today in this VUCA world is not going to disappear” (p. 17). N. Bennett and J. Lemoine (2014) elaborated the term VUCA by presenting meaning of each word again and how to respond each threat. Volatility is unstable changes that situational information is understandable but there are frequently change unpredictably. It needs agility which aggressively and rapidly applies resources preoccupying for future potential and flexibility. Uncertainty is a lack of knowledge as its meaningful ramification that cause and effect might be acknowledged but not the unknown effects of significant change. It needs information to reduce uncertainty by learning new sources of data through new perspectives. Complexity is elaborate network of information by interconnected parts. It needs restructuring which matches internal operations to the external complexity to mirror the environmental complication for addressing it. Ambiguity is a lack of knowledge as the rule-based of the game that the turbulent environment cannot be understood on both cause and effect. It needs experimentation which helps organizations and leaders making decision on what strategies are, or are not effective for situations or outdated for business (Bennett & Lemoine, 2014).

2.1.5.2 Technology Disruption

The formal and academic term of technology disruption is ‘disruptive innovation’ by Christensen in 1997 from the book ‘The Innovator’s Dilemma: When New Technologies Cause Great Firms to Fail’. A disruptive innovation is innovations, mostly are technological advancement, that create new markets and value networks and eventually displaces established market-leading business organizations, products, and alliances, causing some levels of crisis. In emergence of this concept, Christensen (1997) stated that, “these rules, which I call principles of disruptive innovation, show that when good companies fail, it often has been because their managers either ignored these principles or chose to fight them. Managers can be extraordinarily effective in managing even the most difficult innovations if they work to understand and harness the principles of disruptive innovation” (p. 9)

Liversidge (2015) stated that “Christensen seeks to answer two questions, first ‘Why is success so difficult to sustain?’ And second ‘Is successful innovation really as unpredictable as the data suggest’” (p. 61). In comparison,

Liversidge (2015) mentioned that Schumpeter's creative destruction did not look at particular industries but did mention the industrial war and competitive techniques although did not contain an example, whereas Christensen's disruptive innovation did not mention these economic theory and effect that companies interfere with, block or destroy competitors. Nevertheless, Liversidge (2015) concluded that "the threat is the same: a failure to invest in or develop a new technology, expand or maintain a market share risk being 'eaten' in the future" (p. 66). Therefore, this reflects the macro and micro views respectively to understand the effects of change from new creativity and innovation (Liversidge, 2015). According to this perspective, disruption, creative destruction, and disruptive innovation similarly are the situation that new innovation in organizations or boarder systems becomes a threat which might be unexpected as the implication of crisis (Liversidge, 2015).

2.1.5.3 Organizational Accidents, Failures, and Errors

Even in this era crises can emerge through new various forms as mentioned VUCA and disruption, crises in traditional perspective such accidents or so-called man-made disasters still have occurred continuously avoidably under socio-technological advancement during routine operations (B. A. Turner & Pidgeon, 1978; Weick et al., 2008). In this turbulent environment, individuals and teams is those high-risk organizations and systems have dealt with it persistently to survive under extreme environments and trying conditions which contain complexity, interdependency, and external volatility (Ericksen & Dyer, 2005; Shrivastava et al., 1988; Weick & Sutcliffe, 2011) through organizational behaviors, explored in HRO theory (Roberts, 1990). In addition, the disruptive innovation in VUCA world also relates to the threats and hazards as potentials for crises in these organizations (Azadegan, Srinivasan, Blome, & Tajeddini, 2019).

HRO scholars viewed a rate of accidents through the lens of positive perspective to see that not only its implication reflects the number of failures in high-risk systems, but it also presented the number of successful and survive operations that have already been saved and error-prevented when it was compared to the total number of operations. Robert (1990) defined the term 'high reliability' by stating that "HROs are a subset of hazardous organizations that have enjoyed a record of high safety over long periods" (p. 160). The meaning of these hazardous organizations

referred to the theory of Normal Accident that they are highly prone to accidents because of their systems' complex interaction and tight coupling (Perrow, 1984). Then, Robert (1990) further stated the questions to define HRO that "one can identify this subset by answering the question, how many times could this organization have failed to result in catastrophic consequences that it did not? If the answer is on the order of tens of thousands of times, the organization is high reliability" (p. 160).

2.2 Crisis Management

2.2.1 Managing a Crisis

Vagueness of cause, effect, and resolution about the organizational crisis will lead to disillusionment or loss of shared meaning, beliefs, values and individuals' basic assumptions. During the crisis, decision making is pressed by perceived time constraints and cognitive limitations (Pearson & Clair, 1998). According to these situations as the research problem, the straightforward and logical approach needed for crises is the crisis management (Mitroff et al., 1987). Mitroff et al. (1987) mentioned that it is impossible to prevent all crises, hence organizations have to apply systematic and comprehensive perspective for managing them effectively. Pearson and Clair (1998) defined that "effective crisis management involves minimizing potential risk before a triggering event. In response to a triggering event, effective crisis management involves improvising and interacting by key stakeholders so that individual and collective sense making, shared meaning, and roles are reconstructed" (p. 66). Then, individuals and organizations have to readjust basic assumptions, behaviors and emotions to respond and recover a crisis. This also includes to sustain and minimize losses including learning for the future (Pearson and Clair (1998).

The problems of crisis response plan also were found by some studies. Lockwood (2005) mentioned that crisis readiness receives little attention under normal operating conditions because of the belief that the organization is unlikely to face a crisis. Lockwood (2005) cited a 2005 Disaster Preparedness Survey to indicate that even after the 9/11 attacks, 45% of the organizations surveyed did not create or revise the preparedness plans. Bowers, Hall, and Srinivasan (2017) mentioned that organizations rarely allocate enough resources to prepare for crisis management.

Hickman and Crandall (1997) stated that “despite past disasters and the millions of dollars of damage they have rung up, many organizations are not prepared for a catastrophe to occur.” (p. 75). This come from the notion that it is difficult to anticipate a crisis.

Roux-Dufort (2007) further suggested that the management of crisis has to explore origins of an event and possible future after the event, not only focuses on accidents when they are occurring or only accepts the inevitability. This later became the differences between crisis as event and as process (Roux-Dufort, 2007; T. A. Williams et al., 2017). Deverell (2012) stated that “crises, and disasters, then, are not bolts from the blue” (p. 3). A lack of contingency planning can be an explanation for a failure, rather than explain it as a surprise (Billings, Milburn, & Schaalman, 1980). The period of incubation, from information and communication difficulties regarding vague in defining problems, can last for years before the crisis onset (N. F. Pidgeon, 1991; B. A. Turner & Pidgeon, 1978). Thus, a crisis is a non-routine event that cannot be managed by the organization’s regular structure (Seeger et al., 1998; Smith, 2006). However, the other various approaches for dealing with crises have to be applied.

2.2.2 Crisis Management as Event Approach

This event approach is a logical conceptualization of crisis management as a tactical activity focused on incident response when a crisis occurs and how to prepare for it (Coombs, 2007). This traditional event approach typically positions crisis management structurally with operational or technical functions such as security or emergency response, and also with public affairs as media or public relations (Pearson & Clair, 1998; Williams et al., 2017). Nevertheless, Sapriel (2003) cautioned that crisis management is not only the corporate communication. A crisis challenges the sense of safety, values or appropriateness. The actual or potential damage of crisis to the organization is massive that should not wait until the key event occurs. Furthermore, Sapriel (2003) presented statistics that since 1990s most crises in business have turned from sudden crises to be non-event-related or so-called smoldering crises which cumulated from inaction or neglect of management.

2.2.3 Crisis Management as Process Approach

The process approach focuses on the other aspect that is a tendency for crisis management to be evolved beyond the event responses. This might need for new organizational design. A key of this evolution is a growing awareness in proactive management that should prevent a crisis in happening at the first place (Williams et al., 2017). Shrivastava (1995) as a famous scholar of the process approach stated that “crises are not events, but processes extended in time and place” (p. 2). ’t Hart, Heyse, and Boin (2001) also proposed that “crises are not discrete events, but rather high-intensity nodes in ongoing streams of social interaction” (p. 185).

Thus, crisis management is a process continuum, based on the recognition that most crises are not sudden events but emerge from a period of incubation and need precognition and red flags for managing them. Furthermore, leaders and managers have a wide range of proactive processes and activities which can be implemented to identify, prepare, and prevent potential crises (Fink & Association, 1986; Mitroff & Pearson, 1993; B. A. Turner & Pidgeon, 1978; T. A. Williams et al., 2017). Pearson and Clair (1998) illustrated the crisis management process that before triggering events cause individual and collective reactions together with planned responses leading to success or failure, the executive’s perceptions about risk and adoption of crisis management preparation are key prior factors. For practices, key crisis concerns are signal detection, incident containment, business resumption, effects on learning, effects on reputation, resource availability, and decision making (Pearson & Clair, 1998).

2.2.4 Typologies of Crisis Management

Mitroff et al. (1987) presented typology and expanded typologies of types, causes, and preventive actions of crisis, based on four quadrants from internal or external emergence, and technical/economic or people/social/organizational which helps to precisely manage crises. This study integrated and synthesized key ideas of these typologies to be one integrative model of crisis management (see Figure 1.1). Accordingly, keys of the crisis management are also the understandings of crisis phases and crisis typologies for managing a crisis appropriately and timely (Mitroff et al., 1987; Roux-Dufort, 2007; Sapriel, 2003).

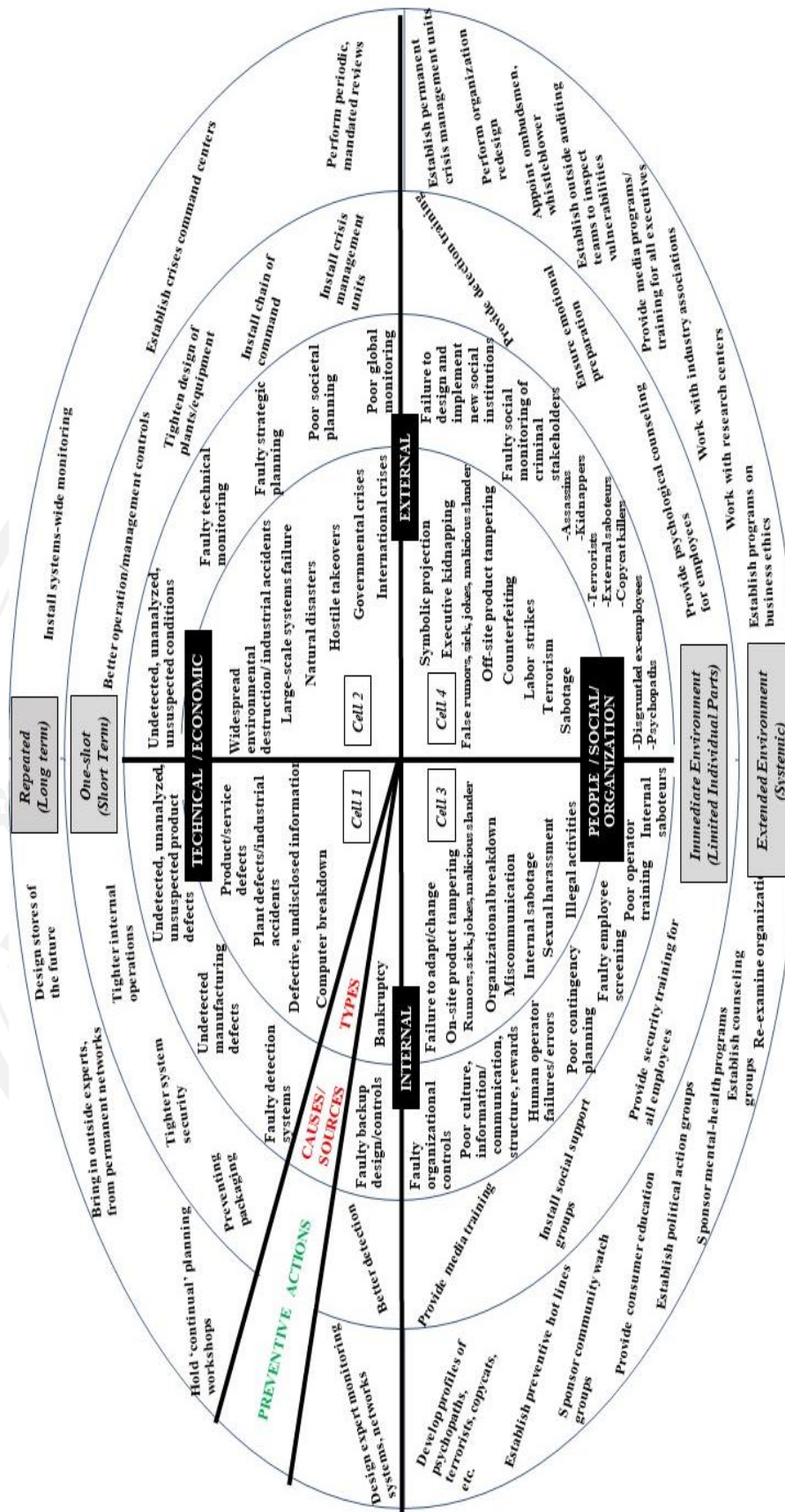


Figure 2.1 Integrative Crisis Management Typology. Integrated

Source: Adapted from Mitroff et al. (1987).

2.3 Leadership

2.3.1 Meaning of Leadership

For universality of leadership in natural settings, Bass and Bass (2009) stated that “leadership is a universal phenomenon in humans and is also observed in many species of animals..... Primate groups learn norms for the different status of members and their leadership. The norms are learned by group members, are stable but can be changed, and are complied with by the majority of members” (p.32). Leadership are vital successors for organizations that leverage the understanding of the connection between emotions and behavior (Klann, 2003; Lussier & Achua, 2015). Besides key definitions of Vroom and Jago (2007) stating that “leadership involves the process of influence...one or more followers... [and] potential or capacity to influence others” (p. 17) and Lussier and Achua (2015) stating that “leadership is the influencing process between leaders and followers to achieve organizational objectives through change” (p. 5), Bass and Stogdill (1990) mentioned that there are hundreds of definitions about leadership. Nevertheless, it is difficult to either define its exact meaning or to find any widely accepted definitions. R. Singh and Kumar (2014) provided examples of leadership definitions. Various scholars agreed on key features of influencing, motivation, direction setting, common goals, and interpersonal and political skills (Burns, 1978; Hart, 1980; Segal; 1981; Hersey & Blanchard, 1982; Jago, 1982; Clarke & Clarke, 1996; Northouse, 2001; Nissinen, 2001; Chemers, 2000; Moss & Barbutto, 2010). Thus, it is also clear that they agreed on that the leadership is the influencing process, not positions or roles.

2.3.2 Leadership and Management

From academic and practical discussions since Zaleznik (1977) proposed in the 1970s, Azad et al. (2019) mentioned that “there has been much effort dedicated to studying the differences between managing and leading, with more than 4000 documented definitions of leadership existing alone” (p. 1). There are differences between leadership and management functions or roles of leaders and managers and both are needed for organizations. Managers focus on systems, processes, budgets, equipment, and things, whereas leaders focus on visions and people. Individuals at

any level, not necessary to be management positions can have leadership (Bertocci, 2009). Meanwhile management is to plan, organize, direct and control people and systems, leadership is to align, motivate and inspire people including set a direction and vision, employ credibility, anticipate change, and cope with change (Bertocci, 2009; Kotter, 1990; Stanley, 2006). (Zaleznik, 1977) mentioned that goals of management come from necessity whereas goals of leadership come from passion. Therefore, it is widely-accepted by both scholars and professionals that leaders ‘do the right thing’ while managers ‘do things right’ (Stanley, 2006; Zaleznik, 1977).

Stanley (2006) proposed the comparison table depicting differences between these two terms by the study of nurses perceiving clinical leadership qualities in healthcare. From Stanley (2006)’s qualitative research by grounded theory method conducting 830 questionnaires, 42 in-depth interviews and eight further interviews. Also, Toor (2011) conducted the interview questioning how 49 senior executives in Singaporean construction companies perceived the differences, and then illustrated differences through thematic network diagram. Nevertheless, in studies of Azad et al. (2019), they argued by the key conclusion that this comparison between nowadays situation and the first thought is the 1970s’ are different. In the past, for mindset of those business studies, management and leadership are separate. However, in this era, Azad et al. (2019) stated that “the concepts of leadership and management are transposable in high-performing organizations... leading and managing are inseparable” (p. 5). Also, they emphasized that “in fact, based on our research, there cannot be effective leadership within an organization without the combination of the two, and each person titled with either leader or manager also must have the skillset of the other” (p. 5). Azad et al. (2019) also presented the table of leadership and management, yet they emphasized that it illustrated that the functions of leadership and management flow in a continuum that are not separable. Hence, Table 1.1 was proposed by the researcher in integrating the concepts of Stanley (2006)’s and Toor (2011)’s differences, together with Azad et al. (2019)’s continuum to be the differences and interdependences of leadership and management.

Leadership		Differences	Management	
Interdependencies				
Charisma/Values	Personal	Conceptual	Organizational	Formal Authority/Hierarchy
Drive: Heart/Spirit				Drive: Head/Mind
Motivation: Work Excitement				Motivation: Tangible rewards
Innovation	Flexible		Inflexible	Using personnel/resources
Uses conflict constructively				Avoids/manages conflicts
Breaks/explores the rules				Makes/keeps rules
For: Anyone	Principle	Definitional	Subset	For: Hierarchical positions
Essential				Necessary
Sets direction	Long-term		Short-term	Plans detail
Creates new opportunities				Establishes system/ process
Transformation				
Focuses on people	Empower		Functional	Impose
Trusts/Development		Focuses on things		
Delegates responsibility		Directs/Coordinates		
Articulates a vision	Change	Stability/ Order		Acts decisively
Creates chang				Executes plans
Thinks strategically				Manage change
Risk taking		Determines objectives		
Uses influence	Personal power	Behavioral	Positional power	Minimizing risk
Persuasion: Sell				Uses authority
Responsibility: Takes the blame				Persuasion: Tell
Energy: Passion	Leading by doing		Managing by asking	Responsibility: Blames others
				Energy: Control

Figure 2.2 Differences and Interdependences of Leadership and Management.

Integrated from Differences and Interdependences of Leadership and Management

Source: Stanley (2006); Toor (2011); Azad et al. (2019).

2.4 Leadership in Crisis

There were various directions of research and practices claimed to be the studies of crisis leadership. These propositions be argued that they seem to be concepts of leadership in crisis or during crisis rather than the crisis leadership. According to these examples, these scholars did not define as neither a theory of crisis leadership nor a definition. Only Christensen (2009) tried to combined the definition of crisis and definition of leadership and then shared an idea that “definition of ‘crisis leadership’ might be captured as; crisis leadership is the process of responding to a low-probability, high-impact situation by influencing others to overcome or take advantage of the situation, regardless of its cause, optimizing the effect, in a timely

framework. One might consider crisis leadership the same as non-crisis leadership but with the all the features intensified.” (p.13).

According to these concepts of leadership in crisis rather than crisis leadership, scholars mentioned that this leadership will be a key to anticipate the chain of events and lead in a way to return balance to others in the organization (Boin et al., 2013; Jaques, 2012; Klann, 2003). Wooten and James (2008) proposed that competencies of leadership in crisis are a linkage of “building organizational capabilities through crisis management activities” (p. 1) to solve a problem that organizations neglect the leadership responsibilities in crises. In crisis management, leadership becomes vital factors to deal with crises as leaders are a strategic apex for any organization (Mintzberg 1989). As a result, by this study’s literature review in discussion of leadership and crisis, there are only three groups of literature currently. The first one seems to be theories of leadership for crisis as such as the crisis-related studies of situational leadership (Wisittigars & Siengthai, 2019), authoritative leadership (Gartzia, Ryan, Balluerka, and Aritzeta (2012), transformational and transactional leadership (Bowers et al., 2017), or other leadership (Christensen, 2006). The second is the leadership in crisis management and leadership practices in crisis which mainly mentioned leader’s roles in crisis management (Bower et al., 2017).

As mentioned, some claimed the word ‘crisis leadership’ in the studies but the researcher found that they applied the concepts in crisis management principles to be components and practices of leadership positions to manage the crisis. When crisis management literature mentioned organizations, it means these managers as leaders in organizations are ones who drive these managerial practices (R. Heifetz et al., 2009; R. Heifetz & Linsky, 2017; Prewitt & Weil, 2014). These works proposed tasks (Boin et al., 2013; Boin et al., 2016; E. Stern, 2013), roles (Jaques, 2012), and strategies (Prewitt et al., 2011) of crisis leadership that all were based on the phases and framework of crisis management (Mitroff et al., 1987). These leadership practices in crisis were provided for managers as positional leaders (P. O'Connor et al., 2014).

For instances, there are some key leaders’ practices for crises. Boin et al. (2013) have proposed the various tasks revised since five to ten tasks, and Wooten and James (2008) further studied relevant competencies of leadership in crisis, proposing competencies for each phase: signal detection, prevention, containment,

recovery, and learning. Boin et al. (2013) recommended that future research should find a common understanding of crisis leadership. Nevertheless, they reminded scholars and professionals to be aware of the confusion from focusing and evaluating crisis leadership only on communication and politicization aspects. This study conducted the review of elements proposed as crisis leadership components that this study argued that they seem to be practices of crisis leadership (see Table 1.2), nevertheless, they can be some parts of guideline for this study. Therefore, the researcher reviewed different various leadership practices in crisis and leadership in crisis management which are the attempt to propose crisis leadership frameworks. This presented the collection of their elements in works of key scholars in crisis (Heifetz & Linsky, 2002, 2017; James & Wooten, 2004; Prewitt et al., 2011; Stern, 2013; Jaques, 2012; Boin et al., 2013; Williams et al., 2017) that they have the same core concepts following the phases of crisis.

Crisis Leadership Practices	Heifetz & Linsky (2002, 2017)	James & Wooten (2004), Wooten & James (2008)	Prewitt et al., (2011)	Stern (2013)	Boin et al., (2013)	Jaques (2012)	Williams et al., (2017)
Crisis Sensemaking	Preparation phase	Signal Detection - Sense-Making - Perspective Taking Preparation/Prevention - Issue Selling - Organizational Agility - Creativity	Continuous planning	Sensemaking	Early Recognition	Encourage a proactive crisis culture.	Pre-adversity Organizing: Preparing and Restoring the full range of risks. - <i>Preparing: Managing risks to reduce vulnerability</i> - <i>Restoring</i>
Critical Decision Making		Focus on the core purpose - <i>Know and Understand the Core Purpose</i> - <i>Instill Value and Align with Reality</i> - <i>Provide Vision and Embody Values</i> - <i>Consistently Assess and Update Purpose</i>					
Responsive Action and Containment		Lead from the front - <i>Visibility & Image</i> - <i>Demonstrate Courage</i> - <i>Show Commitment</i> Mitigate the threat - <i>Take Action</i> - <i>Be on the Scene</i> - <i>Consult the Team/Find Experts</i>					Postcrisis Response: Responding to Major Disturbances - <i>Cognitive/ Behavioral/ Contextual reinforcement</i>
Centralized and Decentralized Collaboration	Emergency phase	Containment/Damage Control - Decision Making - Communicating - Risk Tasking		Decision making	Orchestrating Vertical/Horizontal Coordination	Establish and enforce standards and processes.	
Meaning Making Communication		Build a team	Tell the story - <i>Be the spokesperson</i> - <i>Be honest and timely</i> - <i>Shape the message</i>	Meaning Making	Coupling and Decoupling Meaning Making Communication Terminating	Promote open upward communication. Be ready to deal with the news media Rendering Accountability	Resilience Feedback Loop - <i>Interpretations of tasks and relationships</i>
Termination	Adaptive phase	Business Recovery - Promoting Organization Resilience Learning - Learning and Reflection	Profit from the crisis - <i>Keep Moving</i> - <i>Learn from the Crisis</i> - <i>Adapt the Organization</i>	Learning Preparing	Learning Enhancing Resilience	Encourage a learning environment and share experience. Build relationships before the crisis.	Capabilities for Durability: Resource Endowments - <i>Financial/ Cognitive/ Behavioral/ Emotional- regulation/ Relational</i>

Figure 2.3 Summary from Integrative Review of Leadership Practices in Crisis

2.5 Theory Building

As mentioned in Chapter 1 that there is no theory as the research gap, primary goal of this study is to build a theory of crisis leadership by the theory development research. Thus, the meanings of theory have to be reviewed. These examples are key definitions of theory.

Kerlinger (1977) - “A systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena” (p. 5).

Bacharach (1989)) - “A theory is a statement of relations among concepts with a set of boundary assumptions and constraints. It is no more than a linguistic device used to organize a complex empirical world” (p. 496).

Torraco (1997) - “A theory simply explains what a phenomenon is and how it works” (p. 352) and “system for explaining a set of phenomena that specifies the key concepts that are operative in the phenomena and the laws that relate the concepts to each other” (p. 114).

Senge (2014) - “A theory is a fundamental set of propositions about how the world works, which has been subject to repeated tests and in which we have gained some confidence” (p. 29).

Then, this study operationally defined a theory as, ‘the explanation of phenomenon as a conceptual proposition within a set of boundary assumptions and limitation provides understandings of what and how phenomenon is, but, by what and how, it has to state its underlying constructs and their systematic interrelations and influences which come through methodology in generating and repeatedly testing’. Therefore, a theory by this meaning will be the goal of this dissertation in building a Crisis Leadership Theory. Lynham (2000) presented theory development research methods that relate to methods, methodologies, and epistemologies.

2.5.1 Theory Development Research

As the attempt to initiate the theory building process as a goal of this dissertation, this study becomes the theory construction or theory development research (Bacharach, 1989; Weick, 1989). The research area of theory development

has emerged from discussion and argument on concepts for research operations in purpose of building a theory (Bacharach, 1989; Storberg-walker, 2003; Toracco, 2005; Weick, 1989) linking to the discussion and argument of the term 'theory' by Sutton and Staw (1995), DiMaggio (1995) and Weick (1995). This field of theory development, or so-called theory building, theory construction, or theory research that has emerged to discuss the understanding, framework and guideline of research operation for creating a theory (Bacharach, 1989; Storberg-walker, 2003; Toracco, 2005; Weick, 1989). Theory building takes long process before getting good theories that this study will play roles of initiation and conceptualization for further development. DiMaggio (2004) stated that "good theory is so difficult to produce routinely, in part, because goodness is multidimensional: The best theory often combines approaches to theorizing, and the act of combination requires compromise between competing and mutually incompatible values" (p. 396).

In HRD, Lynham (2000) mentioned that this research area of theory-building research has drawn increased attention from HRD researchers and there are various world views, concepts, issues and challenges in applied field. Then, Lynham (2000) pointed out "theory-building research paradigms feeding the HRD body of knowledge" (p. 174) which are four paradigms depending on two criteria: objective or subjective, and regulation or radical change; constructing a quadrant for HRD body of knowledge. Four paradigms consist of functionalist (regulation-objective), interpretivist (regulation-subjective), radical structuralist (radical change-objective), and radical humanist (radical change-subjective). Lynham (2000) further recommended that HRD professionals and scholars "must recognize that sound theory and theory development are important to the maturity of HRD thought and practice" (p. 175) and "must commit to conversations to agree to and clarify inclusive, multiple theory-building research paradigms at a philosophical (ontological and epistemological) rather than just a methods level" (p. 175). Accordingly, a theory is necessary for developing knowledge and practices to develop people in organizations (Swanson, 1995, 2001).

Research and practices will critically inform each other to develop both academic and practical worlds (Lynham, 2002; Storberg-Walker, 2003) as Lewin (1951) stated that "there is nothing so practical as a good theory" (p. 167) and R. A.

Swanson (1997) illustrated the model of Theory-Research-Development-Practice cycle In HRD that a *theory* is at the central among the other three. Furthermore, Storberg-Walker (2003) stated that “HRD is within the school of education or business, theory building and theory-building research in HRD have two equal purposes: (a) to advance the knowledge of the HRD profession and (b) to guide the problem-solving process of practitioners” (p. 215). In building a theory, Storberg-Walker (2003) defined two types of interest for theory building. Firstly, it is the interest of focal phenomena for studying to be a theory. The second one is the interest in a process to build the theory. For theory development, there are various theory building methods, concepts and paradigms. Therefore, according to the concept of theory development research, this study aims to study a phenomenon to build a theory and also was interested in theory building process related to leadership.

2.5.2 Theory Development Research Methods

In this field of research, there are various theory building methods, concepts and paradigms. Richard J Torraco (2005) reviewed all quantitative, qualitative, and mixed method approaches of theory development research method, presenting Dubin (1976)’s theory-building research method, Yang (2002)’s meta-analytic research, Strauss and Corbin (1998)’s grounded theory research, Moustakas (1994)’s phenomenological research, Gergen and Thatchenkery (2004)’s social constructionist research, and Eisenhardt (1989)’s case study research. Furthermore, there is the General Method of Theory-Building Research (GMTBR) in applied disciplines proposed by Lynham (2000) which is multiparadigm method of theory development. For this study, Egan (2002)’s grounded theory-building research was applied to the research project because it fits to the aims to explore the meaning and building a theory as moving the data from informants to a theory. Also, Lynham (2002)’s general method and Dubin (1976)’s theory-building method can also help to explain this theory development dissertation as it is the initiation of theory development as the part of theoretical model development of Dubin (1976)’s eight steps and the phase of conceptualization of Lynham (2002) ‘s five phases.

The theory building research method of Dubin (1976), from deductive perspective, consists of eight steps as 1) defining concepts, units and constructs, 2)

defining laws of interaction, 3) defining the boundaries, 4) defining the system state, 5) defining the propositions, 6) defining empirical indicators of key terms, 7) obtaining testable hypotheses, and 8) testing. In these eight steps, steps one to five are part one which is a theoretical model, meanwhile steps six to eight are part two as the empirical research. Therefore, this method is applied by researchers and theorists who adopt a theory-then-research strategy (Torraco, 2005). Chermack (2004)'s work in the proposed theoretical model of scenario planning is an example that presented only seven steps as the proposed framework of theory is the useful point of the theory building process. Differently, Lynham (2002)'s general method combines both deductive and inductive logics through five interdependent and interacting phases: a) conceptual development, b) operationalization, c) confirmation or disconfirmation, d) application, and e) continuous refinement and development of the theory (Lynham, 2002; Torraco, 2005). This GMTBR initiates broaden and opened approach for multiple methods and phases in building a theory. It also represents the theory-practice relation and strategies (Torraco, 2005). According to Lynham (2000), to achieve the goal of theory development, it takes time and needs to gradually create each building block such a phase and a cycle from different research developed over time.

2.6 Meaning of Leadership Theory for Development

Apart from theory development research method, a framework or scope for theory of leadership phenomena have to be understood.

2.6.1 Leadership in any Individuals

From literature, most of scholars might focus the research population on high management levels as the leadership of executive leaders in crisis on various contexts such as publics, organizations, and industrial operations (Boin et al., 2013; Prewitt et al., 2014; Bowers et al., 2017). For example, Boin and Hart (2003, as cited Flin (1996) to note that “when we speak of leaders, we refer to the people in senior positions in governments and public organizations, whether they are political appointees or career bureaucrats. We do not claim to speak about tactical leaders at

the operational level of crisis response” (p. 551). Nevertheless, in this study, Crisis Leadership Theory will be developed and studied in individual at any levels depending on the emerging phenomenon found by criteria of crisis leadership. For this, Ruksana and Ahmed (2019) suggested that VUCA world needs leadership at all levels in organizations and systems.

In this study, a leader was defined as ‘any individuals who have leadership and does not necessary means only any official positions such as executives, managers or supervisors.’ Besides the organizational and leaders’ management, strategies, planning and practices in managing and leading a crisis (Prewitt, Weil & McClure, 2011; Bowers, Hall & Srinivasan, 2017), there are the needs to understand crisis leadership such as individuals’ competencies and beyond competencies and deeper levels of thought and behavior in individuals at all levels for dealing with errors, threats, and crises in routinely operations (Boin et al., 2013; Shrivastava et al., 1988). As Stanley (2006) mentioned that leadership are found at any levels in organizations as “someone who does not have to be in management position, someone inspirational, and someone who comes with knowledge and experience” (p. 35). It is not limited by the job positions.

Various scholars agreed on that leadership is for everyone. Hogan and Kaiser (2005) mentioned that good leadership promotes effective team and group performance and leadership is an adaptive tool for individual and group survival. As human origins, people always live in group evolving to be group living animals that effective leaders are skilled at building relationships and acquiring status. The essence of leadership also concerns in persuading people to give up their selfish for a while to pursue a common goal. Rughani (2015) suggested that everyone should develop leadership abilities and defined leadership as the use of individuals’ personal influence in socially acceptable ways to make a difference to the communities that individuals are part of. Leaders identify what people need to do differently as change requires individuals to take a lead role and set a new direction of the groups. There is no suggestion in this definition that leadership is the right of people of a particular position or ability.

From literature reviewed from the past to the present, scholars specifically mentioned leadership in the aspect of using persuasion rather than authority. Bernard

(1927) emphasized that leaders were influenced by the needs and wishes of the group members meanwhile they also focused the group attention and released the energies of group members in a desired direction as leaders are the center of group activity focusing on group structure and group processes. Schenk (1928) mentioned that leadership is to manage people by persuasion and inspiration rather than by the direct or implied threat of coercion. Cleeton and Mason (1934) stated that leadership indicates the ability to influence men and secure results through emotional appeals rather than through the exercise of authority. Copeland (1942) defined the leadership is the art of influencing a body of people by persuasion or example to follow a line of action, not by intimidation or force. Knickerbocker (1948) mentioned that in terms of the dynamics of human social behavior, leadership is a function of needs existing within a given situation which is a relationship between an individual and a group. Leadership is not a matter of passive status or possession of traits rather it “acquires status through active participation and demonstration of his/her capacity for carrying cooperative tasks through to completion” (p. 23). Merton (1969) stated that leadership is an interpersonal relation that others follow because they want to, not because they have to. Bertocci (2009) also stated that “it is commonly accepted that managers deal with systems, processes, budgets, equipment, and things, while leaders deal with visions and people. In addition, anyone in at any level can play a leadership role and need not be in a top management position to make a leadership contribution” (p. 9).

2.6.2 Leadership beyond Observable Elements

Not only focusing on the individual phenomenon of persons who can have leadership, but this study also was interested the scope of leadership elements. As Western Governors University (2020) and Naushad (2021) stated that “leadership theories are the explanations of how and why certain people become leaders.” (p. 226), the theories for leadership have to be developed by the aim to explain how and why that leadership emerges. Thus, not only leadership competencies which are knowledge, skills, or abilities that facilitate individuals’ ability to perform a task, leadership is viewed as a dynamic process of individuals who lead that the roles evolve over time and influences can extend beyond the organization’s boundaries that requires perception and sense-making skills to determine appropriate courses of action

(R. E. Boyatzis, 1982; Ulrich, Zenger, & Smallwood, 1999). Therefore, as mentioned that leadership in crisis management or leadership practices in crisis only presented practices and competencies for practical contributions (Muffet-Willett & Kruse, 2009; Prewitt et al., 2011; E. Stern, 2013), this study proposed the meanings of ‘crisis leadership’ by developing a theory that would present underlying rationales and processes of individuals such as motivational and environmental factors including intuition, deliberation and interaction with a crisis (Bargh & Chartrand, 1999; Dijksterhuis & Nordgren, 2006; H. Li et al., 2016; Sloman, 1996).

The reason why competency is not enough can be seen from the and Zaccaro et al. (2004) developed the Model of Leader Attributes and Leader Performance presented the overlapping between scopes of trait and competency considered by the explanations of McClelland (1973) and R. Boyatzis (2008). Even competencies as knowledge, skills and ability are observable behaviors including some relevance of traits such as personalities and attributes (R. Boyatzis, 2008; McClelland, 1973), some details of leadership traits and attributes leadership are constructed from personality, temperament, motives, cognitive abilities, skills, and expertise which are deeper than practical level and unobservable (Avolio, 2007; Zaccaro et al., 2004). Zaccaro et al. (2004) presented that leadership performance are influenced by underlying proximal attributes which are social appraisal skills and problem-solving skills, and tacit knowledge, based on the deeper level by distal attributes which are cognitive abilities, personality, and motives values. Thus, leadership theory-building fundamental has to understand that leadership theory consists of cognitive elements, individuals and group behavior, historical context, proximal context and distal context which are broader and deeper than managers and leaders’ practices (Avolio, 2007). Also, all of these elements cannot separately influence the leadership performance. They are constructed jointly as a system influencing leadership phenomenon (Zaccaro et al., 2004).

Also, Van der Merwe and Verwey (2007) viewed the leadership is an inside-out approach. Bogo et al. (2006) mentioned that it relates to motivation and cognitive abilities, so-called meta-competencies meanwhile Bolden and Gosling (2006) mentioned that it should capture the sense-making nature and how meaning emerge and change over time rather than competencies in practices. They illustrated the

example of musician that not only reading notes and playing instruments' skills but also abilities of interpretation, improvisation and performance including emotion, intuition, moral judgement, experience and etc. Furthermore, Ruderman et al. (2014) recommended the Beyond Competencies Model to extend from the focuses solely on tangible and observable behavior, to the internal and automatic process underlying the surface such as experiences, emotions, or mindsets, including "structures, relationships, and dynamics necessary to enact leadership" (p. 4). Ruderman et al. (2014) presented "less visible forces such as leaders' physiological, emotional, and mental processes" (p.4) as three elements of the inner world, consisting of circuitry, inner content, and conscious engagement.

Firstly, circuitry means individuals' physical, chemical and neurological by the interconnected neurons' network in the nervous and brain system. Behaviors are influenced by this neuroscience systems. Ruderman et al. (2014) stated that "at heart, leadership development rests on self-awareness, but development practices fail to include awareness of the body's neural circuitry" (p. 6). Since several decades, research studies in the neuroscience discipline have increased understanding of how human internal systems process information, influencing behavior. For example, a circuit of neurons in the brain stem influences our behaviors, regulating sleep and wakefulness to improve memory, problem-solving, decision-making, and ability to regulate individual emotions which are factors critical to leadership roles or external stimuli that set off hormonal and chemical reactions in human central nervous system, leading to fight-flight-freeze behaviors (Maas & Robbins, 2010).

The key understanding about this linkage of brain and behaviors is the learning how the brain processes pleasure and pain. Medina (2010) stated that the brain generates behaviors and this can be couched because there are two sets of purpose-driven circuits which are seeking pleasure and avoiding (Hanson, 2016), p. 20). Nevertheless, according to Ruderman et al. (2014), a drawback is that a brain cannot differentiate between physical pain and organization-generated pain, hence human bodies still react the same through hormones causing quick reaction as it is about life and death. Additionally, the important recent discovery in neuroscience research found that the brain's ability can grow new neurons and neural networks over the life time, so-called 'neuroplasticity' (Ruderman et al., 2014). This is also

beneficial for leadership development as leaning agility is critical factor for leaders' performance that adaptive brain responses can be developed, so-called 'conscious engagement' by Ruderman et al. (2014).

Secondly, the inner content of individuals' mind is raw emotions, gut reactions, and inner dialogue that these inner experiences shape beliefs and emotional reactions for cognition in situations. Mind chatter goes on in individual thoughts. Ruderman et al. (2014) mentioned that in waking moment, minds provide unfiltered and unsolicited commentary on what 'should', 'if', 'ought to', and 'wish'. This dialogue with the self comes from both present and accumulated experiences of life through implicit and explicit memory, beliefs, cultural norms, mental constructs, and adaptive responses. The emotions tied to these past experiences and interactions. As humans are animas as well, Ruderman et al. (2014) stated that human inner experiences are intrinsically linked to others in the outer world, influencing individuals' inner content as "our parents, families, peers, and pop culture can influence what we see as satisfying, exciting, and relaxing as well as threatening or harmful" (p. 8). Therefore, leaders often use their inner content to evaluate their experiences and feelings and to determine how they will act and making a decision. As such, inner content. Inner content can influence how a leader takes in information for actions and can be considered a hidden compass that shifts the direction of leadership behavior (Ruderman et al., 2014).

Ruderman et al. (2014) reviewed that research found that rumination, including repetitive, obsessive, and self-focused thinking, activates a mood center in the brain, impairing critical-thinking and problem-solving ability. This affects dysfunctional attitudes and depression (Cooney, Joormann, Eugène, Dennis, & Gotlib, 2010). Also neurological studies showed that the amygdala which is an area of the brain related to emotions, links to the prefrontal cortex which is an area of the brain related to decision-making, and the evidences showed that patients with damaged amygdala have impaired individuals' decision-making ability (Bechara, Damasio, Damasio, & Lee, 1999). Ruderman et al. (2014) further stated that "the age-old adage of making decisions by 'following your heart' may be a moot point—it seems we do it automatically" (p. 9). Nevertheless, it is fortunately for leadership development that the inner content also can be modified even it is maladaptive. Nolen-Hoeksema,

Wisco, and Lyubomirsky (2008) suggested that some activities such as jogging, mindfulness training, or conversation, which are positive distractions can interrupt negative ruminative cycles. Kross et al. (2014) proposed that self-talk with avoiding first-person pronouns will lower social anxiety and regulate thoughts and emotions in anxiety-provoking situations.

Lastly, conscious engagement is the ability to observe, modify, and regulate mental processes (Ruderman et al., 2014). They mentioned that “conscious engagement allows individuals to choose a more mindful response to difficult situations. It gives leaders the ability to ‘hit the pause button’ in a heated situation or take in complex, discordant information more accurately” (p. 10). These conscious efforts create reward and positive feelings. Past experiences cannot be changes but their influences can be. However, in managing these influences, it has to be learned to aware and identify the sensations, emotions, and thoughts. In observing reactions to various stimuli, individuals can find and learn the triggers of emotion, thinking pattern and physiological changes.

Ruderman et al., 2014 stated that “with time and dedicated training, leaders and non-leaders alike can develop the ability to tune into thoughts, emotions, and inner processes to promote healthier physical and psychological responses” (p. 10). After understanding of circuitry and inter contents, the next step is the learning to pause unwanted automatic reactions, emotional cycles, and thoughts for redirecting minds in ways that support desired responses and behaviors. In developing this, practices for monitoring and modifying individuals’ inner world such as contemplative approaches, meditation, yoga, or mindfulness are appropriate (Lazar et al. (2005). These medication of thoughts and interception of automatic reactions allow for renewed perceptions, interpretations, and adaptations which are also beneficial for well-being and relieving stress (Kabat-Zinn, 1991).

By adopting the lens of Ruderman et al. (2014) in looking beyond competencies, leadership would emerge by a function of circuitry, inner content, conscious engagement, and external behaviors that this whole process is also critical for explanation of leadership phenomenon. Ruksana and Ahmed (2019) also proposed that the leadership characteristic is “oriented toward the interplay between internal elements (physiological, psychological, emotional, thoughts, memory) and external

behavior and activity” (p.5) that comes from “influences of state of mind and body, reflecting automatic processing emotions, thought patterns, past experiences, and level of self-awareness” (p. 5).

According to these two conceptual layers, they become foundation of leadership beyond, or deeper than, competencies. This study combined them as deep elements into the proposed integrative model from models of Zaccaro et al. (2004) and Ruderman et al. (2014) as Figure 1.2. Also, in attempt to define the meaning and theory of crisis leadership, the data needed from individuals to reflect their phenomena on crisis leadership should include these underlying factors and these constructs’ relationship. This helps to form the theory of crisis leadership rather than only practices and competencies (Bacharach, 1989; DuBrin, 2013; Wooten & James, 2008).

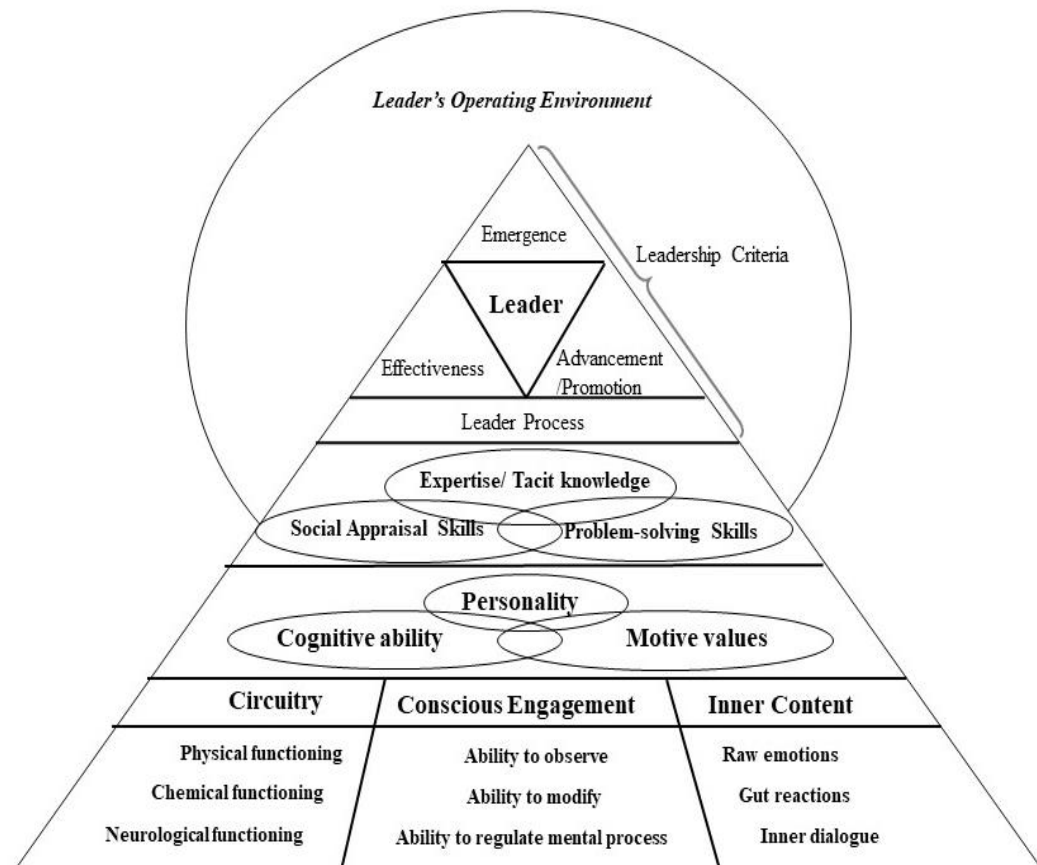


Figure 2.4 Leadership Integrative Elements Model

Source: Adapted from Zaccaro et al. (2004); Ruderman et al. (2014).

2.7 Research Conceptual Framework for Crisis Leadership Theory Development

In this dissertation, there are two research goals. Firstly, by an inductive approach, this research will initiate the theory development and propose the Crisis Leadership Theory to explain ‘what’ a phenomenon of crisis leadership is and ‘how’ crisis leadership works. This focal phenomenon does not mean ‘what’ that happens only at the executive or top level, rather it is the meaningful emergence from individuals at any levels who perform unique leadership, in facing organizational or operational crises, and dealing with those situations since incubation to signaling, emergence, handling and recovery. Also, the understanding of ‘how’ this phenomenon works means the exploration of individuals’ mechanisms and relevant factors (Egan, 2002; Endres & Weibler, 2017; Torraco, 1997).

Secondly, the researcher then will explore meaning and mechanism to gain deep understandings of the crisis leadership phenomenon which are not only practices or strategies but also constructs and interactions; for example, roles, behaviors, skills, and abilities to facilitate others, including background values, experiences, attitudes, motivation, intuition, deliberation, reasoning, and mental processes (Avolio, 2007; Dijksterhuis & Nordgren, 2006; Zaccaro et al., 2004)). Therefore, the conceptual framework will illustrate the design of this research project to achieve these objectives in building a theory and exploring the meaning and mechanism. From research objectives to research design, as the inductive approach, the researcher proposed the conceptual framework of the study as shown in Figure 1.3. It presents all dimensions of the research process and points out rationales and connection of each research part.

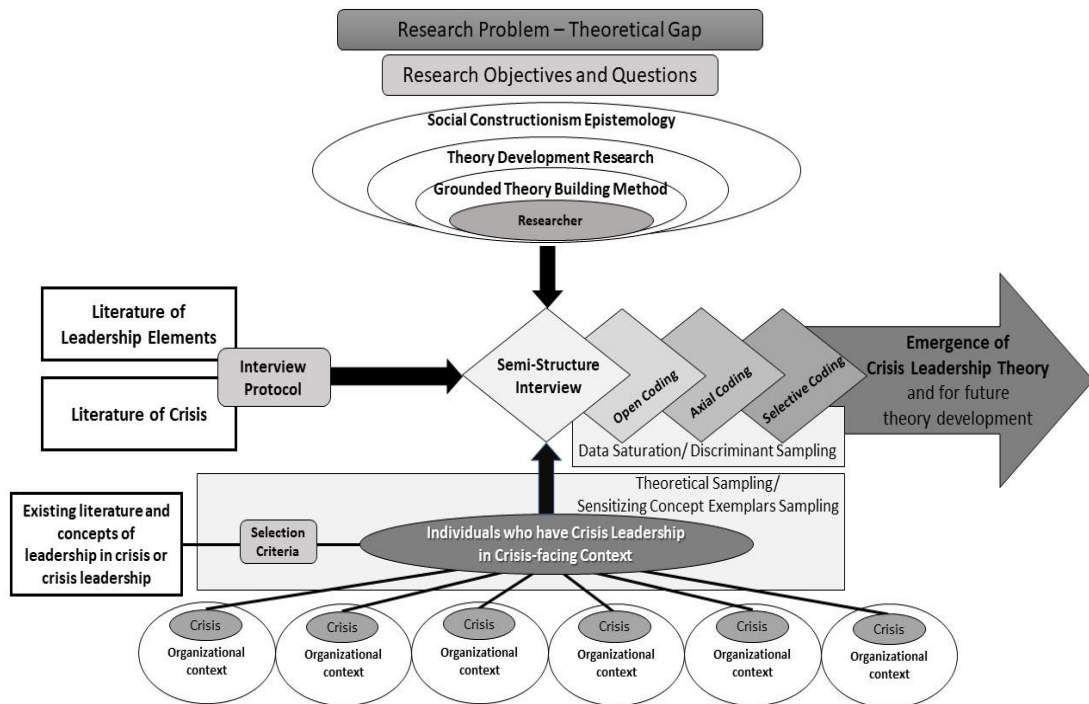


Figure 2.5 Research Conceptual Framework

2.8 Chapter Summary

This chapter presents literature regarding crisis, crisis management, and leadership, to overview the meanings of crisis and leadership including managing practices. This includes the emphasis on a research gap that there is no crisis leadership theory. Rather, there are only practices of leaders in crisis. Secondly, theory building and theory development research methods, and leadership theory meanings for development are explained as they are critical understanding of this research goals. There are the meaning of theory, structure of leadership theory, and method to construct a theory. Lastly, the research conceptual framework and its illustration present a whole dissertation project.

CHAPTER 3

RESEARCH DESIGN AND METHODS

To answer the main research question, - What is the Crisis Leadership Theory? the qualitative research approach is more appropriate based on Creswell and Creswell (2017). They stated that “the intent of qualitative research is to understand a particular social situation, event, role, group, or interaction. It is largely an investigative process where the researcher gradually makes sense of a social phenomenon by contrasting, comparing, replicating, cataloguing and classifying the object of study.... the researcher enters the informants’ world and through ongoing interaction, seeks the informants’ perspectives and meanings” (p. 278).

This chapter practically explains the research methods and underlying research paradigm, research design with research process, and procedures. This research process was designed to get the knowledge and theory of crisis leadership as the research main objective is to develop the Crisis Leadership Theory, including two sub-objectives in exploring the meaning of crisis leadership phenomenon and understanding the elements and process of crisis leadership phenomenon. Furthermore, the detailed research procedures have to be explained to increase the quality of qualitative research in presenting the researcher’s self-conscious design and clear techniques with rationales for readers’ self-judgment.

3.1 Research Paradigm

Because of the design to achieve goals in exploring meanings, elements, and their interactions of phenomenon and social process, the researcher applied social constructionism epistemology for developing a theory by applying an inductive approach (Durrheim, 1997). As leadership emerges from social process (Lussier & Achua, 2015), this is appropriate for leadership theory building, to find underlying rationales that made the individual phenomena of crisis leadership. The social

constructionism epistemology is at the middle between positivism and interpretivism or subjectivism. Lever (2013) mentioned that researchers are not fully external to the process of emergence because they actively construct the theory, but they also are not a part of the constituent elements because they acknowledge that the world exists outside of their mind. For example, Ferroff, Mavin, Bates and Murray (2012) stated that social constructionism is used for social, organizational, and human performance research and they encouraged domains involving with human factors and environments that safety driven, complex, and highly dynamic, such as the aviation domain. Therefore, this study designed research process that data influences how the researcher discovers knowledge and constructs the emerging theory, meanwhile this emerging theory then influences how the researcher interprets the data. All of this process is influenced by social structures and situational contexts.

3.2 Grounded Theory Methodology

These research objectives, questions and epistemology are aligned with grounded theory methodology. The researcher applied this methodology because it is fit for a case that there is no existing theory or a case that needs to explore socially related issue aiming to investigate a phenomenon through participants' experiences, perception and interaction, grounded in the views of participants which enable the researchers to develop a theory as to "move data to theory" (Willig, 2013, p. 69). Charmaz (1996) stated that "grounded theory methods are suitable for studying individual processes, interpersonal relations and the reciprocal effects between individuals and larger social processes. For example, these methods are useful for studying typical social psychological topics such as motivation, personal experience, emotions, identity, attraction, prejudice and interpersonal co-operation and conflict" (p. 29).

As same as social constructionism perspective, this methodology also bridges an interpretivist with traditional positivist assumptions. Interpretative analyses attempt to describe, explain and understand the lived experiences relying on knowledge from the 'inside' of the experiencing persons in describing their situations, thoughts, feelings and actions. Thus, the researcher learned how they construct their experience

through their actions, intentions, beliefs and feelings. On the other hand, positivists study the 'outside' which relies on the researcher interprets the research participants' data. Then, researcher as an objective observer discovered processes in an external world of the participants' world which are describable and predictable to construct a theory (Charmaz, 1996). Thus, the outcome of this inductive analysis is the development of themes into a pattern, model, or framework that summarizes the raw data and linkage of themes and sub-themes (Thomas, 2006).

For the purpose in this theory development, Egan (2002) and Torraco (2005) included the grounded theory method as one of theory development research method in theory building. Additionally, as this study is the PhD dissertation, this grounded theory approach for dissertation was supported by various scholars; for example, Wu and Beaunae (2014) stated that "ground theory methods have been growing in popularity for doctoral researchers because they offer the necessary type of rigor needed in qualitative studies" (p. 1). Glaser (2002) stated that "the grounded theory is an advanced graduate level methodology used for MA and PhD theses. This statement assumes that there has been an educational institutional sifting that brings people who have conceptual talent to this level" (p. 28).

By selecting this methodology, there are many critical characteristics (Charmaz, 1996, 2008; Corbin & Strauss, 1990) that this study has to comply and utilize them as followings: 1) minimization of preconceived hypotheses, 2) data collection and analysis are interrelated, 3) concepts are the basic units of analysis, 4) categories must be developed by analytic codes from understanding of data, 5) theoretical sampling is sampling for theory construction to check and refine the analyst's emerging conceptual categories for theoretical saturation, not for representativeness of a given population, 6) analysis makes use of constant comparisons, 7) patterns and variations must be accounted for, 8) the development of middle-range theories to explain behavior and processes, 9) broader structural conditions must be brought into the analysis, however microscopic in focus is the research and 10) delay of the literature review.

3.3 Research Process

For answering the research questions by inductive approach with grounded theory methodology, the research planned to explore the data from the target participants at any levels in organizations who have the criteria of crisis leadership practices according to existing literature. These participants came from the research setting that were selected from various business sectors whether they are the crisis-facing context or not, to get the settings that have the presence of crisis and crisis leadership phenomenon (Al-Dahash et al., 2016). This study initially expected to interview 30 informants as it is the referencing number from literature mentioning sample size in grounded theory (Charmaz, 2014), and could be less or more until meet the theoretical saturation (Wilig, 2014). The derived data were gathered and analyzed by open coding, axial coding and selective coding with memo writing and theory sensitivity, which provided themes, categories, and their interaction and process to be the proposed theoretical framework (Bloomberg & Volpe, 2018).

During those collection and analysis of data which are inseparable in grounded theory, this study applied codes found in the open coding step to examine, rephrase and group into the categories or themes in the step of axial coding and to study their relations. At the next phase as the selective coding step, the categories were analyzed back and forth with the raw data to explain the linkage and process among constructs and shape the result, according to the researcher's theoretical sampling and theoretical sensitivity for the other existing literature and concepts. By practices and techniques of grounded theory approach, the researcher conducted field notes, line-by-line and focus coding, memo writing, theoretical sampling, theoretical sensitivity and constant comparative analysis to collect and analyze the data for constructing a theory including to increase trustworthiness which is quality of qualitative research.

As a result, this process developed the grounded theory as a theoretical model of crisis leadership. Then, this theoretical framework was discussed again in depth at the discussion part which linked to relevant concepts and theories from the final literature review in supporting the development of the proposed Crisis Leadership Theory as shown in Figure 3.1.

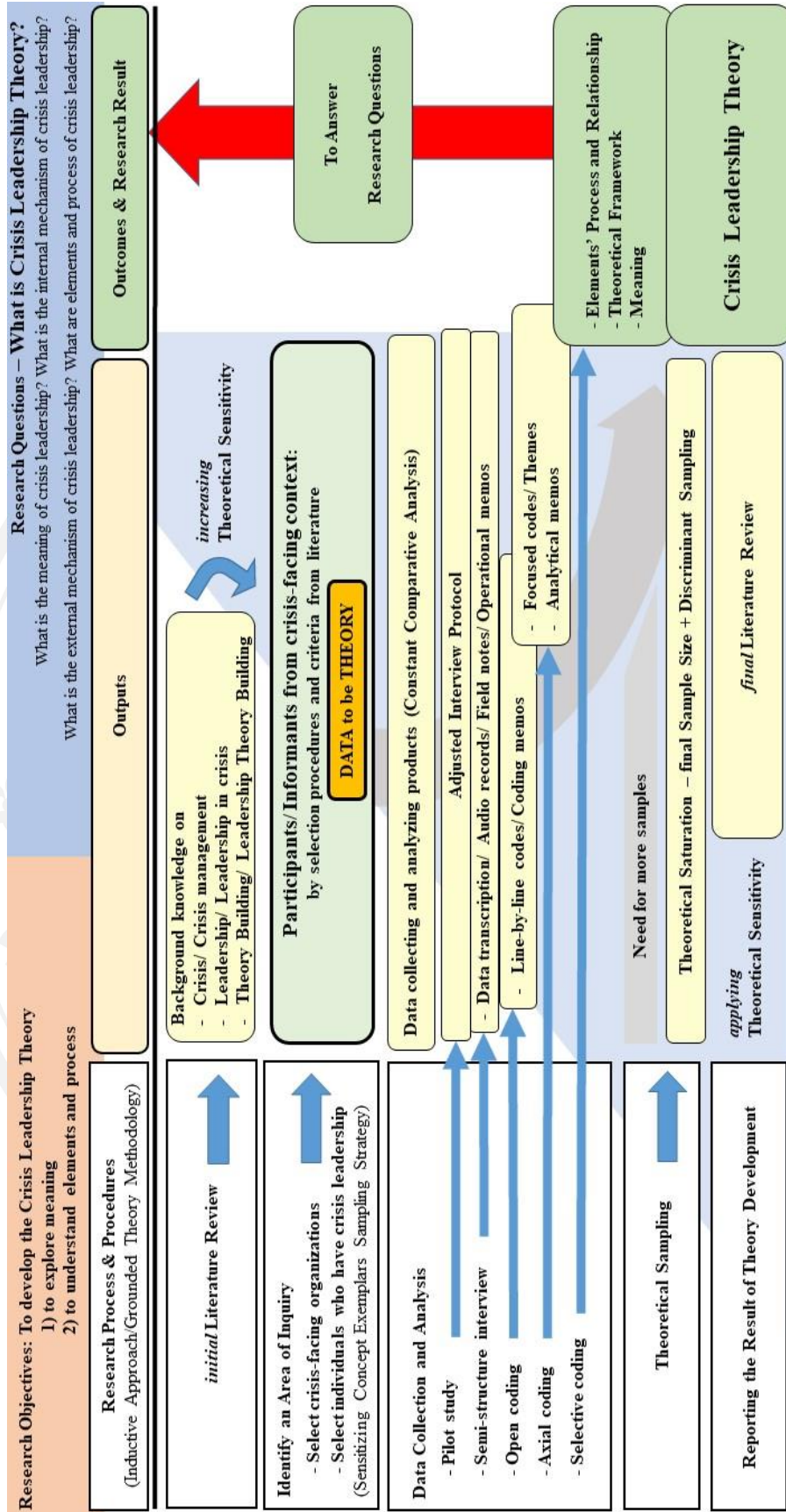


Figure 3.1 Research Process

3.4 Research Procedures

3.4.1 Settings

In this study, the researcher concerned all business sectors in order to generalize the result in building a theory. Therefore, this study adopted the classification from the Stock Exchange of Thailand (SET) which is alike to the Personnel Management Association of Thailand (PMAT)'s as a guideline for coverage of all domains. There are eight industry groups from 28 business sectors. This study initially used these classifications because they are systematic and reasonable for presenting the industry group and sector. After that, the researcher analyzed and synthesized the types of organization in this classification to re-group the organizational types based on different characteristics of their operations and potential threats to be the new sample groups. This study also reviewed the list of industries by Department of Industrial Works (DIW), to help in grouping the appropriate sample groups and types. Finally, there were six sample groups for this research purposes through theoretical sampling.

As in Figure 3.2, from SET and PMAT's classifications categorized all groups and sectors by the end products, this study purposively classified them by the focal points of their business operations and threats that were view differently by the researcher for this study through the lens of crisis researcher with theoretical sampling. These sample groups have different challenges on reliability, audience/user, project/services, product/sale, production, and finance. Also, this consideration was based on types of crises as literature mentioned (Marcus & Goodman, 1991; t Hart & Boin, 2001; Wooten & James, 2008). Then, from this new classification consisting of six sample groups and types, this study will consider organizations in each type that match with the criteria of crisis-facing context as conduct the purposive sampling, whilst some might not meet the criteria. Nevertheless, these selected cases can be private organizations, public sectors or state enterprise organizations, depending on theory sampling of this study that the researcher can find the key informants in order to get the emerging theory of crisis leadership in those organizations. Thus, the targeted organizational contexts and domains might be different, but they have the

same area of inquiry as a crisis-facing environment with a crisis leadership phenomenon.



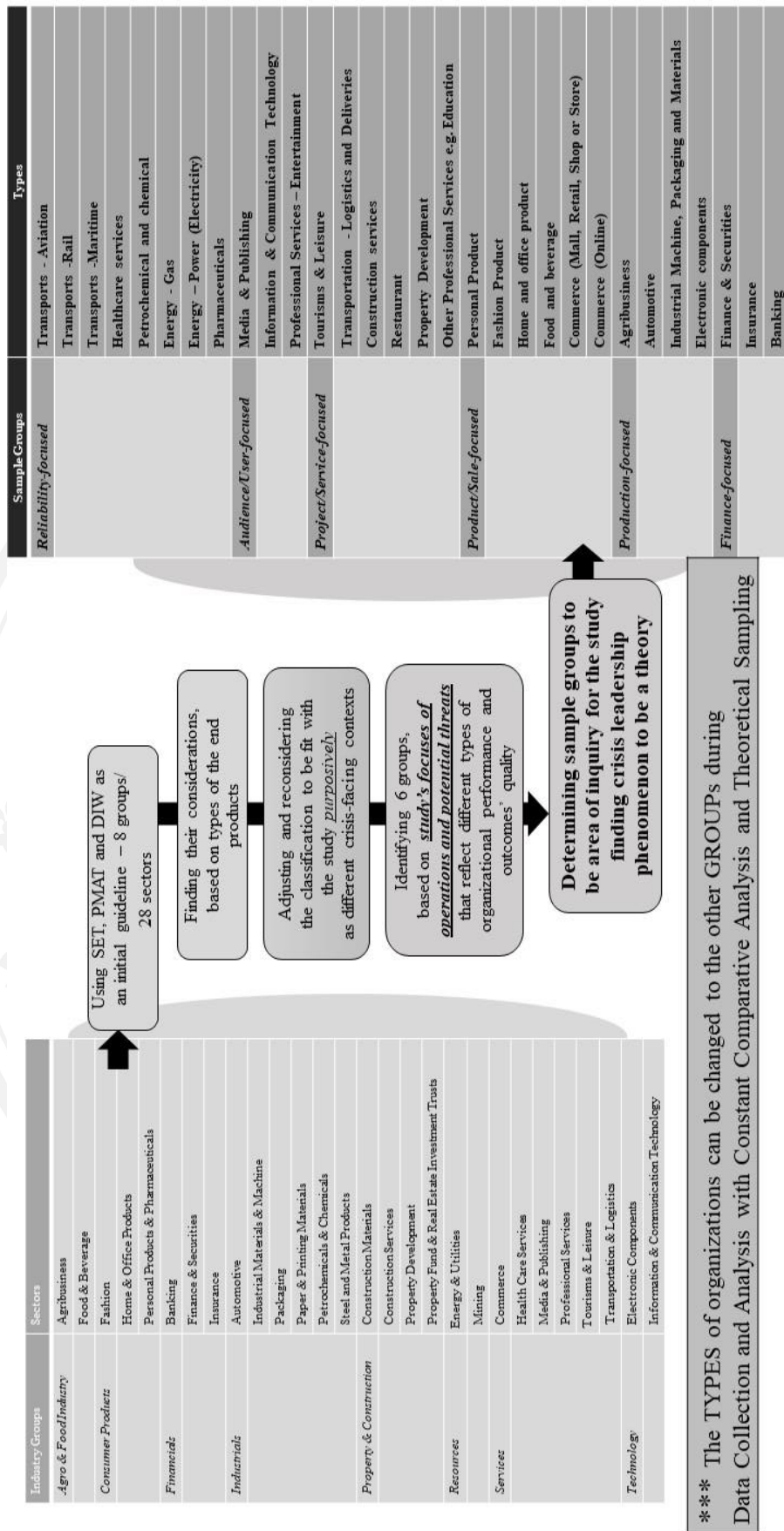


Figure 3.2 Sample Groups and Settings. Adapted from classifications of SET, PMAT and DIW

In screening for the crisis-facing contexts during research process, a meaning of crisis was referred to crisis definitions excluding overlapped meanings with emergency and disaster (Al-Dahash et al., 2016). The researcher applied definitions of crisis as criteria to select the appropriate organizations from those domains or any specific sections in those organizations to find the crisis leadership phenomenon in crisis. From key definitions of Booth (1993) and Shrivastava (1993), the operational definition of the term 'crisis' in this study was used for screening organizations' experiences, searching for a crisis-facing context is as following.

Crisis - An occurrence from combination of disruptive, turbulent, unexpected, and stressful situations or environments, - that impacts and influences human or any systems' conditions through physical, mental, emotional, environmental, cultural, operational, organizational, or reputational aspects, - which needs sensibility, predictability, urgent decision making, managerial actions, and resilience capability for anticipation, responses, mitigation, and containment, including restoration to normal conditions.

As a result, the key criteria for selecting participants in any organization are the experience of crisis that organizations get impacts from disruptive, turbulent, unexpected, and stressful situations or environments. Therefore, this situational context is not limited to only one organization, rather it can be the specific phenomenon across different organizations. Egan (2002) mentioned that this is an area of inquiry as it "can be described in a variety of ways or levels, including as a specific phenomenon, a place or location, or a context" (p.281) that this will help to increase generalizability of the result as the study across domains and organizations for theory building as expected. From Glaser and Strauss (1967), Charmaz (1996) stated that grounded theory works "have potential for greater generalizability (for example, when conducted at multiple sites) than other qualitative works" (p. 48)

3.4.2 Sample Size

This study initially expected to interview 30 informants as it is the average number from scholars' recommendation as being the dissertation and theory development research or when it reaches the theoretical saturation (Creswell & Poth, 2016; Hennink et al., 2017; Mason, 2010; Saunders et al., 2018; Willig, 2014). This

also might help to meet the standard requirement or reviewers' expectation for publication of some journals. There is no specific guideline for the number of informants for a qualitative dissertation. Some scholars discussed and suggested differently on this issue by various considerations of sample size and its saturation (Bloomberg & Volpe, 2018; Creswell & Creswell, 2017). Creswell and Poth (2016) presented that the number of participants in qualitative research range from one (Huber & Whelan, 1999; Padilla, 2003) up to 325 (ePolkinghorne, 1989) and they suggested that "in grounded theory, we recommend including 20 to 30 individuals in order to develop a well-saturated theory, but this number may be much larger (Charmaz, 2014)" (p, 226). In the grounded theory, the sample size is flexible as Egan (2002) suggested that "a specific plan for sampling cannot be clearly developed in the initial stages due to the predisposition that sampling decisions should be informed theoretically. Therefore, ongoing decisions about the direction of data collection are dependent on the emergence of categories and grounded theory" (p. 282).

Furthermore, theoretically, the final number of sample size depends on consideration of theoretical saturation, not only thematic saturation (Hennink et al., 2017). Saturation was considered after finishing each interview and coding process whether the number of participants should be added or not. Fusch and Ness (2015) suggested that "data saturation is reached when there is enough information to replicate the study when they able to obtain additional new information has been attained, and when further coding is no longer feasible." (p. 1408). However, as this study is PhD dissertation with the expect to publish in the standard journal that some journals' traditions might require the referenced number around 25 – 30 samples, this study then planned to interview 30 participants even beyond saturation point. Therefore, the researcher initially expected 30 participants for the sample size in anticipating the publication standard or requirement by some journals. In the actual research process, two pilot cases were included as usual as in a qualitative method. Also, one additional candidate who was already contacted and screened was included to be last participant as an extra discriminant sample. Eventually, this study had 33 participants joining the research project.

3.4.3 Sampling Procedures

The researcher designed the purposive sampling as usual in qualitative research (Bloomberg & Volpe, 2018), concerning target participants from various sites but the same phenomenon of crisis leadership in their different crises. The participants were selected from those sites, identified by the criteria of the crisis leadership practices in each focal organization. This helped the researcher to conduct the grounded theory effectively in getting data from the accurate area of inquiry (Egan, 2002) as Cobin and Strauss (1990) emphasized that “sampling in grounded theory proceeds on theoretical grounds” (p. 422).

3.4.3.1 Sensitizing Concept Exemplars Sampling

This study needs to choose participants who can provide rich information about the meaning of concepts or ideas within a specific context (Patton, 2015). The individuals who can provide the valuable explanation of meaning and mechanism of crisis leadership were searched for. Therefore, this method of sampling adopted Patton (2015)’s sensitizing concept exemplars sampling strategy from 40 purposeful sampling strategies. Patton (2015) provided explanation for this strategy as to “select cases for study that are exemplars of the concept or construct that is the focus of inquiry to illuminate the theoretical ideas of interest” (p. 407) and mentioned that “empowerment, leadership, inclusivity, sustainable development, complexity, and innovation are sensitizing concepts” (p. 407) which match with this sampling strategy.

3.4.3.2 Participant Selection Procedures

In selection, the researcher found and approached ones who can be a coordinator for participant selection. The coordinators were HR persons, other assigned point-of-contact persons, and ones who can help the researcher to find the right participants for this research project. The selected organizations were chosen from the scale of business and the impacts of crisis consequences, including the convenience and accessibility of those organizations in cooperating with this research project. This study did not only select the successful organizations because it would cause a problem that participants might come from only the executive level because management levels can perform well in controlling organization to the success which was not relevant to the study of situational context. As a crisis can emerge in any

levels, crisis leadership can happen in any levels as well whether those phenomena would help the organization meets the success in overall or not.

From 30 business types, the researcher made a contact with the coordinators, learned background information of those domains, and assessed the probability of crisis in those business sectors, to exclude some types which are not the area of inquiry for crisis leadership (see Figure 3.3). Next, the researcher provided information of the research project's objectives to the coordinators of those screened crisis-facing organizations. By conversation and discussion about the understanding of crisis in their organizations to assure in selecting the appropriate informants, the coordinators clearly understood the meanings of crisis and leadership in the aspect of leadership at any level, not only executives. Then, they thought of potential candidates to be research informants or so-called crisis leadership exemplars according to Patton (2015).

Next, with the understanding from the researcher, the coordinators identified people who were matched with the research scope to be the candidates. As this study did not limit the levels of participant, they were able to consider by these criteria from any levels in organization. If they could not find the participants by themselves, they then advised the researcher to the other coordinators such as ones in specific operations to select the appropriate person according to the list provided. Finally, these candidates were finally checked by the researcher applying the list of criteria in the checklist in Table 3.1 to systemically test for each item and explanation again. After finishing selection, the researcher noted the detailed demographic information such as work experiences, and training experiences to be further uses.

However, in actual research operations, the research found that some coordinators helped to suggest the other domains' coordinators or participants if they were involved in the other areas of business in various domains. Also, the researcher could not succeed the selection process to get the same amount of number for each sample group due to accessibility and some candidates did not pass the research selection process.

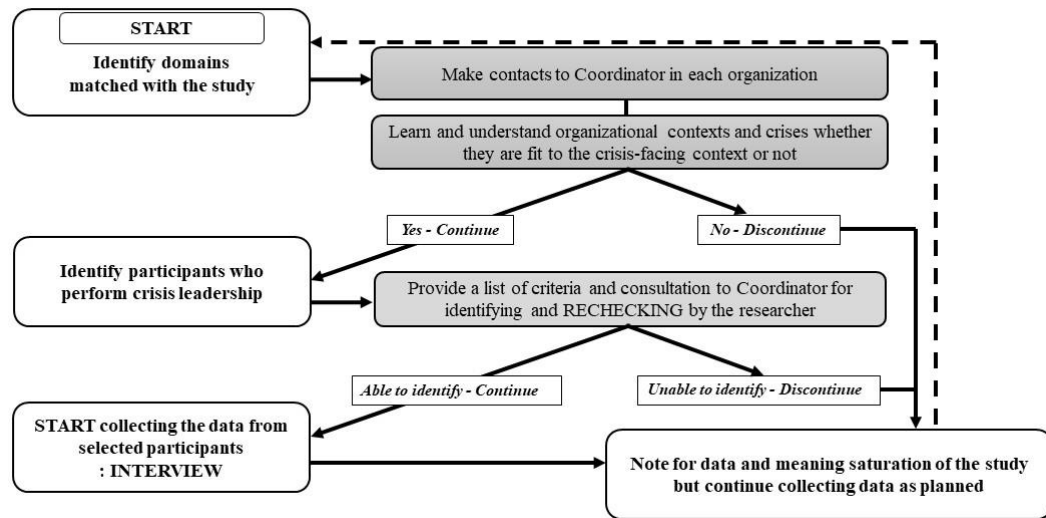


Figure 3.3 Participant Selection Procedure

3.4.3.3 Selection Criteria Checklist

For the specific criteria as mentioned, the checklist came from the existing concepts and elements of crisis leadership mentioned by previous literature as mentioned in Chapter 2 (Boin et al., 2013; James & Wooten, 2005; Prewitt et al., 2011; Stern, 2013). The researcher adjusted the reviewed practices, strategies and tasks of crisis leadership to be seven criteria. Nevertheless, because the participants came from various levels and positions, not only managerial or leader roles, this study hence set the additional one more criterion as 'leadership' to screen participants who have leadership by themselves, not by a management position or authority as the criteria in Figure 3.4.

As mentioned in Chapter 2, even these concepts and components are not a theory of crisis leadership that have to explain individual phenomenon by the meaning of leadership theory; they however helped to identify the individuals who practice crisis leadership to be informants for deep exploration in this study. By the aims is to find individual phenomenon, elements, and elements' relationship and process, this study viewed participants as the target informants rather than subject-matter experts (SME) as SME is defined as persons who are technically qualified and have technical knowledge (Hopkins & Unger, 2017; Mattoon, 2005). In this study of

crisis leadership, participants did not realize themselves in having or being the crisis leadership that needs the other persons to identify them.



Practices of Target Participant/Informants	Criteria	References
Crisis Sensemaking	☐ have foresight, awareness, and continuous vigilance.	(Boin et al., 2013; Turner, 1978; Weick & Sutcliffe, 2002)
	☐ have a collective understanding of the nature, characteristics, consequences, and potential scope and effects of an evolving threat.	
	☐ be good at processing information and creating a dynamic picture that everyone can understand the potential consequences, including determining for specific information needs.	
Critical Decision Making	☐ carefully deliberate in making a decision timely and appropriately.	(Boin et al., 2013)
Responsive Action and Containment	☐ act effectively in responding, controlling, and containing situations.	(James & Wooten, 2004; Wooten & James, 2008)
	☐ can balance between the extremes of persuasion and command-control, so-called 'orchestration' which is coupling and decoupling including vertical and horizontal coordination for creative and innovative problem solving.	(Ansell, Boin & Keller, 2010; Boin et al., 2013; Nooteboom & Termeer, 2013; Perrow, 1984; Quarantelli, 1988)
Meaning Making Communication	☐ have abilities to interpret the emerging situation and convey the intention and planned action to cope with crisis.	(Boin et al., 2013; Jo & Shim, 2005; Mayfield & Mayfield, 1995; Sullivan, 1988)
Termination	☐ keep dealing with the situation until the termination and restoration.	(Boin et al., 2013)
	☐ have accountability of their own actions during crisis and positive attitude to not blame others before crisis termination.	
	☐ have ability to learn for adaptation, improvisation, preparation and the solution discovery for the future.	
Leadership	☐ can influence others to follow in situations relating to crises through interpersonal political skills that should emerge from personal intention, not being forced by positional functions or exercising authority.	(Cleaton & Mason, 1934; Graetz, 2000; Lussier & Achua, 2015; Moss & Barbuto Jr, 2010; Vroom & Jago, 2007)

Figure 3.4 Selection Criteria of Participants from Crisis Leadership Practices

3.4.4 Data Collection and Analysis Methods

In grounded theory, there are concurrent and continual activities between data collection and data analysis (Bloomberg & Volpe, 2017). The researcher as a key research instrument (Creswell & Creswell, 2017) collected data by the interview and analysis exploring the meaning and phenomenon of crisis leadership including constructing its theoretical framework from crisis leadership exemplars.

3.4.4.1 Semi-structured Interview

The interview was one-on-one and semi-structured interview. The sequence was set by starting from one of each sample groups, sequencing group one to six and then repeat from group one again on different types of organization until reach saturation. As a semi-structured interview, the researcher had to prepare the questions before the interview session. During interviewing, this method provides freedom, flexibility, and openness for the participants to express their views by their own words (Creswell & Creswell, 2017; Rubin & Rubin, 2011). In semi-structured interview of this study, the interviewer and interviewees were in an informal environment to make the interviewees as the informants feel relax and ready to share the data needed. Furthermore, the researcher adjusted some questions throughout the interview session for getting useful and complete information. The semi-structured interview was appropriate because of the research paradigm and the purpose in building a theory that some structured question will help in developing a leadership theory. Meanwhile a structured interview is rigid as researchers read a series of questions from a script for interviewees by the same questions in the same order allowing deviate as little as possible, an unstructured interview is informal as researchers do not have to prepare questions because their paradigms is to explore lived experiences such as phenomenology (Qu & Dumay, 2011).

3.4.4.2 Pilot Study

In this study, the researcher conducted pilot study prior to the data collection phase to check the suitability and understandability of interview questions, to assess language and sentence of those questions can be probed and gain rich and deep information, to anticipate problems that might occur, and to test the time period of the interview was appropriate. The researcher conducted two pilot studies for double-checking with two participants. The pilot cases were conducted in a private

company and air traffic controller through the researcher's personal contacts. Nunes et al. (2010) stated that "a pilot-study stage should be considered in the research design of the grounded theory studies" (p. 76). The pilot study is a mini version of a full-scale study as a feasibility study, which is essential for research project. It will be applied to pre-test and refine a research instrument or protocol (Kim, 2011; Nunes et al., 2010). Therefore, after the pilot tests, this research project adjusted some sections of interview protocol to help participants easily recalled the past events.

3.4.4.3 Interview Protocol

After getting the participant from the selection process, the researcher contacted them by phone call, the LINE application, or e-mail to make a formal invitation and an appointment for the interview. In the final period of COVID19 pandemic era, the researcher still conducted online-video (virtual) meeting or a phone call to interview depending on participants' convenience. Nevertheless, it did not disturb data collection process as the researcher had built rapport and mutual trust before the interview.

This study took time about 45-60 minutes and more than this because some participants had a long story and explanation to provide that the researcher already considered to not interrupt them as it was beneficial for the research objective. In the interview process, the researcher firstly informed the participants about general information of the study, the right for denying to answer questions, and they can withdraw from the session any time. In details, the researcher asked for their permission before the session, in using an audio record of the interview. Also, the researcher provided the consent form to all participants prior to begin data collection. The purpose of informed consent is to protect the privacy and confidentiality of participants, maintaining confidentiality and privacy of all data gathered, and ensuring participants' understanding that participation is voluntary (Creswell & Creswell, 2017). The flow of interviewing questions was applied from the prepared interview protocol. The interview protocol is displayed in Appendix A.

All interviews were conducted and transcribed in Thai language and then were translated into English during the phase of result report. During the research project, the researcher did member checking. The restated or summarized information by the researcher was determined the accuracy and appropriate by those participants

who provide information (Creswell & Creswell, 2017). The researcher noted comments and concerns of the participants during the interview.

Additionally, the researcher applied probing technique during the interview in order to deepen and clarify issues, and helped the participants expand and fulfil their information including initiate the new points. These probing questions were sub-questions under each prepared questions that emerge by the researcher naturally during conversation or purposively used to get more information extending from the interviewees' answers (Creswell & Creswell, 2017). The words used in each question were general and simple to understand for participants without unclear or technical words that make them misunderstand to answer, or be forced and led by biases. Furthermore, as this study concerned that the incidents and events from participants' experiences might be the story in the past more than a year since the pandemic. Therefore, the time that the researcher as an interviewer provides for participants to recall would be significant including probing questions to help them imagine about, or associate with, those real scenarios from past experiences and stories.

In this study, the semi-structured interview was conducted to answer the main research question including five sub-questions. The researcher ensured that the interview protocol covers the key inquiries throughout the interview by developing a list of the interview questions used as the procedural guideline during interview process. The same interview guideline was used with all participants to answer five research questions. According to these research questions and the background of leadership theory building (Lussier & Achua, 2015; Vroom and Jago (2007), the interview protocol was categorized in six general sections as followings: 1) experience and meaning of crisis, 2) meaning of crisis leadership, 3) internal backgrounds, processes and mechanisms of individuals who perform crisis leadership, 4) external environment and mechanisms influencing individuals who perform crisis leadership, 5) deep elements relating to crisis leadership, and 6) interaction and causal relationship among internal and external elements relating to crisis leadership. Each section consisted of a main question, and the other sub-questions with tentative probe questions depending on situations.

Practically, the researcher started the interview by asking the participants to describe their experiences and began the section one in build a rapport from discussing meaning and understanding of crises in their domain and organization. The researcher asked for their experiences on the incident of crisis (Spradley, 1979) that the coordinators mention about, in selecting them to be participants. This interview technique was called as the critical incident technique (Flanagan, 1952) and the developed one, so-called Behavioral Event Interview (BEI) (McClelland, 1998). Then, from the second section and later on, they were asked to recall their behaviors, thoughts, and other elements and process in the situation based on discussion in the section one. Critically, the researcher avoided to mention that their phenomena were crisis leadership, only asked their external and internal experiences, actions and thoughts including rationales during those situations of crisis. It mitigated a bias for the derived data.

Furthermore, the protocol for this interview adopted tips for the interview suggested by Jacob and Furgerson (2012). Their tips recommended the researchers to start the interview with the script. The consent form was collected before the interview and give participant a time to read through the form that provides opportunity for discussion some issues before the interview. Also, using recording device and only writing brief notes in order to concentrate with participants was the effective techniques for interviewer including setting the semi-private interviewing environments avoiding background noise and too privacy which can be negative impacts. Before the session, the researcher prepared the blocking off time by clearing schedule and preparing for no-distraction environment.

For the protocol relating to further data analysis, the researcher recorded information gathered from the interview in form of e-files stored in Microsoft Word and Excel computer programs in the researcher's laptop computer with a protected password. As ethical consideration, the researcher kept all data, communications, audio files, and the transcripts in a highly confidential manner. All notes were kept in lockable places. Furthermore, as a plan to use data analysis through the computer platform; Microsoft Word, Excel, and PowerPoint, data were stored in that system as well. After the end of this dissertation project, the researcher will destroy all raw information related to this study. Also, all interview results will remain confidential.

Maxwell (2013) pointed out that qualitative data analysis is a complex process that requires clear critical thinking. Nevertheless, well-constructed interview questions assisted the thought process and deliver the essential data collection which led to the rigorous data analysis.

3.4.4.4 Theoretical Sampling and Saturation

During the qualitative research process, the researcher had to seek for more participants to get deeper understanding or stop collecting data if it was saturated (Thomson, 2010). Nevertheless, this research expected 30 participants for the sample size as the literature's average and for anticipation of publication standard or requirement by some journals. As planned, saturation can be decreased or increased depending on the emerging themes and theoretical relevance until reaching both data saturation and theoretical saturation. The data collection in this study stopped when it had reached the point that there was "no additional issues or insights emerge from data and all relevant conceptual categories have been identified, explored, and exhausted. This signals that conceptual categories are saturated, and the emerging theory is comprehensive and credible" (Hennink et al., 2017, p. 592). Furthermore, this study adopted the developed concept by Hennink et al. (2017) in assessing the saturation by being aware of code saturation, identified as 'heard it all', and meaning saturation, identified as 'understand it all'. Nevertheless, after the data had saturated, the research continued collect the data in order to conduct discriminant sampling and increase transferability of the study (see Figure 3.4). It was important for this study as the theory development research. Additionally, sample size was increased beyond discriminant sampling until assuring the publication acceptance regarding the number of the interviews.

3.4.4.5 Discriminant Sampling

This study also applied a strategy in the grounded theory method which is a technique to move toward saturation so-called 'discriminant sampling' (Creswell & Poth, 2016) that researchers conduct additional cases after the emerging theory has been constructed for examining if the theory still remains true (Creswell & Poth, 2016; Johnson, 2015). Johnson (2015) suggested that "if the cases fit the advanced theory, greater validity can be ascribed to the findings. If not, however, the researchers may go back to the theoretical model, revise it and repeat this process" (p.

270). Creswell and Poth (2016) mentioned that using discrimination sampling is fit to Charmaz (2006)'s grounded theory perspective with less structured and adaptable. Therefore, this research was planned to get the additional participants in if the number went beyond 30 participants or continue interviewing participants even it reached saturation already if the saturation was reached before 30 participants.

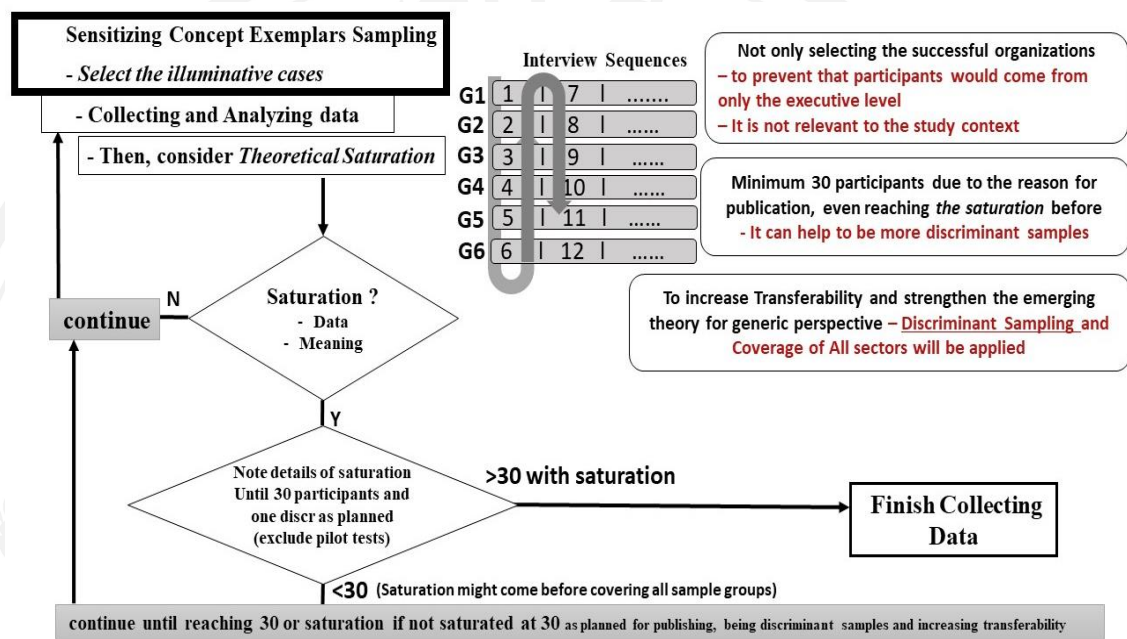


Figure 3.5 Sequence, Saturation, Theoretical Sampling, and Discriminant Sampling

3.4.4.6 Theoretical Sensitivity

The researcher has increased theoretical sensitivity by initially reviewing relevant literature. Although qualitative researchers in the grounded theory were recommended to review literature after data collection to avoid some biases in data analysis (Luckerhoff & Guillemette, 2011), a qualitative dissertation still needs an opportunity for the literature review first to present what is known about relevant knowledge and how can be a “part of a broader conversation” (Bloomberg & Volpe, 2018, p. 137). This enhances researchers’ theoretical sensitivity as this study did. Thus, meanwhile the researcher collects and analyzes the data for integrating and the metizing into a theoretical framework, the theoretical sampling together with this

theoretical sensitivity will assist the researcher to ensure the saturation of data collected reflecting the final product as a theory (Bloomberg & Volpe, 2017).

3.4.4.7 Data Transcription

From the interview, the research transcribed data by processing information in the transcript including nonverbal actions, physical orientation, languages, and interview environment (Davidson, 2009; Green et al., 1997). Then, the researcher converted video recording and the field notes up into text form. Coding procedures through analysis tools were highlighted on the transcripts to identify keywords and meaningful sentence for further analyzing the data. After that, it was the step of reading through all data (Creswell & Creswell, 2017). Vaismoradi, Jones et al. (2016) mentioned that the ability to generate ideas and make sense of the data will depend on the data immersion which is the closeness of the researcher to the data. The researcher had to read the transcripts carefully several times to get a general sense, understanding, and familiarize with the information including note emerging ideas before breaking them into parts.

3.4.4.8 Data Coding

In coding, the researcher analyzed qualitative text data that will be broken down and took apart to see outcomes before putting them back together in a meaningful way (Elliott, 2018) by tagging the relevant disparate data to a particular point which allowed the researcher to make sense of the data in relation to the research question (Creswell & Creswell, 2017). Coding is a key method of data analysis. In grounded theory, data analysis happens together with data collection. Charmaz (1996) suggested that “the researcher engages in data analysis while collecting data. That data analysis drives subsequent data collection. The grounded theorist's simultaneous involvement in data-gathering and analysis is explicitly aimed towards developing theory. Thus, an interviewer will adapt his or her initial interview guide to add areas to explore and to delete questions that have not been fruitful” (p. 35).

In this study, through three steps of coding: open, axial, and selective coding, the research conducted practical techniques to analyze the data through line-by-line coding, focused coding, constant comparison, and memo writing. Egan (2002) called this as naming, comparing and memoing. Firstly, after getting data from each

participant, this study started line-by-line coding, in the step of open coding, by naming codes next to each line of data which keeps the researcher close to the data preventing “taking off on theoretical flights of fancy” (Charmaz, 1996, p. 37). This is different from typical qualitative methods that researchers code from large information. Practically, this study made sense out of the text data as line-by-line analysis, divided them into text segments and labeled the segments with codes. Codes were examined for overlapping and redundancy. New codes were assigned if the data did not fit the existing codes.

Secondly, this study proceeded to conduct the focused coding during the step of axial coding by taking previous open codes from line-by-line codes to try out to set categories or themes identifying by examining the relationship of the open codes, comparing them for differences and similarities. This process generated the clusters of codes that, according to research questions, hence the researcher assigned similar codes to be sub-themes, and themes. This is called constant comparative method that compares data between different categories, different participants, and different points in time, in generating themes for theoretical generation.

Next, even the researcher started memoing since the data collect begins, it strongly relates to the step of selective coding. Through memoing, the researcher can “articulate, explore, contemplate and challenge their interpretations when examining data” (Birks et al., 2015). The researcher further took the emerging categories to make them active and studied their process and relationship, making sense of them. The form of memoing was a narrative essay that captured the researcher’s thought, analysis, and emergent conceptual framework. Then, the researcher with theoretical sensitivity applied theoretical sampling to consider the further data collection from more participants to saturate categories and process of emerging theory.

3.4.4.9 Memo Writing

The researcher wrote memos whenever having an idea, stretching thinking, and interrogate the data. It helped to shift qualitative inquiry into an explicit analytic attempt in grounded theory method. Furthermore, the researcher moved the data and analysis from description to be storytelling of the focal phenomenon (Glaser, 1998). In memo writing, it was not only the intermediate approach between collecting

the data and drafting the dissertation, but also this tool helped the researchers to capture ideas from data to illuminate themes and the further probing for more data. This study adopted Charmaz (2008)'s suggestion in writing grounded theory memos that has to contain a title of the memos for easy sorting and storage, write memos throughout the entire research process, delineate the conditions underlying their sources, emergence, maintenance, and changes of codes and categories, and compare among various codes and categories.

3.4.4.10 Translation Procedure

An issue of translation was critical in this study as the research project was conducted in Thailand. Even all targeted organization are under the standardized organizational design as the western format. People in organizations under all sample groups of business mostly spoke by using Thai language. Therefore, the translation procedure was focused and clearly designed before starting the project. As Chen and Boore (2010) stated that "no standardized procedures exist for evaluating the influence of translation on the trustworthiness of data in qualitative research" (p. 237), this study adapted the translation methods and ideas from Chen and Boore (2010), Nurjannah et al. (2014), and Mouratidou and Crowder (2018) that they proposed suggestions for translation of grounded theory research differently on types of translators, team settings and interpretation process. From various ways to enhance the quality of English translation and adaptation issues, this study considered to have a translation procedure as shown on Table 3.2.

As planned, the researcher defined two types of translators in the team that two persons for the first type and one person for the second type. Firstly, the professional translator one is an expert of English language. She graduated in the degree of English language and work as an English teacher and professional translator for movies' subtitle. Secondly, the researcher approached the HRD translator who in the area of HRD, OD, leadership or psychology that she is a PhD student in international program or scholars who is bilingual. The researcher also was in the process of translation and translation team as proposed as he is in the PhD international program based on English language and graduated Master degree from Australia. He also works as instructors based on English-language in various training programs. The team of these three people set up the meeting to translation Thai

information from the interview and analysis to be the English. The professional translator two is an English teacher and the researcher assigned him to be the back translator that helped to translate the information back to Thai and joined the team later to make a decision in editing words when the team firstly got the feedback of back translation from him. The results were the English version of derived codes.

Table 3.1 Translation Process

Process	Translator
Transcribing data in Thai language and then conducting analysis	Researcher
Oral presenting the data transcription to the translation team for interpreting the overall idea from the interview.	Researcher
Individually translating odes, themes and categories to English.	Researcher, 1 st Professional
Conducting team discussion for finalizing the translation	Translator, HRD Translator
Back translating codes, themes and categories to Thai language.	2 nd Professional Translator
Comparing and adjusting the result of back translation to the team's translation to be the final translation	Researcher, 1 st Professional Translator, 2 nd Professional Translator, HRD Translator

3.5 Trustworthiness and Quality of Qualitative Research

The researcher concerned in the quality of this study. Mays and Pope (2000) mentioned qualitative researchers can present the issue of quality by ensuring self-conscious research design and process. There are various ways to improve quality of qualitative research including triangulation, respondent validation, clear exposition of

methods, reflexivity, procedural rigor, interpretative rigor, evaluative rigor, and transferability (Kitto et al., 2008). Lincoln and Guba (1985) presented the term 'trustworthiness' representing as validity and reliability in qualitative research. Trustworthiness increases readers' confidence that the findings are worthy to attend (Law, 2002).

Referring to Shenton (2004), trustworthiness consists of credibility, transferability, dependability, and confirmability. Credibility replaces truth value and the most crucial technique for increase credibility is member checking. Transferability replaces applicability or external validity as conventionally conceived. Dependability replaces consistency or reliability by peer auditing procedures. Confirmability, replacing the neutrality or objectivity by auditing which is an exercise in reflexivity and the provision of a methodologically self-critical account of the research (Lincoln & Guba, 1985). Nevertheless, trustworthiness is negotiable and open-ended, not being a matter of final proof nor readers are compelled to accept. The researcher assured trustworthiness of the study as the followings.

3.5.1 Creditability

The researcher did the member checking with the participants both taking place during the interview, and at the end of the data collection dialogues (Shenton, 2004). Also, the back translation was important to interpret the accurate meaning and it was necessary for naming the themes for being the understandable word uses. In this study, the researcher both perform member checking during the interview by restating or summarize the information which the researcher gets from the participant, and also asked the participant to determine accuracy at the end of the interview sessions. Furthermore, the researcher noted comments and concerns of the participants during the interview. Also, the debriefing sessions assisted the researcher to recognize own biases and preferences (Shenton, 2004).

Also, this study was careful about the data saturation during data collection and analysis process. Besides the data or thematic saturation, the research used theoretical saturation which is important for this theory development research. Additionally, this study applied the discrimination sampling by conducting extra data collection and analysis to enhance validity of this research project. Therefore, these

practices increased creditability which is the confidence of the truth of the finding (Shenton, 2004). Creditability is the internal validity in quantitative research, where researchers seek to certify that their study measures or examines what is actually intended. Ensuring creditability is one of the most importance in creating trustworthiness.

3.5.2 Transferability

This study attempted to promote the transferability hence the researcher designed the method to collect the data from various business sectors but the same phenomenon of crisis leadership as the area of inquiry (Egan, 2002). Thick description describing the phenomenon under investigation in sufficient detail was provided to allow readers to have a proper understanding. The description of different organizations and their crises were gathered and provided to readers. Also, this study provided supporting quotations from the participants as much as possible to present the raw data for readers to evaluate the extent to which the presented conclusions were transferable to another time, setting, as well as situations (Potidokmai & Kusumavalee, 2020) in Appendix A.

By this research design, transferability was enhanced as external validity which is the criterion for the study if it can be applied to another setting (Golafshani, 2003). In qualitative research, the researcher knows only the “sending context” (Shenton, 2004, p. 70), so readers are the ones who can determine whether the finding can be transferred or applied to another context or not, which is different from quantitative research (Curtin & Fossey, 2007). According to Shenton (2004), researchers cannot make transferability inferences but researchers have responsibility to ensure that sufficient contextual information is provided to enable the reader to make such a transfer by their own determination from detailed provided (Curtin & Fossey, 2007). This emphasizes that from the detail provided in qualitative research, readers should be able to determine if the findings can be applied to other contexts.

3.5.3 Dependability

The researcher presented the detailed procedures by flow charts of the research process and the informant selection and saturation procedures to clarify the

steps systematically. Additionally, during the data collection phase, to ensure that the participants understood the questions correctly and to evaluate the research inquiry procedures, the researcher asked the same questions with slightly different words. Finally, in the data analysis, the researcher did coding and recoding procedures to clarify and compare the results of the first time and the second time coding.

These processes improved dependability which refers to the consistency of findings, and the research repeatability. It was to ensure that the other researchers would get the similar finding, interpretations, and conclusions about the data if they research on the same data. Therefore, Shenton (2004) recommended that research should include sections as the research design and implementation, describing the detailed plan and execution of data gathering and evaluation.

3.5.4 Confirmability

The researcher took notes of thoughts and interesting ideas that emerged during the interviews, coding, and provide rationales behind codes and themes. The field notes during data collection process were applied according to the guideline of Phillippi and Lauderdale (2018) that consists of basic information, geographic setting, demographics, societal pressures, cost of living, interview setting, participants' appearance and character, and critical reflection. This guideline also helped to fulfil the research epistemology as the social constructionism. Besides the field notes, this study conducted memo writing or so-called memoing by adopt Birks, Chapman and Francis (2008)'s "mnemonic 'MEMO': Mapping research activities; Extracting meaning from the data; Maintaining momentum; Opening communication" (p. 70), and also conducted three levels of memo by Strauss and Corbin (1998)'s classification which are operational memos, coding memos, and analytical (theoretical) memos. These memos covered and reflected all process of this study from committees' suggestion on the proposal until the end of the research project.

Furthermore, by researching on different sectors and organizations, this study gained an in-depth understanding of the different points of view to increase confirmability. Additionally, even this research did not include the participative observation, the research received the other ways of data from the coordinators and key persons in each organization who provided the background information of crises

in each environment that helped to enhance the interview result by participants. Confirmability is a level of confidence that the research findings are based on the participant's narratives and words, rather than a potential researcher biases, motivations, and interest (Shenton, 2004). Audit trail and reflexivity techniques can be used to establish confirmability of the findings (Curtin & Fossey, 2007). According to Shenton (2004), the audit trail means that qualitative researchers note interesting issues research process whereas reflexivity concerns "the direct acknowledgment by the researcher that he or she is an active participant throughout the research process and therefore has a significant influence on the development of the research and the engagement of the participant." (Curtin & Fossey, 2007, pp. 92-93). Furthermore, genuine care, concern, and interest for participants during the interview were the critical factors that they could sense and this could affect their responses in sharing more information or not as Jacob and Furgerson (2012) mentioned that the counselling skills as a good listener by the interviewers that in this study the researcher have the certificate on this can help interviewees feel comfortable to sharing their stories.

3.5.5 Qualitative Research Reporting Guideline and Standard

Furthermore, the researcher already examined all research procedures and techniques with Journal Article Reporting Standards for Qualitative Research (JARS-Qual Working Group) by the American Psychological Association Publications and Communications Board Working Group (Levitt et al., 2018) that was critical for this research project for the standard requirement in publishing. Levitt et al. (2018) explained that "the reporting standards were developed for psychological qualitative research but may hold utility for a broad range of social sciences" (p. 26). The details of traditions, methods and reporting styles were illustrated for authors in submission and reviewers and editors in the review process. Therefore, the researcher adopted this as an important guideline for this study and the research report.

3.6 Limitation and Delimitation

This research studied crisis leadership through individuals under a form of organization which not cover the aspects of bureaucracy and international relations which relates to public crisis management, governmental leaders, or international conflicts and crises. The researcher considered that these contexts involve with public or national leaders that their leadership can be influenced strongly by authority and position rather than crisis leadership of any individuals as the research objectives expected. This limitation came from using the qualitative approach which has the limit in generalization. Although the researcher designed the study of grounded theory in promoting the transferability of crisis leadership phenomenon across domains and organizations but the same situational context in crisis phenomenon, there were some gaps that this study was impossible to cover them all.

Also, the researcher concerned the issue of recall bias that might happen because participants could forget some information and details at that period of time (Bryant et al., 1989; Raphael, 1987; Wasserman et al., 2009). Some incidents that this study asked them to explain had emerged before the COVID19 pandemic time. However, during the interview process, the researcher let participants take time to recall those events and used probing question with scenario-based discussion and demonstration as simulation to elicit data by helping them to recall the phenomenon.

3.7 Research Bias

Even conducting the grounded theory methodology, the researcher was aware of research bias. The researcher anticipated some bias emerging from working experiences in crisis-facing professions such a helicopter pilot, an emergency response team, airport operations, and air traffic management. However, it did not affect the analysis in concluding the result without referring to the raw data from participants. Research bias is tendency that prevents unprejudiced consideration. This could occur either intentionally or unintentionally during research process that causes false or misleading conclusions. Therefore, readers need to know this bias for reviewing the method critically and constructively (Pannucci & Wilkins, 2010).

The bracketing is a useful technique to eliminate personal bias by putting aside the researcher's own beliefs on the research process and focusing the conversations discovering participants' information (Creswell & Creswell, 2017). Gearing (2004) explains bracketing as a "scientific process in which a researcher suspends or holds in abeyance his or her presuppositions, biases, assumptions, theories, or previous experiences to see and describe the phenomenon" (p. 1430). After discussion with the coordinators that the researcher used pre-existing knowledge based on literature review only to screen the appropriate samples as the purposive sampling. The researcher conducted the interview without prejudiced attitudes and worldviews, and only listen to the data with a nonjudgmental mindset.

Nevertheless, although the researcher reduced bias as much as possible, some could occur unintentionally and some interfered intentionally as used as theoretical sensitivity in constructing the output of grounded theory method. Lever (2013) mentioned that grounded theory researchers are not fully external to the process of emergence because they actively construct the theory, but they also are not a part of found elements because they acknowledge that the world exists outside of the researchers' mind.

3.8 Researcher Positionality

Throughout the research process, there is always the likelihood that researchers may impact the methodology or findings of the study. Therefore, it is necessary that the researcher stated the 'positionality statement' or 'reflexivity' to present a self-conscious awareness of the relationship between the researcher and others. This is also critical that the researcher was mindful during research project (Bourke, 2014; Corlett & Mavin, 2018).

Positionality Statement:

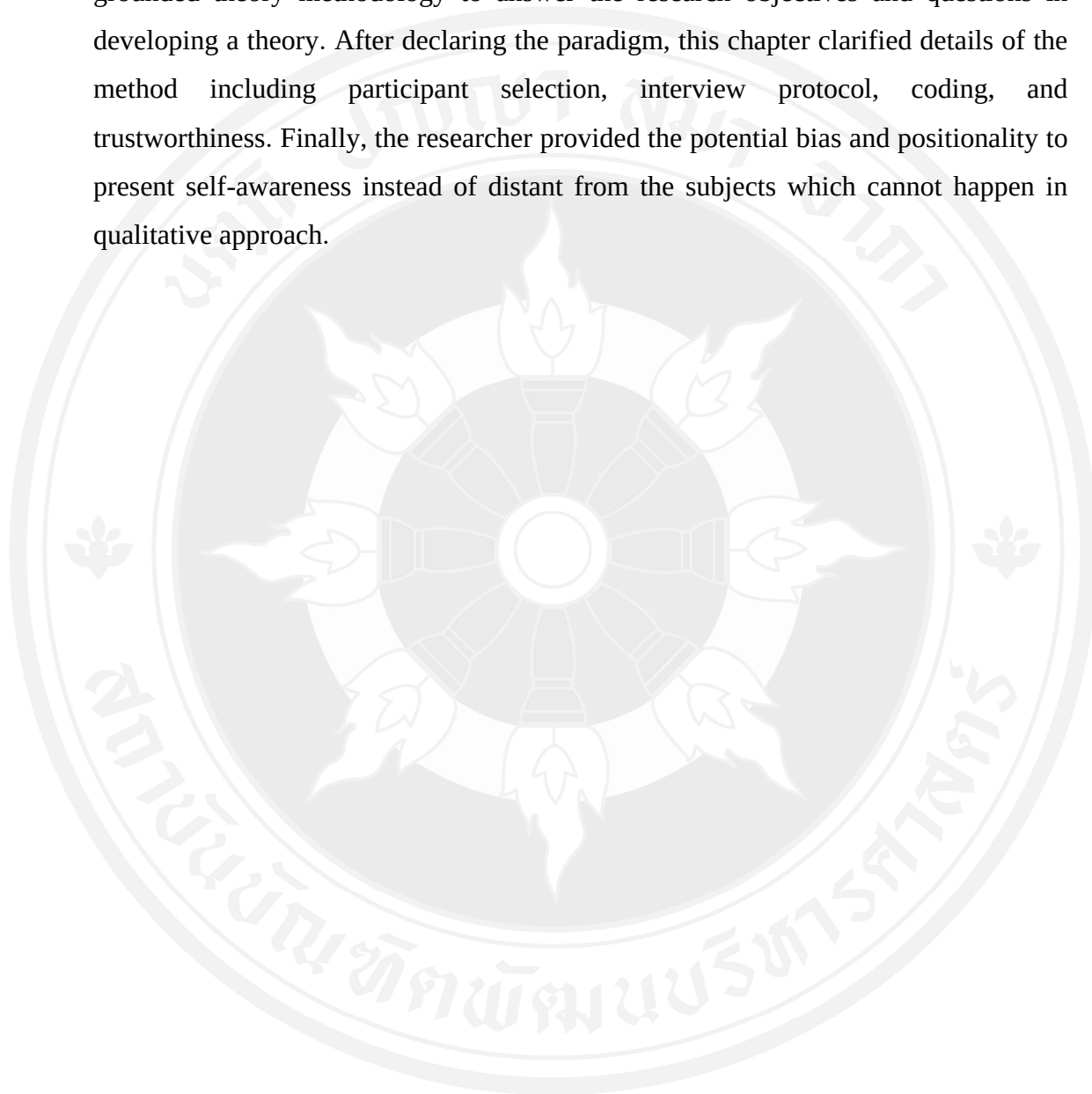
The researcher has backgrounds in military pilot qualified by Thai and United States military and work experiences in safety management, emergency response planning, accident investigation, and human factors instructor and analyst since 2005. While studying Master degree, the researcher was interested in research topic of safety culture and HRO. In continuing the Ph.D. journey, the researcher focused on

the areas of HRD and OD, hence the researcher started to research more about areas of passion, intrinsic motivation, and self-determination theory including learning and agility. Furthermore, since the doctoral studying period starting in 2018, the researcher has been working as the Head of Airport Operations that this experience combined with the prior experiences in safety management, emergency management, and human factors, including curiosity of academic research has caused the interest in the topic of crisis leadership. The researcher believes that leadership is emerged inside everyone, not only belongs to people in specific leader or manager positions. Also, crisis leadership should have some differences from the other leadership as observing from the researcher's colleagues in various workplaces and operations for a decade from both military and civilian experiences including throughout different national, professional and organizational cultures.

As an instructor and an investigator, the researcher must apply a theory frequently at work, hence this causes the researcher would like to understand more about theory of crisis leadership. Then, when recognizing that there is no crisis leadership theory, this research gap was related to the researcher's other professional area of the helping professionals such as coaching and counselling that in building the theory of crisis leadership, researchers should elicit the rationales and underlying elements, through inductive approach with social constructionism epistemology, by an emphatic listening skill to construct a new theory which can explain this leadership phenomenon deeply and systematically. Lastly, according to my previous research interest and experiences in HRO, the researcher has a standpoint and assumption that crisis leadership in individuals might come from voluntariness and intrinsic motivation influenced by situations and it needs to find the reasons behind this individual phenomenon by this research. Nevertheless, to avoid prejudices and preconceived attitude from this researcher positionality, the researcher will apply various techniques used in grounded theory methodology to improve quality of research and have self-consciousness to prevent the research bias as mentioned above.

3.9 Chapter Summary

This chapter illustrates the process of this research project that the design and rationales including the actual process are explained. The method is under the grounded theory methodology to answer the research objectives and questions in developing a theory. After declaring the paradigm, this chapter clarified details of the method including participant selection, interview protocol, coding, and trustworthiness. Finally, the researcher provided the potential bias and positionality to present self-awareness instead of distant from the subjects which cannot happen in qualitative approach.



CHAPTER 4

RESEARCH FINDINGS

The purposes of this study were primarily to initiate theory development of Crisis Leadership Theory and also to explore the meaning of crisis leadership phenomenon and to understand the elements and process of crisis leadership phenomenon. The qualitative method served as a tool to provide rich and in-depth information from various participants. The researcher collected data by online semi-structured individual interviews and phone-call interviews for some who were not convenient because of the online video records or using the software application. The study findings of the meaning of crisis leadership and its elements and process are presented in this Chapter. The following topics are presented.

4.1 Participants and Crisis Contexts

4.2 Method of Data Analysis

4.3 Findings

4.3.1 RSQ 1: Meaning of Crisis Leadership

4.3.1.1 Category A-Deliberate and Immediate Decision-Making Processing and Planning

- 1) Theme A1: Emergent Design-led Strategic Thinking
- 2) Theme A2: Decisive Critical Decision-Making and

Planning

4.3.1.2 Category B-Agile Execution, Management, and Communication

- 1) Theme B1: Responsive actions and ambidexterity
- 2) Theme B2: Assertive actions and communication
- 3) Theme B3: Monitoring and Feedback

4.3.1.3 Category C-Appling Operational Arts and Tactics

- 1) Theme C1: Strategic communication
- 2) Theme C2: Vertical-Horizontal orchestration

3) Theme C3: Political tactics

4.3.1.4 Category D-Task, People and Change-Oriented Leading

1) Theme D1: Influencing others to follow rapidly

2) Theme D2: Centralized-decentralized controls

3) Theme D3: Being supportive

4.3.1.5 Category E-Emerging Feelings during Actions

1) Theme E1: Negative feelings in actions

2) Theme E2: Positive feelings with success

3) Theme E3: Positive feeling with returns

4.3.1.6 Category F-Crisis Handling Learning and Development

1) Theme F1: Crisis awareness

2) Theme F2: People-oriented learning

3) Theme F3: Post-crisis development

4.3.2 RSQ 2: Internal Mechanism of Crisis Leadership

4.3.2.1 Category G-Brain-Body Instant Reactions

1) Theme G1: Responsive reaction

2) Theme G2: Excitement

3) Theme G3: Effects of stress

4.3.2.2 Category H-Mental Instant Reactions

1) Theme H1: Thought reactions

2) Theme H2: Positive emotional reactions

3) Theme H3: Negative emotional reactions

4.3.2.3 Category I-Focus to Control

1) Theme I1: Situational engagement

2) Theme I2: Deliberate consciousness

4.3.2.4 Category J-Reference to Control

1) Theme J1: Building up confidence

2) Theme J2: Adhering to learning and experiences

4.3.2.5 Category K-Pause to Control

1) Theme K1: Mindfulness generation

2) Theme K2: Stress relief

4.3.2.6 Category L-Strategic Crisis-related Intelligence

- 1) Theme L1: Vigilance
- 2) Theme L2: Sense-making capability
- 3) Theme L3: Situation awareness
- 4) Theme L3: Adaptability and applicability of learning

4.3.2.7 Category M-Heroism

- 1) Theme M1: Altruism
- 2) Theme M2: Kindness
- 3) Theme M3: Courage
- 4) Theme M4: Action-oriented personality
- 5) Theme M5: Integrity

4.3.2.8 Category N-Tough Attributes

- 1) Theme N1: Tenacity
- 2) Theme N2: Resilience
- 3) Theme N3: Growth mindset

4.3.2.9 Category O-Tactical Attributes

- 1) Theme O1: Interpersonal intelligence and habits
- 2) Theme O2: Communication ability
- 3) Theme O3: Political intelligence and ability

4.3.3 RSQ 3: External Mechanism of Crisis Leadership

4.3.3.1 Category P-External Driving Forces

- 1) Theme P1: Systems vulnerability
- 2) Theme P2: Pressure

4.3.3.2 Category Q-External Enablers

- 1) Theme Q1: Power
- 2) Theme Q2: Supporting resources

4.3.3.3 Category R-External Influences

- 1) Theme R1: Factors fulfilling human safety needs
- 2) Theme R2: Models

4.3.4 RSQ 4: Elements and Process of Crisis Leadership

4.3.5 RQ: Crisis Leadership Theory

4.4 Chapter Summary

As described, the researcher conducted the study to answer the research questions by proposing methodology and methods in Chapter 3, this chapter was organized to present the research operations and results of data collection and analysis as the following topics.

4.1 Participants and Crisis Contexts

As mentioned in Chapter 3, the researcher conducted the mentioned process in selected participants which are informants or ‘exemplars’ which is the word used in the method of Patton (2015)’s sensitizing concept exemplars sampling strategy. The participants selected were ones who represented as a case study of leadership exemplars in the study of a crisis leadership phenomenon. The researcher approached participants through coordinators by starting focusing on organizations in each group of domains. However, as mentioned in Chapter 3 about accessibility and convenience, the researcher practically found that approaching to HR managers in each organization was hard to explain the concept of this research project because they did not have time to spend in discussing with the researcher on this research methodology which is different from the other methods that they get used to such as providing questionnaire or requesting for employees’ interview. Rather, this study would like them to have conversation with the researcher for selection a participant that some of them tried to avoid a long conversation because of complex selection by proposing their executive because the title of the research project is about leadership. Therefore, the researcher found that the way to find the coordinators for each organization was more effective as they were convenient to talk openly and friendly because these people came from the networking and professional relationship of the researcher.

Therefore, the researcher knew most of them before that they have highly experiences and creditability representing as professionals from different domains. Nevertheless, although they were only coordinators not directly participants, the researcher was fully awareness of being backyard research by examining the meaning of it and found that this selection process did not fall under the scope of the backyard research as the researcher did not involve in those participants’ professional and organizational context (Glesnes, 2016). Even the researcher positionality is related to

the crisis environment as same as participants but participants who were informants did not know the professional experiences of the researcher and the interview protocol of this study was already structured avoiding bias of the researcher to skip some questions that researcher might overclaim by a mistake in bracketing. On the other hand, the benefits of backyard research mentioned by Glesnes (2016) can explain the decision of this study to focus on familiar coordinators as “they have relatively easy access; the groundwork for rapport is already established” (p. 48).

Furthermore, comparing Patton (2015)’s sensitizing concept exemplars sampling strategy to the other well-known sampling method, the researcher practically found that this study selection procedures and process represented the mix of differences between convenience sampling and purposive sampling as compared by (Etikan et al., 2016). It was the need of convenience in coordinators and the rapports meanwhile these coordinators were able to lead the researcher to the purposive selection and screening for the appropriate crisis leadership exemplars of this research project.

In this selection method and procedure, the researcher approached two pilot-test participants who later helped to select the other candidates in relevant areas or areas that they had the network. Including these two participants who were directly qualified and selected by the researcher to be interviewees and they also help to be coordinators, the researcher overall approached 23 coordinators. From this, there were 7 coordinators who considered that they cannot find any fit candidates as themselves after getting understanding of the research project and the criteria checklist meanwhile the other 4 coordinators considered themselves like this but still can help to select the other candidates for more interviews. Therefore, there were 12 coordinators that only helps to select candidates as planned firstly. Furthermore, the other 2 coordinators were suggested by the first-step coordinators. All of these coordinators and candidates approaching are presented by Figure 4.1.

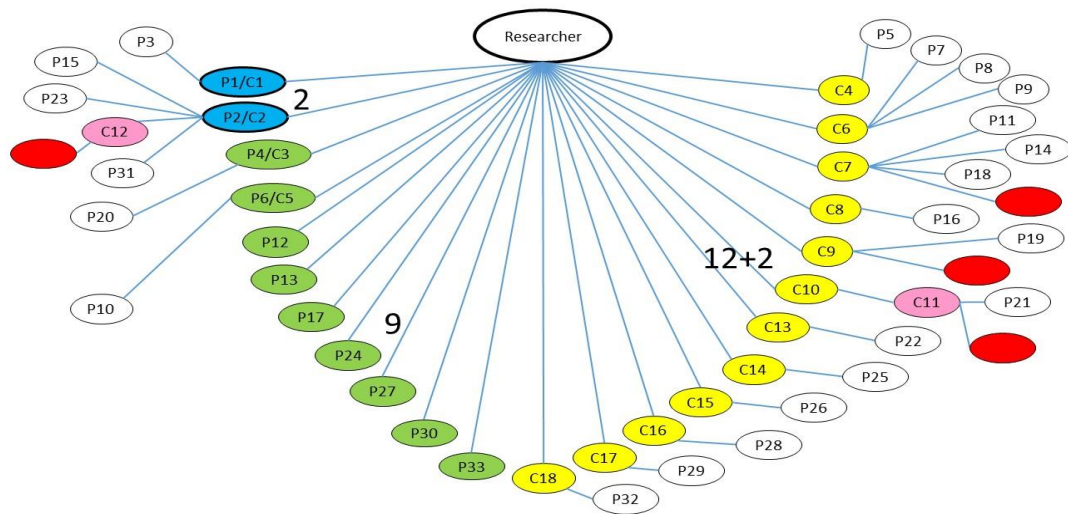


Figure 4.1 The Selection Process through the Coordinators and Selected Participants

Note: P is stands for selected participants meanwhile C is stands for coordinators with the yellow color. The red color means candidates who did not pass the checklist process whereas P with the green color means coordinators who considered themselves suitable to be candidates and finally passed the criteria to be participants.

After that, the researcher will screen participants and by conversation and discussion following Section 1 of the interview protocol to assess their contexts whether it is a crisis or not. It was based on existing literature and operational definition as stated that “a ‘crisis’ is an occurrence from a combination of disruptive, turbulent, unexpected, and stressful situations or environments, that impacts and influences human or any systems’ conditions through physical, mental, emotional, environmental, cultural, operational, organizational, or reputational aspects.” As a result, there were four candidates who failed to proceed to the interviews. Two candidates from agricultural work and financial funding company did not pass the checklist process after the initial conversation. One was in the electrical power company, one from agricultural work, and the last one from the financial funding company. The other two candidates from power and energy industry were too busy to make appointment and join the research project.

Eventually, this study presented the research result from 33 participants including two pilot test participants and one additional participant that the research had prepared in case the study needs one more after 30 participants to be a discriminant sample. In the final decision, the researcher did not exclude them from the data to be analyzed. In qualitative research, pilot data is often used as a part of the main study (Teijlingen & Hundley, 2001). Participants were grouped by their domains or work context that set up only for this research operation according to their natures of operations and challenges that might be faced to, and interrupted by different forms of crisis. This study categorized numerous types of industry to be six groups. They were based on the contexts including kinds of crisis impact, operational characteristics, objectives and expected achievement, and stakeholders' expectation. As mentioned in Chapter 3 that the groups have different challenges on complexity and safety, people's perception, continuing operational or production performance, customers' satisfaction and services, and business profits. From the study and theoretical sampling, the researcher practically assigned the participants' information to six groups. The groups of participants and the different characteristics of each group derived during the study were presented in Table 4.1.

Reliability-focused – R	Safety and reliability in complex operations	04/02/22 – P1	Air traffic controls	Medical laboratory	07/04/22 – P5	P12	Hospital - Emergency room	P19	Helicopter service - Maintenance	28/09/22 –	P22 Maritime operations	29/09/22 –	P24 Airlines		
Project/Service-focused – P	Clients' satisfaction with hired services and projects	01/03/22 – P2	Human resource specialist in a company	Transports and moving services	21/06/22 – P8	26/6/22 – P10	Construction site	P11	Residence security	20/07/22 –	P16	Dental clinic	31/07/22 – P17	University	
Product/Sale-focused – S	Customers' satisfaction with products that might include services	21/06/22 – P7	Warehouse and storage business	Car sales company	6/07/22 – P13	19/07/22 –	P15	Real estate company	P20	Shop, food, and beverage	29/09/22 –	P23	Online commerce business	17/10/22 – P27	Real estate company
Production/Operations-focused – O	Continuity of operations or production process	24/03/22 – P3	Airport Operations – passenger services and	Supply chain company – sale coordinator	04/04/22 – P4	20/06/22 – P6	Industrial spare part supplier	Cloud kitchen business	P21	Waste management factory	27/09/22 –	P21	Industrial agriculture company	05/11/22 –	P31

Reliability-focused – R	Safety and reliability in complex operations	04/02/22 – P1	Air traffic controls	Medical laboratory	07/04/22 –P5	P12	Hospital - Emergency room	P19	Helicopter service - Maintenance	28/09/22 –	P22 Maritime operations	29/09/22 –	P24 Airlines		
Project/Service-focused – P	Clients’ satisfaction with hired services and projects	01/03/22 – P2	Human resource specialist in a company	Transports and moving services	21/06/22 –P8	26/6/22 –P10	Construction site	P11	Residence security	20/07/22 –	P16	Dental clinic	31/07/22 – P17	University	
Product/Sale-focused – S	Customers’ satisfaction with products that might include services	21/06/22 – P7	Warehouse and storage business	Car sales company	6/07/22 –P13	19/07/22 –	P15	Real estate company	P20	Shop, food, and beverage	29/09/22 –	P23	Online commerce business	17/10/22 – P27	Real estate company
Production/Operations-focused – O	Continuity of operations or production process	24/03/22 – P3	Airport Operations – passenger services and	Supply chain company – sale coordinator	04/04/22 –P4	20/06/22 –P6	Industrial spare part supplier	Cloud kitchen business	P21	Waste management factory	27/09/22 –	P21	Industrial agriculture company	05/11/22 –	P31

facilitation				
Audience/ User- focused - A	Quality of performance or system for audiences and stakeholders	04/10/22 – P25 Media and news company	04/10/22 – P26 Information Technology – Software Application Development	26/10/22 – P29 Music band
Finance- focused – F	Clients’ satisfaction with financial services and security	12/07/22 – P14 Life insurance	17/08/22 – P18 Local branch bank	

However, according to theoretical sampling and sensitivity in the grounded theory method (Creswell & Creswell, 2017), The researcher found that these groups and crises were the same as the expectation and proposal that all professional contexts have the same context of crisis that experience quite similar phenomenon under different professions. Therefore, the interview questions were not to be made changes for each group. The background and selected cases that participants recalled in proving a story telling of emerging crisis in the interview Section1 (see Table 4.2) before providing information about their crisis leadership in the later Sections.

Practically, during research, the researcher planned to collect data by referring to the list of these proposed groups and sequencing. The proposed sequence aimed not to finish data collection and analysis for each single group that this study made cycles of the interview sequence via six groups. According to the actual accessibility and convenience of participants in the interview appointment, Table 4.3 shows the actual sequence of research data collection for all participants. The researcher conducted the interview for 33 participants: 30 as planned, 2 from pilot tests, 1 additionally for being discriminant sampling. Table 4.3 also shows 4 candidates that this study cannot proceed to the interviews. Demographic of participants are shown in Table 4.4.

Table 4.2 Crisis Cases from Participants

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P1	Air traffic controls	R	During operations on shiftwork, air traffic controllers managed air traffic movement through radar display and radio communication. P1 was working as deputy team leader of the shift.	Air traffic volume had been vast increasing surprisedly until unable to handle.	Air accidents
P2	Human resource	P	P2 started working as HR senior staff in one organization.	Failure of the organization's HR performance management just was recognized with surprise when P2 had been assigned to this job.	Failure of HR functions
P3	Airport Operations - facilitation	O	Because of the congestion of the airport terminal that has no automatic facilities, P3 works as a senior officer in the airport service and facilitation team.	Accidentally mistake in the boarding pass checking process by the airport team member.	The passenger goes to the wrong flight
P4	Supply chain company – sale coordinator	O	P4 is sale coordinator in one of many teams in this company. His responsibilities are to contact customers and supplier of various industrial products in seeking,	Other State's regulations about prohibited import and export items generate a crisis that people were promulgated unexpectedly .	Interruption in logistics affecting productions.

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P5	Medical laboratory	R	coordinating and fulfilling the requirement. Usual problems are about commercial aspects. P5 works as a junior medical laboratory scientist in hospital X having responsibility in assisting the head of department.	- Unexpected failure of the blood sample test equipment in the medical laboratory operations. - Suddenly flooding in the laboratory area.	- Erroneous results and misdiagnoses of patients' blood test. - Operational interruption.
P6	Industrial supplier company	O	P6 was a CEO of the small industrial supplier business that help the famous automotive company to coordinate and support for some spare parts in the manufacturing process.	On the delivery date, at the port, a cargo of a specific spare part for the automotive industry from country X was found surprisingly that it had not been shipped to Thailand because a problem overseas.	Interruption of production process and customers of the end products
P7	Warehouse and storage business	S	P7 works as a sale manager and helped to manage resources in this business from many businesses under one owner.	A main regular renter/customer of P7's warehouse business surprisingly canceled the rent of storage.	Loss of incomes affected business for a long period.
P8	Transportation and moving	P	P8 works in transportation and moving services. In moving these	Inaccurate size information from customers causes difficulty in packing and unpacking for	Package was damaged and must be

No	Domain	Type	Background	Unexpected Event	Impact/Potential
	services		customers' packages, the service includes packing, unpacking, disassembly, assembly, and installation stuff.	transportation. The unexpected event is when this problem happened with high-value oversize package that the customer still asked for help to transport.	compensated.
P9	Cloud kitchen and facility management	O	P9 is one of the staff assigned by the owner to take care of facilities for all renters in this cloud kitchen.	- Unexpected power outage causing tenants' problems. - The emerging political mob nearby.	- Tenants' business operation problems. - Traveling and logistics difficulties.
P10	Construction site	P	P10 works as a foreign worker and laborer in a construction site hired by a contractor company.	Unplanned or unpredicted lack of supplies or shortage of important components, site access, and raining.	Delay of construction project and get fined.
P11	Residence security and facility supports	P	P11 works as a security guard at the condominium and helps to take care the other issues of facilities.	Unusual water tank leakage spreading all over the building	Property damaged.
P12	Hospital - Emergency room	R	P12 is an emergency medical doctor in a large hospital (medical center)	- Contaminated patients from industrial chemical leak surprisingly misplaced into the emergency room (ER) causing spread of chemical vapors inside the building instead of the outside for cleaning first for safety.	- Harms to people inside ER

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P13	Car sales company	S	P13 works as the local manager in the provincial car center and voluntarily joined the project of the headquarters that he just knew later about its challenge.	- A patient getting stroke needs fibrinolysis injection which is an injection of clot-dissolving drug within 4.5 hours. In this stressful case, it passed 3 hours already at that time while it takes another 2 hours to travel from that local hospital to the main hospital for drug. Unexpected difficulties of the project P13 volunteer to help in buying and selling 1,200 flooded cars within one year. There were various complex processes in reviving them.	- Death of patient - Huge business losses and profits
P14	Life insurance	F	P14 is the sales team leader who has highly experience and got various awards.	The company surprisingly did not approve a proposal of life insurance case of a premium client that seems to be simple with high possibility due to unexpected technical issues. Also, P14 first committed to client already about approval.	- Negative emotions of customers to blame and distrust these agents leading to business losses from the premium client. Organizational reputation and violation in front of the office
P15	Real estate company	S	P15 works for internal communication but also helps solving problems from outside	Customers, who got impacted by buying real estate, set a mob and came in front of the company in one morning that she accidentally	

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P16	Dental Clinic	P	aspects by assisting in providing information to internal staff as an inside-out strategy. P16 works as an administration and the dentist assistance. Also, she is not the most senior of the team but she often has to lead people there.	met in the early morning and tried to handle the situation. - Unexpected technical problems such as the power outage during dental operations and customer expectations such as - Customer dissatisfaction in orthodontics causing surprisedly angeriness and emotional complaints from customers. - Chaos at the clinic and reputation	- Patients' safety
P17	University	P	P17 is an assistant professor at the university. Apart from teaching job, there is also the responsibilities in administrative job.	Even it seems to be a normal trend in the education industry nowadays, it was surprising vast decreasing number of students applying in undergraduate programs lower than expected.	- Losses of profit in the education business causing further management decisions in the University.
P18	Bank	F	P18 works as a local branch manager. In banking services, customer satisfaction and securities are concerned.	Power was unexpectedly shut down or the system is failed in the local branch bank.	customers are highly concerned about their transactions and some might respond aggressively to bank agents.

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P19	Helicopter Services and Technician	R	P19 has responsibilities for the Health and Usage Monitoring System (HUMS) of helicopter fleets in taking care of aircraft status and conditions following procedures in fixing technical troubles.	the Health and Usage Monitoring System (HUMS) of helicopter fleets was failed which is not normal or routine job of P19 as aircraft technician to deal with this maintenance software failure.	Unsafty in making decision and assuring safety of aircraft before releasing for flight operations.
P20	Food, beverage, and souvenir shop	S	P20 worked in a management team of a company owned by a famous entertainer. This business covers a souvenir shop, food and beverage, and a restaurant.	Loss in the account balance was surprisedly found because a number of the frozen food in the stock were stolen by employees.	Losses of profit in business
P21	Waste management factory	O	P21 is a worker in the waste management factory. In the process, his team had to stay around the waste compactor.	Fire burning unexpectedly behind the garbage compactor during operations rapidly.	Machine damaged and injuries of staff.
P22	Maritime operations	R	P22 is a professional crew working in the navigation section of a ship under XO and CO by the chain of command. In this event, it seems to be usual for others but P22 felt that	The ship was anchored in the middle of the sea facing severe weather and very high see state more than expected . P22 noticed that the force pulling the anchor rope, stronger waves, and the ship's structure hit the water hard.	Ship damaged and sunk including crew fatalities.

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P23	Online commerce and trainer	S	this time is more severe than experienced before. P23 comes from the online commerce business and often organizes the event. P23 also works as a trainer or “coach” for the newcomers in this business network.	The surprising mistake of the food supplier in preparing a meal for hundreds of participants in the organized event at the venue was found at nearly lunch.	Mass complaints and loss reputation
P24	Airlines	R	P24 worked as the First Officer (Co-Pilot). He always was eager to solve problems during flight operations which are not only situations about flying such as dealing with ground stations when the delay of some passengers or technical problems on the ground that pilots have to decide operational and business aspects.	P24 as the First Officer pilot on duty firstly experienced a criminal gang stealing passengers’ money in the cabin that this gang of money theft had frequently committed crimes in flights of this flight route between Thailand and country X. Apart from being concerned with the safety and security of flight, it was surprising that no one has prosecuted them because of the busy procedure.	Safety of flight and airlines’ reputation.
P25	Media and news company	A	P25 works in the media and news industry. He has expertise in the area of media production.	The adverse weather that should not have occurred in that season including the interruption of the internet signal due to the overload during that new year holiday period causing unexpected	Mass audience satisfaction and being fined by the contract.

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P26	Software Application Development	A	P26 got promoted as an IT project manager. It is hard for the business department and the management level to understand IT issues and configuration in a mobile application.	failures during the online broadcast of the premium shopping mall's grand opening event, contracted by the news company. A stressful project from the management level was assigned to a new IT project manager, with too complexity and impossibility for an IT professional, and had too tight a time limit.	Failure of project and job security.
P27	Real estate sale	P	P27 works as a sale agent of a real estate company that not only to sell a product but also control and coordinate a project in building houses. When P27 sells real estate to a buyer, she has to follow up on the building projects that clients have to pay in advance to build them. This is a system used in her industry, not only to sell real estate that is completely constructed. stock.	The serious and surprising event for sales who also has to coordinate with construction teams, occurred when the company mismanaged or ineffectively controlled a budget between selling other houses and spending to the construction team such as delays in transferring money or lack of construction resources in the stock.	Loss of reputation and being sued.

No	Domain	Type	Background	Unexpected Event	Impact/Potential
P28	Rail transportation operation	R	P28 works as safety officer. In this domain, not only safety risk of trains, the panic of passengers in the situation has to be concerned.	Accidentally loss of power at the middle part of the rail system between two stations causing a train to stop during the journey.	Safety during passengers' evacuation.
P29	Music performance	A	P29 is a musician playing instrument in a backup band for the famous musician and TV shows. Inside the music band performance as same as the other live performances. It is about observing audience reactions to make quick decisions and also changing ways to perform.	During the final rehearsal of the planned song performed on the TV show, they got an order to change a part of the song, and the singer surprisingly had difficulty performing that change in that time limit causing unexpected pressure to everyone in the band.	Audience's satisfaction in broadcasting.
P30	Tour business	P	P30 is in the tourism industry and always works overseas. Problems come from the frontline operations or at the operation office by administrative issues.	The unexpected news of terrorist attack in the foreign country X causing the tour was stopped by that country's procedure. .	Safety of tourists and the tour company reputation in services.
P31	Industrial agriculture company	O	P31 works in the industrial agriculture company. His responsibilities are about technical	The unexpected Covid-19 pandemic disrupted agriculturists by causing lack of labor and loss of profit for a company. Also, apart from applying	Losses of profit in business and the project deadline.

No	Domain	Type	Background	Unexpected Event	Impact/Potential
			supports and services.	usual remedies such as business promotion or cutting costs, P31's idea in transforming operations to be automation-based agriculture was surprisedly accepted hence this project became stressful assignment to be achieve timely and effectively.	
P32	Gas station and shop business	S	P32 works in the gas station for a while waiting for moving to be a manager of the coffee shop at that station. He has various experiences in service domains such as restaurants and beverages.	One of the team members accidentally filled to wrong fuel type to a car causing problems from car owner's emotion that escalate to be a chaos in the gas station.	The cost of car's maintenance had to be compensated and loss of reputation.
P33	Wholesale and retail business	S	P33 works for one of the big retailer and wholesaler company in Thailand as the Assistant Merchandise Manager of vegetable oil products. She works as a team for a specific product in commercial sourcing and buying from suppliers.	The government rapidly surprisingly announced the price control on a product which was effective on the day after. This made P33 had to rapidly take charge stressfully alone while her manager was not there, in calculating the price and negotiation with suppliers and retailers including coordinate with other relevant sections on that day in the evening before the end of working hours.	Loss of profit for both the supply side and retail side.

Table 4.3 Interview Sequences

Reliability-focused (R)	1	5	12	19	22	**24	X	28		
Project/Service-focused (P)	2	8	10 11	16 17				27	30	
Product/Sale-focused (S)		7	13 15	20	23					32 33
Production/Operations-focused (O)	3	4	*6	9	X 21				31	
Audience/User-focused (A)							25 26	29		
Finance-focused (F)										X

Note: *Theme saturation, **Meaning saturation, and X = discontinued participants

Table 4.4 Demographic

No	Professional	Type	Date	Sex	Position	Level	Age	Degree	Major	Exp	Location
P1	Air traffic controls	R	4/2/22	M	Supervisor	Supervisory	45	Bachelor	Accounting	24	Rayong
P2	Human resource	P	1/3/22	F	Organization Development Specialist	Middle	40	Master	Human Resource and Organization Development	18	Bangkok
P3	Airport Operations - facilitation	O	24/3/22	F	Supervisor	Supervisory	38	Bachelor	Landscape Design	14	Rayong
P4	Supply chain company – sale coordinator	O	4/4/22	M	Assistant Manager	Middle	36	Master	Aviation Management	5	Bangkok
P5	Medical laboratory	R	7/4/22	F	Medical Laboratory Technologist	Middle	29	Bachelor	Medical Technology	7	Bangkok
P6	Industrial supplier company	O	20/6/22	M	Owner	Executive	42	Bachelor	Laws	10	Bangkok
P7	Warehouse and storage business	S	21/6/22	M	Sale Manager	Middle	39	Bachelor	Communication Arts	2.5	Bangkok
P8	Transportation and moving services	P	21/6/22	M	Operations Manager	Middle	45	Bachelor	Communication Arts	10	Bangkok
P9	Cloud kitchen	O	22/6/22	F	Facility Manager	Middle	41	High-school Certificate	-	1 (10)	Bangkok
P10	Construction site	P	26/6/22	M	Painting Worker	Operational	34	-	-	10	Samutprakarn
P11	Residence security	P	29/6/22	M	Security Guard	Operational	59	Diploma	Welding	4	Bangkok
P12	Hospital - Emergency room	R	5/7/22	M	Deputy Head of Department	Middle	35	Doctor of Medicine	Emergency Medicine	6 (9)	Chonburi

No	Professional	Type	Date	Sex	Position	Level	Age	Degree	Major	Exp	Location
P13	Car sales company	S	6/7/22	M	Senior Manager	Middle	41	Bachelor	Business Administration	17	Surat Thani
P14	Life insurance	F	12/7/22	F	Sale Manager	Middle	35	Bachelor	Business English	9	Bangkok
P15	Real estate company	S	19/7/22	F	Employee Engagement Manager	Middle	40	Bachelor	Social Work	18	Bangkok
P16	Dental Clinic	P	20/7/22	F	Dentist Assistant and Administration	Operational	31	Diploma	Accounting	7	Phichit
P17	University	P	31/7/22	F	Lecturer	Operational	37	Master	Human Resource Management	9	Phitsanulok
P18	Bank	F	17/8/22	F	Branch Manager	Middle	40	Master	Management	16	Bangkok
P19	Helicopter Services	R	3/9/22	F	Maintenance Data Analyst	Operational	25	Bachelor	Management	3	Nakorn Sri Thammarat
P20	Food, beverage, and souvenir shop	S	22/9/22	F	Manager (Restaurant Business)	Middle	36	Master	Business Administration	3	Chiangmai
P21	Waste management factory	O	27/9/22	M	Worker	Operational	20	Vocational Certificate	Civil Engineering	1	Saraburi
P22	Maritime operations	R	28/9/22	M	Gunnery Petty Officer	Operational	44	Diploma	Navy	24	Chonburi
P23	Online business	S	29/9/22	M	Co-Founder And Director	Executive	38	Bachelor	Telecommunication Engineering	9	Bangkok
P24	Airlines	R	29/9/22	M	Captain	Operational	41	Bachelor	Electrical Engineering	10	Bangkok

No	Professional	Type	Date	Sex	Position	Level	Age	Degree	Major	Exp	Location
P25	Media and news company	A	4/10/22	M	Senior Producer	Supervisory	42	Master	Communication Arts and Marketing	9	Bangkok
P26	Software Application Development	A	4/10/22	M	Technical Mobile Lead	Middle	27	Bachelor	Computer Science	5	Bangkok
P27	Real estate sale	P	17/10/22	F	Head of Sales Department	Middle	37	Bachelor	Mass Communication	12	Bangkok
P28	Rail transportation operation	R	19/10/22	M	Safety Officer	Supervisory	47	Bachelor	Technology in Electronical Industry	26	Bangkok
P29	Music performance	A	26/10/22	M	Professional musician	Operational	44	Bachelor	Education (Music)	25	Bangkok
P30	Tour business	P	5/11/22	M	Tour Manager	Middle	34	Bachelor	Hotel Management	6	Europe
P31	Industrial agriculture company	O	5/11/22	M	Manager of Central Regional Services	Middle	41	Bachelor	Agriculture	17	Bangkok
P32	Gas station and shop business	S	10/11/22	M	Service Agent	Supervisory	45	Bachelor	Accounting	3	Rayong
P33	Wholesale and retail business	S	16/11/22	F	Merchandise Manager	Middle	29	Bachelor	International Business Administration	1.5	Bangkok

Note: There are different characteristics among participants that can group as the followings. However, these descriptive statistics are not relevant to this research's scope of the study. Sex: males (20) (61%)/ females (13) (39%)

Positional level: 9 operational (9) (27%)/ supervisory (5) (15%)/ middle level (17) (52%)/executive level (2) (6%)

Age (Years old): 20-29 (5) (15%)/30-39 (12) (36%) /40-49 (15) (45%)/50-59 (1) (3%)

Year of specific work experiences: 1-5 (9) (27%)/ 6-10 (13) (39%)/ 11-20 (7) (21%)/21-30 (4) (12%)

4.2 Method of Data Collection and Analysis

This section aimed for increasing trustworthiness in qualitative research by explaining the research operations in collecting and analyzing data. The research result came from interview protocol that was categorized in six general sections as followings: 1) experience and meaning of crisis, 2) meaning of crisis leadership, 3) internal backgrounds, processes and mechanisms of individuals who perform crisis leadership, 4) external environment and mechanisms influencing individuals who perform crisis leadership, 5) deep elements relating to crisis leadership, and 6) interaction and causal relationship among internal and external elements relating to crisis leadership. At the starting point of the research project during the pilot phase, the researcher discussed with the Advisor again about the interview questions and was suggested to cut the Section six because it would be a further analyzed and constructed part by the researcher rather than directly questioning. Then, after the pilot test, the researcher decided to reorder the sections from the difficulty of the story-telling issue from interviewees found at the pilot interview. Therefore, the researcher finally organized the interview protocol as five sections which are matched with four sub-questions of the research question as shown in Table 4.5.

Table 4.5 Interview Sections and Research Questions (Edited after the Pilot Test Interviews)

Interview Sections		RQ-What is the Crisis Leadership Theory?
Section 1 Meaning and understanding of crisis phenomenon		To screen and recheck the participants' context of crisis
Could you describe your crisis situation?	ตอนที่ 1 ความหมายและความเข้าใจปรากฏการณ์ที่เป็นวิกฤตการณ์/สภาวะวิกฤติ 1.1 ตามที่องค์กรของท่านได้อภิปรายร่วมกับข้าพเจ้าเกี่ยวกับสภาวะวิกฤติที่เกิดขึ้นกับองค์กร ในเหตุการณ์.... (สภาวะวิกฤติที่ต้องครุ่นคิดเลือกผู้ร่วมการวิจัย)..... ขออนุญาตให้ท่านค่อยๆ ลองย้อนนึกถึงเหตุการณ์นั้นและสภาพแวดล้อมในขณะนั้นจนกระทั่งความทรงจำในขณะนั้นชัดเจนขึ้น ----- ถ้าท่านพร้อมแล้ว กรุณาช่วยเล่าเรื่องราวและบรรยายสภาวะวิกฤติในช่วงเวลานั้นเพื่อเป็นข้อมูลว่าเหตุการณ์นั้นเป็นอย่างไร 1.2 จากประสบการณ์ข้างต้น ตัวท่านเองเผชิญกับสภาวะวิกฤตินั้นอย่างไร	
Section 2 Deep elements relating to crisis leadership		RSQ2 -What is the internal mechanism of crisis leadership? (Discovery)
How did you experience that crisis?		
How did you feel during actions?	- Please explain or add more (if you have or could) about the relevant circuitry; for example, physical, chemical, and neurological functions (about your body). - Please explain or add more (if you have or could) about the relevant inner content; for example, raw emotions, gut reactions, and inner dialogue (about your feeling). - Please explain or add more (if you have or could) about the relevant conscious engagement; for example, abilities to observe, modify, and regulate mental process	

RQ-What is the Crisis Leadership Theory?

Interview Sections

(about your mindfulness).

ตอนที่ 2 องค์ประกอบเชิงลึกที่เกี่ยวข้องกับภาวะผู้นำวิกฤตการณ์

- 2.1 จากเหตุการณ์ที่ผ่านมา ให้ท่านช่วยกรุณาย้อนคิดว่าร่างกายของท่านในขณะนั้นตอบรับกับเหตุการณ์เช่นไร
 หมายเหตุ เพื่อค้นหารายละเอียดเชิงลึกเกี่ยวกับสิ่งที่เกิดขึ้นกับร่างกาย ได้แก่ สิ่งที่เกี่ยวข้องกับการทำงานของสรีรวิทยาเคมีในร่างกาย และระบบประสาท ซึ่งหมายถึงปฏิกิริยาต่อเหตุการณ์ทาง "ระบบร่างกาย" ของผู้ให้สัมภาษณ์
- 2.2 แล้วในทางจิตใจและอารมณ์ ท่านเกิดความรู้สึกนึกคิดเช่นไรในขณะเกิดเหตุการณ์นั้น
 หมายเหตุ เพื่อค้นหารายละเอียดเชิงลึกเกี่ยวกับสิ่งที่เกิดขึ้นที่เป็นความหมายต่ออยู่ในความคิดความรู้สึกของท่าน ได้แก่ อารมณ์ที่เกิดขึ้นอย่างแท้จริงในขณะนั้น การตอบสนองโดยสัญชาตญาณ และเบนสนทนาที่เกิดขึ้นภายในความคิดขณะนั้น ซึ่งหมายถึงปฏิกิริยาต่อเหตุการณ์ที่เกิดขึ้นใน "ความคิดความรู้สึก" ของผู้ให้สัมภาษณ์
- 2.3 และในเหตุการณ์ที่เกิดขึ้น ท่านมีการตระหนักรู้สถานการณ์ มีสติรู้ตนเอง หรือการควบคุมตนเอง อย่างไร
 หมายเหตุ เพื่อค้นหารายละเอียดเชิงลึกเกี่ยวกับการตระหนักรู้ที่เกิดขึ้นในขณะนั้น ได้แก่ ความสามารถที่จะสังเกตปรับเปลี่ยน และควบคุมกระบวนการความคิดของตนเองในขณะเกิดเหตุการณ์ ซึ่งหมายถึง "สติ" ที่เกิดขึ้นต่อเหตุการณ์ของผู้ให้สัมภาษณ์

Section 3 Meaning of crisis leadership

RSQ1-What is the meaning of crisis leadership? (Discovery)

Please describe behaviors and characteristics that you perform at those situations.

What did you get from those actions for yourself in those situations?

ตอนที่ 3 ความหมายของภาวะผู้นำวิกฤตการณ์

- 3.1 กรุณาลำเลียงสิ่งที่ท่านได้ทำลงไปเป็นขณะเกิดเหตุการณ์ดังกล่าวว่าท่านทำอย่างไร
- 3.2 ทำไมท่านจึงทำเช่นนั้น
- 3.3 ในสิ่งที่ท่านได้ทำหรือดำเนินการในสถานการณ์นั้น เกิดผลอะไรต่อท่านบ้าง ท่านรู้สึกอย่างไรบ้าง

Interview Sections	RQ-What is the Crisis Leadership Theory?
3.4 ในสิ่งที่ท่านได้ทำหรือดำเนินการในสถานการณ์นั้น มีความหมายหรือมีความสำคัญ มีคุณค่าต่อตัวท่านอย่างไร Section 4 Internal rationales, processes and mechanisms of individuals who perform crisis leadership RSQ2-What is the internal mechanism of crisis leadership? (Discovery) Could you share your internal rationales of the things you did? Why did you do that? Please describe your internal elements, processes and mechanisms. ตอนที่ 4 สาเหตุ กระบวนการ และกลไกภายในของภาวะผู้นำวิกฤติการณ์ (เหมือน 2.2) 4.1 ระบุว่าท่านเล่าถึงเหตุผลและกระบวนการภายในตัวท่านที่ทำให้ท่านได้ดำเนินการหรือแสดงออกในเหตุการณ์ 4.2 ที่มาของสิ่งเหล่านั้น	
Section 5 External environment and mechanisms influencing individuals who perform crisis leadership RSQ3-What is the external mechanism of crisis leadership? (Discovery) Could you tell me about external surroundings that influence you? What external elements, process, and mechanism from your surroundings affect you? ตอนที่ 5 สภาพแวดล้อมและกลไกภายนอกที่มีอิทธิพลหรือส่งผลกระทบต่อภาวะผู้นำวิกฤติการณ์ 5.1 อะไรเป็นปัจจัยภายนอกที่ส่งผลกระทบต่อตัวท่านที่เป็นทำให้ท่านได้ดำเนินการหรือแสดงออกในเหตุการณ์	
All information from the Interview Section 1-5 will be further analyzed and constructed by the researcher RSQ4-What are elements an crisis leadership? (Construction)	

During the collection and analysis of data which are inseparable in grounded theory, this study applied codes from line-by-line codes found in the open coding step to examine, rephrase and group into the themes. Then, the researcher studied codes' relations and causations in the step of axial coding to generate categories. At the next phase as the selective coding step, the categories will be analyzed back and forth with the raw data to explain the linkage and process among constructs and shape the result. The data analysis process and outcomes are presented in Table 4.6. Each step of coding in this grounded theory research provided codes, themes and categories by concepts of open coding, axial coding, and selective coding through theoretical sampling and theoretical sensitivity thereby each data at certain points was constantly compared to other data points to form themes, categories and finally concepts of element and process.

As this research under the grounded theory paradigm that bridges an interpretivist with traditional positivist assumptions, the researcher did not only discover the information but also had to construct the theory from information. It was getting deep understanding participants from the inside and analyzing the phenomenon to be a theory for the view from the outside (Charmaz, 1996; Creswell & Creswell, 2017)

Table 4.6 Coding Process and Outcomes

Items	Coding Process		Purposes
Line-by-Line	Open Coding		Directly coding from data transcription
Codes	(naming codes and themes)		
Codes		Axial Coding (identifying core, causal, responsive and influencing phenomena)	Analyzing and grouping to name the information
Themes		Selective Coding (describing the interrelationships among categories and themes)	Grouping and comparing codes in the same concepts as themes.
Categories			Grouping and comparing themes to be categories or move some to other categories based on concepts and phenomenal functions, rationales, sequences, processes, and interrelation.
Story Line (Elements and Processes)			Referencing existing concepts and theories for the emerging story line of elements and processes to be a proposed theory.

Theoretical Sampling, Theoretical Sensitivity, and Constant Comparison

According to Hennink et al. (2017)'s discussion on being aware of code saturation, identified as 'heard it all', and meaning saturation, identified as 'understand it all'. This study found this importance after the research operations. The proposal of 30 participants from the concern of publication and the analysis process in generating categories, themes, and codes, provided advantages to the researcher in seeing the implication of code/theme saturation and meaning saturation.

The researcher found that the data or theme saturation came from the repetition of codes in each theme can be considered to be enough (Constantinou, Georgiou, & Perdikogianni, 2017). However, when the researcher had to continue conducting the interviews and analysis, there were more codes emerged in the saturated themes that created more understanding of those themes as Hennink et al. (2017) defined this as meaning saturation and the effect on changes to code/theme definition changes. Practically, when the researcher got better understanding, it caused changes or revision of code names or theme names because of more insights of the derived data. Table 4.7 presents the saturation of RSQ 1-3 that meaning saturation were consistent with Charmaz (2014) in suggesting that in grounded theory, it was recommended to include 20 to 30 individuals in order to develop a well-saturated theory, but this number may be much larger. Table 4.7 also describes data saturation and meaning saturation since the level of themes until the research question level. Data saturation was at the point of the first repeat of any code after the first emerging code in each theme, category, and research question's finding, whereas the meaning saturation was at the point of the first repeat of the last emerging code by that same code in each theme, category, and research question's finding. The researcher considered that when this study reached the last emerging for each theme, understandings for all aspects on that theme were discovered enough.

Table 4.7 Findings, Theme Saturation (TS), Meaning Saturation (MS), Category Saturation (CS), Category Meaning Saturation (CMS), and Research Question's Data Saturation and Meaning Saturation

Main Research Findings – Data Saturation 4 – Meaning Saturation 23					
RQ1's Findings – Data Saturation: 2 - Meaning Saturation: 23					
Categories (CS/CMS)	Themes	TS	MS	Codes	(n) for (n) for theme code
A) Deliberate and immediate Decision-Making Processing and Planning (2/8)	A1) Emergent Designed Strategic Thinking	2		Deliberately assessing situations	31
				Designing solutions and preparing for the worst	25
			4	Considering stakeholders	14
	A2) Decisive Critical Decision-Making and Planning	2		Rapidly and strategically considering solutions	29
			8	Deciding to do or not (Being hesitant)	10
		2		Prioritizing and sequencing actions	21
	B1) Responsive actions and ambidexterity	2		Taking immediate actions	33
				Containing the impacts	21
B) Agile Execution, Management and Communication (2/13)			7	Doing multi-tasks at the same time	5
				Managing resources	25
	B2) Assertive actions and communication		4	Responsively notifying for understanding	21
		2		Reporting to higher-ups	25
				Suggesting solutions	18

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

C) Applying Operational Arts and Tactics (2/7)	B3) Monitoring and Feedback	2	Making argument assertively	12	
		2	Supporting knowledge and experiences	20	
		8	Monitoring	10	14
	C1) Strategic communication	13	Debriefing	6	
		4	Communication Planning	23	28
	C2) Vertical-Horizontal orchestration	2	Communication Design	20	
		7	*Brainstorming with the team	24	33
		2	Opening for ideas	12	
	C3) Political tactics	2	Vertically-horizontally coordination, cooperation and collaboration	33	
		2	Finding special supports	16	
D) Task, People and Change-Oriented Leading (2/10)	D1) Influencing others to follow rapidly	6	Reciprocity and Negotiation	16	23
		2	Utilizing relationships, networking, and power	18	
		2	Persuading	33	33
	D2) Centralized-Decentralized Controls	2	Building trustworthiness	20	
		5	Commanding	17	20
	D3) Being supportive	9	Delegating	10	
			Participating with the team	12	29

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

E) Emerging Feelings during Actions (2/15)	E1) Negative feelings in actions	Comforting and complimenting the team	11
		Teaching	11
		Being open-minded for listening	7
		Anxiety	14
		Communication concern	8
	E2) Positive feelings with success	Frustration	8
		Tiredness	3
		Satisfied with the success	22
		Relieved from stress	13
		Happy and proud about the success	30
	E3) Positive feeling with returns	Work engagement	4
		More confident from the right decision making	12
		Valuable for organization and team	17
		Successful in keeping self-image	8
		Successful in keeping an organizational image	11
		Happy and proud about rewards	11
		Relieved, happy and proud with being accepted and	9

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

		followed			
F) Crisis Handling Learning and Development (2/23)	F1) Crisis awareness	2	Learning the hardness	7	24
			Learning the solvability	19	
			Learning the possibility of the future crisis	12	
	F2) People-oriented learning	6	Learning importance of teamwork	4	5
		6	Learning importance of networking	2	
	F3) Post-crisis development	23	Being adopted as a role model	4	17
		4	Development of thoughts and problem-solving	12	
		4	Networking development	9	

RQ2's Findings – Data Saturation: 3 - Meaning Saturation: 20

Categories (CS/CMS)	Themes	TS	MS	Codes	(n) for code	(n) for theme
G) Brain-Body Instant Reactions (Physical/ Neurological) (2/17)	G1) Responsive reaction	2		Involuntary responses (Automaticity)	11	32
		2		Surprise and Startle reflex (Unresponsive)	27	
				Reactive response	10	
			12	Attentive response	5	
	G2) Excitement	2	3	Fidgety	11	27
				Agitation	23	
	G3) Effects of stress	4		Symptoms of stress	9	9

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

H) Mental Instant Reactions (2/17)	H1) Thought reactions	17	Limited capability (Thinking that) Time is limited	3
		17	(Thinking that) No one is going to take an action	10
		17	(Thinking that) I must take an action	29
	H2) Positive emotional reactions	2	Being curious why it happened	8
		2	Thinking repeatedly (Fixation)	13
		13	Being challenged	11
	H3) Negative emotional reactions	2	Having a can-do attitude	20
		2	Being fearful and worried	3
		2	Being discouraged	5
	I) Focus to Control (2/13)	I1) Situational engagement	5	Need for a pre-action pause
5			Being frustrated and angry	11
5			Keeping going and concentration	4
I2) Deliberate consciousness		2	Focusing solutions and planning	12
		2	Writing down their thoughts	16
		2	Being consequence-conscious	25
		2	Being time-conscious	5

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

J) Reference to Control (2/18)				Being aware of the responsibility	15
	J1) Building up confidence	2	2	Seeking advice	9
			2	Being self-confident	9
			8	"Doing the right things"	16
	J2) Adhering to learning and experiences	5	18	Recalling knowledge and experiences	9
K) Pause to Control (2/20)				Following on procedures and training	5
	K1) Mindfulness generation	2	2	Being mindful	20
			4	Taking a breather	14
	K2) Stress relief	14	20	Talking	3
				Escaping	3
L) Strategic Crisis-related Intelligence (2/7)	L1) Vigilance	2		Ability to detect signals	23
			6	Readiness	14
	L2) Sense-making capability	2		Ability to foresee	24
			7	Ability to assess, analyze, and generate options	24
	L3) Situation awareness	2		Time awareness	26
				Impact awareness	29
			3	Punishment awareness	8

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

M) Heroism (Heart) (2/17)	L4) Adaptability and applicability of learning	2	2	Need-help awareness	24
	M1) Altruism	2	2	Stakeholder awareness	25
		2	3	Knowledge	17
		2		Work experience and skills	27
		2		Past experiences and skills	13
		2		Creativity and innovative ideas for problem-solving	24
		2		Belief that no one is going to take action	16
		2		Voluntary	10
		2		Sacrifice	6
		2		Loyalty	5
		2		Caring the team and others	23
		2		Bravery	26
		2		Assertiveness	12
		2		Leading by example	7
		2		Self-reliance	14
		2		Agility	19
		2		Pragmatism	16
	M5) Integrity	3		Moral	16
				Responsibility	24
					30
					24

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

N) Tough attributes (3/13)	N1) Tenacity	Dignity	4
		Sincerity	7
		Patience	5
		Diligence	8
		Perseverance	13
	N2) Resilience	Commitment (Do the best)	24
		"Never give up" attitude/ Bouncing back/ Adaptability	18
		Positive attitude	14
		Instinct, intuition, and improvisation	8
	N3) Growth mindset	Development-oriented person	12
		Self-confidence and can-do-attitude	13
		Recognizing own leadership and competence	16
		Seeking challenges as adventurous learning	10
O) Tactical attributes (2/8)	O1) Interpersonal intelligence and habit	Empathy	10
		Social skills and intelligence	22
		Being communicative	10
		Humility	12
		Courtesy	13

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

O2) Communication ability	6	Communication techniques	20	21
O3) Political intelligence and ability	6	Communication strategies	15	32
	2	Power awareness	21	
	2	Networking	18	
	6	Reciprocating and negotiation skills	20	

RQ3's Findings – Data Saturation: 4 - Meaning Saturation: 23

Categories (CS/CMS)	Themes	TS	MS	Codes	(n) for code	(n) for theme
P) External driving forces (2/4)	P1) Systems vulnerability	2		Gaps of a system and team	19	26
	P2) Pressure	2	4	Possible lack of action/possibility of inaction Impacts affecting stakeholders	16 33	33
			4	Time pressure	25	
		2		Workload	5	
Q) External Enablers (2/13)	Q1) Power		3	Higher-ups' supports	21	31
		2		Autonomy	29	
	Q2) Supporting resources	3		Good resources	26	30
			13	Familiar resources	13	

Main Research Findings – Data Saturation 4 – Meaning Saturation 23					
R) External Influences (4/23)	R1) Factors fulfilling human safety needs	4	10	Life and family security	9
	R2) Models	4	23	Potential returns and rewards	7
				Role models	9
				Books	3
					11
					12

4.3 Findings

The researcher presented the result based on a research question and four sub-questions that guided this study as followings.

RQ - What is the Crisis Leadership Theory?

RSQ1 - What is the meaning of crisis leadership? (Discovery)

RSQ2 - What is the internal mechanism of crisis leadership? (Discovery)

RSQ3 - What is the external mechanism of crisis leadership? (Discovery)

RSQ4 - What are elements and process of crisis leadership? (Construction)

From the interview for answering these research questions, the researcher finally derived 152 codes which generated 50 themes and 18 categories respectively for the whole research project. They came from each research sub-questions and were reported separately in this chapter. According to various dimension to be explored in each interview section for each research sub question, there were sets of understanding of crisis leadership phenomenon that needed to be framed by many categories for getting more insight systematically.

The researcher reported these findings based on the analysis of words and implications of their explanation of the answers during the interview that sometimes the researcher kept questioning until getting the understanding, not only taking the direct words they said to be information, but also the researcher analyzed what they really wanted to inform by making understanding of their whole phenomenon. This also included some non-verbal communication that made the researcher know what they tried to inform. In reporting the findings, the researcher has ensured anonymity of participants by using P1 to P33 instead of their name.

Among 18 categories, the study collected the data from both direct words in transcriptions and implications that they tried to explain by analyzing a whole story they told the researcher. However, there were some themes in some categories (Category G, I, J, K, R) that the research coded and reported them from the mentioned words only because it would be a bias on some types of information such as some physical reactions, perception, or what they said they did in control themselves rapidly. Therefore. the researcher should have not assumed if it was able to be observed from the interviews. The quotes were edited for grammatical clarity.

However, a transcription was done in order to preserve the original meaning of information as much as possible. Additionally, the researcher did not mention the names of organizations, product brands, and some geographical locations to avoid the ability to link information with participants' identities.

4.3.1 RSQ 1: Meaning of crisis leadership

To explore the meaning of crisis leadership as stated in SQ1 of RQ (RSQ1) as What is the meaning of crisis leadership? the researcher applied Section 3 of the interview question in exploring the understanding of what and how participants did in a crisis including what happened or what they perceived during those actions. Apart from Section 1 that was used for checking the crisis contexts of participants, information for this RSQ1 came from the interview Section 3 after Section 2 because from the pilot test, the researcher adjusted the interview questions for RSQ2 to move to Section 2 for starting before as is to explore about internal phenomena at very first of crisis that it would make participants easier to recall their sudden impacts at those emerging crisis case studies. Then, after they had made storytelling about situations already, they would inform the actions they had done in the crisis in the interview Section 3 for RSQ 1 here, since the beginning until the termination including the happening during an action which might be not just a success in solving a crisis. This helped them to explain the details and ongoing perception of crisis leaders' actions and activities during a crisis.

Even actions of crisis leadership were proposed in existing literature and also adopted as the checklist to select participants, the researcher aimed to explore more from them according to the research paradigm of qualitative methodology. Furthermore, those selection items did not interfere with the next process of using the interview protocol that the research had applied non-judgmental and non-bias questions which were not structured about those crisis leadership practices from existing literature, until the process of data analysis that the researcher began to imply the theoretical sensitivity in research operations.

Finally, in exploring themes derived from numerous codes, the researcher found the responding information for this RSQ1 in helping to explore the insight of the crisis leadership meaning should be categorized as six categories or dimensions of

findings to answer RSQ1 explaining the meaning of crisis leadership which included Category A: Deliberate and immediate Decision-Making Processing and Planning, Category B: Agile Execution, Management and Communication, Category C: Applying Operational Arts and Tactics, Category D: Task, People and Change-Oriented Leading, Category E: Emerging Feelings during Actions, and Category F: Crisis Handling Learning and Development. These categories were generated from an understanding of their codes informed and analyzed by the researcher. Category A, B, C, and D describe the meaning of crisis leadership on what participants as normal people who became so-called crisis leaders reacted to the situation hence this presents about the action of crisis leaders meanwhile Category E and F describe on what happened to them as the other outcomes besides the success in solving a crisis when they had performed crisis leadership in actions.

After the analysis process, this study found all participants mentioned these categories by exploring themes and codes. The results of this RSQ1 were presented in Table 4.8 for the thoughts, actions, and activities of crisis leadership and Table 4.9 for the outcomes perceived by crisis leaders during the crisis leadership phenomenon, not only the success in handling a crisis.

Table 4.8 Findings of RSQ1-Thoughts/Actions of Crisis Leaders

Categories		Themes		Codes		Participants (n) for code	Participants (n) for theme
A	Deliberate and immediate Decision-Making Processing and Planning	A1	Emergent Design-led Strategic Thinking	A1.1	Deliberately assessing situations	31	33
				A1.2	Designing solutions and preparing for the worst	25	
				A1.3	Considering stakeholders	14	
		A2	Decisive Critical Decision-Making and Planning	A2.1	Rapidly and strategically considering solutions	29	32
				A2.2	Deciding to do or not (Being hesitant)	10	
				A2.3	Prioritizing and sequencing actions	21	
		B1	Responsive actions and ambidexterity	B1.1	Taking immediate actions	33	33
				B1.2	Containing the impacts	21	
				B1.3	Doing multi-tasks at the same time	5	
B	Agile Execution, Management and Communication	B2	Assertive actions and	B2.1	Responsively notifying for understanding	25	33
				B2.2	Reporting to higher-ups	21	
						25	

Categories	Themes	Codes	Participants (n) for code	Participants (n) for theme
C Applying Operational Arts and Tactics	B3 Monitoring and Feedback	communication	18	
		B2.3 Suggesting solutions		
		B2.4 Making argument assertively	12	
		B2.5 Supporting knowledge and experiences	20	
		B3.1 Monitoring	10	
	C1 Strategic communication	B3.2 Debriefing	6	14
		C1.1 Communication Planning	23	
	C2 Vertical- Horizontal orchestration	C1.2 Communication Design	20	28
		C2.1 *Brainstorming with the team	24	
		C2.2 Opening for ideas	12	
		C2.3 Vertically-horizontally coordination, cooperation and collaboration	33	33
		C2.4 Finding special supports	16	
	C3 Political tactics	C3.1 Reciprocity and Negotiation	16	
		C3.2 Utilizing relationships, networking, and power	18	23

Categories	Themes		Codes	Participants (n) for code	Participants (n) for theme
D Task, People and Change-Oriented Leading	D1	Influencing others to follow rapidly	D1.1 Persuading	33	33
			D1.2 Building trustworthiness	20	
	D2	Centralized-	D2.1 Commanding	17	20
		Decentralized Controls	D2.2 Delegating	10	
	D3	Being supportive	D3.1 Participating with the team	12	29
			D3.2 Comforting and complimenting the team	11	
			D3.3 Teaching	11	
			D3.4 Being open-minded for listening	7	

Table 4.9 Findings of RSQ1-Happenings in Crisis Leaders

Categories	Themes		Codes	Participants (n) for code	Participants (n) for theme
E Emerging Feelings during Actions	E1 Negative feelings in actions	E1.1 Anxiety		14	22
		E1.2 Communication concern		8	
		E1.3 Frustration		8	
		E1.4 Tiredness		3	
	E2 Positive feelings with success	E2.1 Satisfied with the success		22	32
		E2.2 Relieved from stress		13	
		E2.3 Happy and proud about the success		30	
		E2.4 Work engagement		4	
		E2.5 More confident from the right decision making		12	
		E2.6 Valuable for organization and team		17	
		E2.7 Successful in keeping self-image		8	
		E2.8 Successful in keeping an organizational image		11	
		E3 Positive feeling	E3.1 Happy and proud about rewards		11

Categories	Themes	Codes	Participants (n) for code	Participants (n) for theme
F Crisis Handling Learning and Development	with returns	E3.2 Relieved, happy and proud with being accepted and followed	9	
	F1 Crisis awareness	F1.1 Learning the hardness	7	24
		F1.2 Learning the solvability	19	
		F1.3 Learning the possibility of the future crisis	12	
	F2 People-oriented learning	F2.1 Learning importance of teamwork	4	5
		F2.2 Learning importance of networking	2	
	F3 Post-crisis development	F3.1 Being adopted as a role model	4	17
		F3.2 Development of thoughts and problem-solving	12	
		F3.3 Networking development	9	

4.3.1.1 Category A-Deliberate and immediate Decision-Making Processing and Planning

This category refers to the first mental process when crisis leaders already respond to the crisis after they perceive an impact and its effects. This category means when crisis leaders started to solve or handle a crisis, they thought of what, when, where, why and how to do including by whom. Therefore, these thoughts aim to manage or handle a situation. Before various actions, they have to think and make a decision. However, the researcher did not ask what they thought before an action but just simply asked what they do or perform in a crisis. Then, as a result they informed about the decision-making process. Then, the researcher found that participants have unique decision-making process in a crisis they faced which were sophisticated. These characteristics of their decision-making processing and planning will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 2 themes: Theme A1: Emergent Design-led Strategic Thinking and Theme A2: Decisive Critical Decision-Making and Planning by 33 and 32 participants respectively as shown in Table 4.8.

1) Theme A1: Emergent Design-led Strategic Thinking

This theme refers to the analysis process that emerges suddenly as driven by the facing situation. However, crisis leaders did it strategically which considered various factors that need to consider in designing or sketching solutions. The design became a key process because a crisis is an unusual problem that cannot be fixed by normal actions. Then, the further planning and actions had to be done in time and also anticipating the worst-case scenarios that can emerge and escalate. It is like the environmental scanning in strategic planning and management. The essence of strategic perspective is about overall factors including internal and external environments are assessed to generate the appropriate options for further action.

For 33 out of 33, participants indicated their analysis process strategically that it had to be done quickly and deliberately to respond to a crisis by having several choices in mind. There were three codes derived from the interview: A1.1: Deliberately assessing situations, A1.2: Designing solutions and preparing for

the worst, and A1.3: Considering stakeholders. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code A1.1 Deliberately assessing situations

From interviewing participants, this code refers to processes that crisis leaders assess surrounding and relevant situations in detail, analyzing or investigating the causes, and identify their own resources and information including the needs of additional resources. Under the limit of time, crisis leaders can make it fast and it helps to design good options for more effective decisions. These various processes reflecting deliberation of assessment prior to making a decision in crises even the time is limited.

(2) Code A1.2 Designing solutions and preparing for the worst

From interviewing participants, this code refers to thinking of problems and the worst case. Then, crisis leaders design solutions and preparations as options for further decision-making and planning. This would help to contain damages in case the solving problem cannot be done and can help to foresee the escalation of crises by thinking the worst-case scenario thinking when a crisis came. The most severe probable event was aware of.

(3) Code A1.3 Considering stakeholders

From interviewing participants, this code refers to processes that crisis leaders consider all relevant stakeholders involving with a crisis such as ones potentially getting impacts or ones can help to fix a situation. This causes crisis leaders to rapidly inform the relevance and assess factors for planning.

2) Theme A2: Decisive Critical Decision-Making and Planning

This theme refers to decision-making based on options that the mind generates including the complex planning. This is the same as the strategic planning process in strategic management. Crisis leader have to generate and compare options by evaluating pros and cons including feasibility, suitability, and effectiveness. This is critical because of the time constraint and significance of the result of decision. Especially, for crisis leaders, there is a moment that is about deciding to do or not to because they might not have to do or not have their own direct

responsibility to do. They have a choice to not do it and let someone else reacts. Before they executed an action, the detailed plan with sequencing priority also has to be made in mind effectively and quickly.

For 32 out of 33, participants informed the moment of making a decision between doing or not doing, or between courses of action. However, each option does not mean only one action solely but they are many things to perform and planning. There were three codes derived from the interview: A2.1: Rapidly considering options, A2.2: Deciding to do or not, and A2.3: Prioritizing and sequencing actions. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code A2.1 Rapidly and strategically considering options

From interviewing participants, this code refers to thinking of the way to solve a problem or relief the impact of crisis. these solutions can be options or courses of action to be compared and made a selection or a decision. However, crisis leaders create these options with the high speed enough in dealing with situations. This rapid creation of choices covered how to fix a problem, limit escalation, offering innovative solutions and restoration of normal state by also applying strategic thinking.

(2) Code A2.2 Deciding to do or not

From interviewing participants, this code refers to decision-making based on options that the mind generates. This is the same as the strategic planning process in strategic management. Crisis leader have to compare operations by evaluating pros and cons including feasibility, suitability, and effectiveness. This is critical because of the time constraint and significance of the result of decision.

(3) Code A2.3 Prioritizing and sequencing actions

From interviewing participants, this code refers to prioritization of action. In crisis with time limit and high impact, sequences of action step are related to priority to do. The most important thing for reducing impacts, handling situations or fixing problems have to do first.

4.3.1.2 Category B-Agile Execution, Management and Communication

This category refers to the main phenomenal action which crisis leaders deal with a crisis in actions. It includes hands-on action, communication, managing resources, and follow-up. There are characteristics involving with this execution responding to the event. Agility represents the effectiveness in doing things fast and covering various activities at the same time and communicating rapidly as the first wave of information for collaborative actions that sensitively adapting to the presence and embracing scenario planning. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes: Theme B1: Responsive actions and ambidexterity, Theme B2: Assertive communication, and Theme B3: Monitoring and feedback, by 33, 33 and 14 participants respectively as shown in Table 4.8.

1) Theme B1: Responsive actions and ambidexterity

This theme refers to main actions in handling a crisis. Actions of crisis leaders have specific purposes in stopping the impact and unique characteristics because of contextual constraints. It has to be fast and multi-dimensional. It seems to fit to the word ‘ambidexterity’ that nowadays is applied in the organizational context means individuals who use both hands equally well. Crisis do both action and coordination including both direct people and ask for help from people.

For 33 out of 33, participants indicated their responsive and agile action in doing various things. There were four codes derived from the interview: B1.1: Taking immediate actions, B1.2: Containing the impact, B1.3: Doing multi-tasks at the same time, B1.4: Managing resources. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code B1.1 Taking immediate actions

From interviewing participants, this code refers to quick actions after deciding to do. The speed of response is important for handling a crisis. Sometimes, this can mean responsive action from automaticity as by the instinct to react to situations.

(2) Code B1.2 Containing the impacts

From interviewing participants, this code refers to action objectives in crises which are not only solving problems or fixing situation, but also the action in stopping escalation of crisis's impacts and damages. This is not the termination of crisis rather it is about control or contain the crisis impact within a minimum or optimum boundary.

(3) Code B1.3 Doing multi-tasks at the same time

From interviewing participants, this code refers to a phenomenon that crisis leaders have to do various tasks at the same time such as hand-on actions, coordination, and communication, managing resources and systems or etc.

(4) Code B1.4 Managing resources

From interviewing participants, this code refers to managerial actions of crisis leaders. As only one person cannot succeed in handling a crisis due to difficulties of crisis, they have to utilize other persons and things to achieve goals. This is the relationship between leadership and management that one who leads effectively also are able to manage things which mean allocate resources including people effectively.

2) Theme B2: Assertive actions and communication

This theme refers to an action related to communication and behaviors that are direct and respectful. Being assertive makes crisis leaders the advantages in successfully delivering the message. If communicative actions are too passive or too aggressive, the messages may get lost because people might be not ready or open for the message delivery. Also, crisis leaders generate effective meanings of communicated messages. Most of actions need the mean of communication to send messages of assigning tasks, informing situations, coordinating for supports. Assertive behavior is the way to express opinions effectively and stand up for the point of view. It is an honest manner without intentionally hurting anyone's feelings. However, these actions and communications need the bravery of crisis leaders.

For 33 out of 33, participants indicated about this kind of communication which is needed in a crisis. There were five codes derived from the

interview: B2.1: Responsively notifying for understanding, B2.2: Reporting to higher-ups, B2.3: Suggesting solutions, B2.4: Making argument assertively and B2.5: Supporting knowledge and experiences. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code B2.1 Responsively notifying for understanding

From interviewing participants, this code refers to notification for involving stakeholders. There are various relevant aspects of crisis that each stakeholder can be related to and they need to be notified and understood as soon as possible.

(2) Code B2.2 Reporting to higher-ups

From interviewing participants, this code refers to actions in informing higher-ups to acknowledge the situation in creating collective understanding in an organization and receiving authority for further actions. Even there are some difficulties to reporting bosses due to the power distance, it is essential to do. Also, crisis leaders keep reporting to their higher-ups from the recognition of power structure to achieve a goal.

(3) Code B2.3 Suggesting solutions

From interviewing participants, this code refers to when crisis leaders in the non-management role, they might not be able to manage resource to fix problems by their power. However, they offer solutions and suggest the way to handle the situation to the higher-ups even they do not ask for.

(4) Code B2.4 Making argument assertively

From interviewing participants, this code refers to that crisis leaders have to assertively communicate to higher-ups and team when the ideas are different and crisis leaders believe that the right idea will help to fix problems. They can argue with them to create the understanding and acceptance.

(5) Code B2.5 Supporting knowledge and experiences

From interviewing participants, this code refers to the way to make an understanding of situations and planned actions to the team and stakeholders by referencing knowledge and sharing experiences.

3) Theme B3: Monitoring and feedback

This theme refers to activities that are also a part of management that crisis leaders do after executing the decided plan. Not only they follow up the overall action performance, but also provide feedback to the team.

For 14 out of 33, participants indicated this action. There were two codes derived from the interview: B3.1: Monitoring and B3.2: Debriefing. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code B3.1 Monitoring

From interviewing participants, this code refers to actions that follow up the result of execution or monitoring the on-process activities which have been coordinated or assigned to someone.

(2) Code B3.2 Debriefing

From interviewing participants, this code refers to the way to feedback on the evaluation of actions but mostly crisis leaders at post-crisis compliment the team in collective success and conclude the lesson learned for development.

4.3.1.3 Category C-Applying Operational Arts and Tactics

This category is subsequence from strategic thinking and design thinking in a part of crisis leaders' emergent design-led strategic thinking that creative solutions consisting with various arts and tactics have to be generate to deal with unexpected and stressful events. It refers to the concept that the researcher adopted from concept that can refer to military doctrine and theory which is the practical pursuit of strategic objectives, in whole or in part, through the arrangement of tactical actions in time, space, and purpose. In military, it is the employment of military forces to attain strategic and/or as objectives through the design, organization, integration, and conduct of campaigns, major operations, and battles. Therefore, in crisis management, it is the employment of resources and networks to attain strategic and operational objectives through the design, organization, integration, and conduct of plan, major actions, and detail activities. Then, this applies arts and tactics that not only tangible action, but also intangible techniques such as creative and innovative

thinking for solution designs or the interpersonal and political skills. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes: Theme C1: Strategic communication, Theme C2: Vertical-Horizontal orchestration, and Theme C3: Political tactics, by 28, 33 and 23 participants respectively as shown in Table 4.8.

1) Theme C1: Strategic communication

This theme refers to using a specialized or tactical approach to distributing and receiving information other than typical communication that crisis leaders have to firstly rapidly inform stakeholders. This second wave of communication means communicating the appropriate message, through the correct channels, to the right people, at the right time and using feedback from this process to stay focused on ultimate goals. This will help to effectively disseminate information and organize cooperation.

For 28 out of 33, participants indicated this ability and technique of communication in their consideration for achieving a goal. There were two codes derived from the interview: C1.1: Communication planning and C1.2: Communication design. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code C1.1 Communication Planning

From interviewing participants, this code refers to the specific detail of using communication in planning to achieve a goal. It is about considering means, contents, and the right time to send information. These skills and techniques are used in both provide information to stakeholder and coordinating with others.

(2) Code C1.2 Communication Design

From interviewing participants, this code refers to the specific detail of designing communication. It is about considering the scope of messages and words used. These also skills and techniques are used in both provide information to stakeholder and coordinating with others.

2) Theme C2: Vertical-horizontal orchestration

This theme refers to the coordination and management of multiple systems and resources and stringing together multiple tasks in order to execute a holistic plan and process to handle a crisis situation. This coordination in crisis need to orchestrate both vertical and horizontal directions. The horizontal scheme means available resources and assets at the same level but includes inside and outside the loop of management and authority meanwhile the vertical scheme is the management and resources at the higher or lower levels that provide various roles, supports and relevance to crisis leaders.

This complexity is represented by the word 'orchestration' instead of just coordination. The orchestrating action means a dynamic point on a continuum between the extremes of persuasion and commanding control that crisis leaders have to consider in shifting from managerial actions to take leadership and apply leadership skills in the situation.

For 33 out of 33, participants indicated this phenomenon that help to manage a crisis effectively. There were four codes derived from the interview: C2.1: Brainstorming with the team, C2.2: Opening for ideas, C2.3: Vertically-horizontally coordinating, coordination and collaboration and C2.4: Finding supports. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code C2.1 Brainstorming with the team

From interviewing participants, this code refers to that crisis leaders use a method of generating ideas and sharing knowledge together with the team to solve a crisis.

(2) Code C2.2 Opening for ideas

From interviewing participants, this code refers to actions that crisis leaders are ready to receive the ideas and suggested solutions from some else. This can be both vertical and horizontal that means crises leaders are open-minded for colleagues, their team members and their higher-ups.

(3) Code C2.3 Vertically-horizontally coordination, cooperation and collaboration

From interviewing participants, this code refers to actions that work together with others in various dimension to collectively succeed or generate a new outcome in dealing with a crisis.

(4) Code C2.4 Finding special supports

From interviewing participants, this code refers to efforts to find people and things to enable the plan to achieve crisis leaders' objectives such as consults, specialists, equipment and systems including budgets. As in crisis, there are various kinds of support needed more than usual or expected problems. most of essential things are out of the existing system.

3) Theme C3: Political Tactics

This theme refers to practices that come from crisis leaders are aware of power, authority, network, and reciprocity in organizational management. With organizational politics, crisis leaders connect themselves with others in an attempt to win the scarce resources. They engage in behavior for bargaining, negotiating, alliance building, and resolving conflicting interests. Also, these tactics are ways in which individuals understood who has a power to each activity to support mission to handle a crisis.

For 23 out of 33, participants informed that they used these tactics in coordinating for agreed solution with other stakeholders. There were two codes derived from the interview: C3.1: Reciprocity and negotiation and C3.2: Utilizing relationships, networking and power. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code C3.1 Reciprocity and Negotiation

From interviewing participants, this code refers to action in negotiating with others for requesting helps. As in crisis, the supports needed mostly are outside the control. Special tactics should be applied to get what crisis leaders need by exchanging things with others for mutual benefit. However, sometimes organization politics and power help in successful negotiation.

(2) Code C3.2 Utilizing relationships, networking and power

From interviewing participants, this code refers to using the relationship and networks in a crisis. they are important in coordinating and finding

support. As a crisis emerge unexpectedly, the supports mostly come from helps. Only the easiest and fastest way to get support from other people and organization outside the team. It comes when crisis leaders have relationships and networks with people who can support or have power enough.

4.3.1.4 Category D-Task-, People-, and Change-Oriented Leading

This category refers to the ability of crisis leaders that they can lead people to achieve goals. In their leading, they concern various dimension including achieving the task, caring people, and adapting for change. Crisis leaders perform leadership by combining, balancing, and sequencing some key features of Agile, Directive, Transformational, and Servant Leadership styles. Crisis leaders have to be ready and fast in changing environments, decisive in taking reaction, influential in leading and transforming others mindset, and caring, interacting, and trusting others, respectively: 1) Agile leaders concern fast responsive and collaborative actions, sensitively adapting to the presence, embracing scenario planning, sharing information, delegating decision-makers, and unlocking people potential. 2) Directive leaders take responsibility for decision-making rather than collaborating with their team or incorporating employee feedback. They tell their followers what needs to be done and how it needs to be done, rather than letting them make their own decisions or choose their own path for accomplishing tasks. 3) Transformational leadership inspires people to achieve unexpected or remarkable results. It gives workers autonomy over specific jobs, as well as the authority to make decisions once they have been trained. This induces a positive change in the followers' attitudes and the organization as a whole. 4) Servant leaders help their team members become leaders themselves by leading by example and providing their team with opportunities to grow and develop. They also find out what their employees' personal goals are and give them projects or more responsibilities to help them achieve those goals. Agile leaders set direction and never afraid to stand up and take charge, agile leaders have a clear sense of direction and communicate it with ease. They understand how organizations, teams and other constituents can respond to a changing industry. They see the big-picture vision and the path to getting there. Whereas traditional leaders focus on hierarchical systems, failure avoidance and retaining decision-making power. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes; Theme D1: Influencing others to follow rapidly, Theme D2: Centralized-decentralized controls, and Theme D3: Being supportive, by 33, 20 and 29 participants respectively as shown in Table 4.8.

1) Theme D1: Influencing others to follow rapidly

This theme refers to the ability to achieve the expected results by changing behaviors and inspiring others to follow and take action rapidly in a crisis. It means crisis leaders can affect the character, behavior and development of other people. This is an important part of the meaning of leadership.

For 33 out of 33, participants indicated this leadership performance that influenced others to follow in the situation. There were two codes derived from the interview: D1.1: Persuasion and D1.2: Building trustworthiness. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code D1.1 Persuading

From interviewing participants, this code refers to the ability of crisis leadership in persuading others to follow. No one declines their direction and plan. This is also a skill including communication that affect others to follow.

(2) Code D1.2 Building trustworthiness

From interviewing participants, this code refers to generating trust for people around crisis leaders to believe that they will do the right things. Therefore, others perceive crisis leaders as persons who have reliability and credibility from their information and also backgrounds. This builds acceptance from the other team members who have different ideas to follow.

2) Theme D2: Centralized-Decentralized Controls

This theme refers to the unique way of crisis leaders can agilely decide to execute their full authority of controls, delegate the controllability to others, or both to enhance leadership and management performance of the team. They execute power and command on both styles of centralization and decentralization. In centralized controls, emerging crisis leaders take a command directly by themselves.

In contrast, in decentralized controls, formal decision-making power is distributed or delegated across multiple individuals or teams. In case of crisis leaders do not have a formal power, this decentralization means they allow others to help managing some parts of crisis management which one person cannot take control for a whole situation that the span of controls in the emerging crisis managerial organization have to be concerned and structured by agile decision-making of crisis management of crisis leaders.

For 20 out of 33, participants indicated this balancing control during the crisis management. There were two codes derived from the interview: D2.1: Command and D2.2: Delegation. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code D2.1 Command

From interviewing participants, this code refers to an action in telling someone to do something which is directive. Crisis leaders expect the others to follow.

(2) Code D2.2 Delegation

From interviewing participants, this code refers to that crisis leaders cannot do everything by themselves. They delegate power to someone else with trust to help and make a decision.

3) Theme D3: Being supportive

This theme refers to the character of giving help or assistance, or to hold something or someone up. Crisis leaders provide the other with care, encouragement, and compassion, especially when they need it and get impacts of a crisis.

For 29 out of 33, participants described their supports to the team in dealing with situation and caring of their team members' feelings and emotions under crisis impacts. There were four codes derived from the interview: D3.1: Participating with the team, D3.2: Comforting and complimenting the team, D3.3: Teaching and D3.4: Being open-minded for listening. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code D3.1 Participating with the team

From interviewing participants, this code refers to that crisis leaders join the team in taking actions in specific tasks. They participate them to do a task together for both physical and mental supports. This also helps to encourage the team to achieving the goal together.

(2) Code D3.2 Comforting and complimenting the team

From interviewing participants, this code refers to that crisis leaders try to support the team members that also get the impact and have negative feeling emotion by making conversation or encourage them. Also, crisis leaders complement them after they respond to a crisis.

(3) Code D3.3 Teaching

From interviewing participants, this code refers to that crisis leaders are supportive which not only compliment and comfort others, but also teach and transfer their knowledge, experiences and skills to the team during participating them in actions. It includes teaching as the way to make them remember the mistake and act more conscious for the next time.

(4) Code D3.4 Being open-minded for listening

From interviewing participants, this code refers to that crisis leaders are open-minded to listen to problems, mistakes and difficulties of the team.

4.3.1.5 Category E-Emerging Feelings during Actions

This category refers to the feedback emerging after crisis leaders start actions until a crisis is terminated. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes; Theme E1: Negative feelings in actions, Theme E2: Positive feelings with success and Theme E3: Positive feeling with returns by 22, 32, and 15 participants respectively as shown in Table 4.9.

1) Theme E1: Negative feelings in actions

This theme refers to negative emotions that crisis leaders perceive feedbacks from various aspects during taking action and coordination. For 22

out of 33, participants perceived this kind of bad feeling during taking action in solving a problem. There were four codes derived from the interview: E1.1: Anxiety, E1.2: Communication concerns, E1.3: Frustration and E1.4: Tiredness. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code E1.1 Anxiety

From interviewing participants, this code refers to feeling of unease during starting of actions. They wish the outcome will be successful but still be worried during process. Also, it might cause crisis leaders to sweat, feel restless and tense, and have a rapid heartbeat as same as the moment when they firstly got impact of crisis.

(2) Code E1.2 Communication concerns

From interviewing participants, this code refers to that feeling of unease on communication that crisis leaders are going to send or already sent to others. Miscommunication or misperception of messages can cause problems.

(3) Code E1.3 Frustration

From interviewing participants, this code refers to the feeling of being annoyed or less confident because crisis leaders cannot achieve what they want. Also, it happens when the team cannot act as expectation.

(4) Code E1.4 Tiredness

From interviewing participants, this code refers to feeling of being drained of strength and energy. Crisis leaders might have thought that why they have to do this while others do nothing.

2) Theme E2: Positive feelings with success

This theme refers to positive emotions that crisis leaders perceive from the successful actions and the various outcomes. For 32 out of 33, participants also perceived this kind of good feeling during taking action in solving a problem. There were eight codes derived from the interview: E2.1: Satisfied with the success, E2.2: Relieved from stress, E2.3: Happy and proud with the success, E2.4: Work satisfaction, E2.5: More confident from the right decision making, E2.6: Valuable for organization and team, E2.7: Successful in keeping self-image and E2.8:

Successful in keeping an organizational image. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code E2.1 Satisfied with the success

From interviewing participants, this code refers to positive emotions that crisis leaders perceive from the successful actions and the various outcomes.

(2) Code E2.2 Relieved from stress

From interviewing participants, this code refers to feeling of ease. Crisis leaders alleviate or free from distress, anxiety or stress after successful actions.

(3) Code E2.3 Happy and proud with the success

From interviewing participants, this code refers to happy and proud about the successful action. This also includes proud of their problem-solving ideas.

(4) Code E2.4 Work engagement

From interviewing participants, this code refers to that the success in crisis handlings makes crisis leaders increase their job satisfaction and love their work. This also means that they are happy because their work that facing crises motivate or engage them and it makes them perceived the self-values.

(5) Code E2.5 More confident from the right decision making

From interviewing participants, this code refers to that the success in crisis handlings makes crisis leaders increase their confidence in the judgement and decision-making.

(6) Code E2.6 Valuable for organization and team

From interviewing participants, this code refers to perception of their value in helping the organization to deal with a crisis and helping the team to accomplish a task.

(7) Code E2.7 Successful in keeping self-image

From interviewing participants, this code refers to the feeling that crisis leaders are successful in maintaining their image. They can present their competency in solving a crisis or other problems.

(8) Code E2.8 Successful in keeping an organizational image

From interviewing participants, this code refers to the feeling that crisis leaders are successful in maintaining the image of organization. It is an important thing that they can help organization.

3) Theme E3: Positive feelings with returns

This theme refers to positive emotions that crisis leaders perceive when they got the successful actions. For 15 out of 33, participants added more information about the positive feeling that related to their self-interest. There were two codes derived from the interview: E3.1: Happy and proud with rewards and compliments and E3.2: Relieved, happy and proud with being accepted and followed. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code E3.1 Happy and proud with rewards and compliments

From interviewing participants, this code refers to that crisis leaders are happy and proud when they receive the rewards from their successful action.

(2) Code E3.2 Relieved, happy and proud with being accepted and followed

From interviewing participants, this code refers to that crisis leaders feel relieved, happy and proud when others in the team accepts them and their ideas and follows.

4.3.1.6 Category F-Crisis Handling Learning and Development

This category refers to the crisis aspects of learning and results of them that crisis leaders receive during a crisis and have been developed after crisis termination. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes; Theme F1: Crisis awareness, Theme F2: People-oriented learning and Theme F3: Post-crisis development, by 24, 5 and 17 participants respectively as shown in Table 4.9.

1) Theme F1: Crisis awareness

This theme refers to the awareness relating to a crisis and its nature that crisis leaders have learned from experiencing and taking actions in a crisis. For 24 out of 33, participants indicated this aspect of learning. There were three codes derived from the interview: F1.1: Learning the hardness, F1.2: Learning the solvability and F1.3: Learning the possibility of the future crisis. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code F1.1 Learning the hardness

From interviewing participants, this code refers to that crisis leaders perceive hardness and learn that this is a phenomenon of crisis.

(2) Code F1.2 Learning the solvability

From interviewing participants, this code refers to that crisis leaders perceive solvability and learn that problems finally can have solutions.

(3) Code F1.3 Learning the possibility of the future crisis

From interviewing participants, this code refers to when crisis leaders are aware that it is possible to face a crisis in their context. They feel that they are learning everything for the next crisis if it happens.

2) Theme F2: People-oriented learning

This theme refers to the issues relating to crisis management activities that crisis leaders have learned during action about importance of people in supporting through various aspects.

For 5 out of 33, participants recognized this kind of learning. There were two codes derived from the interview: F2.1: Learning importance of teamwork and F2.2: Learning importance of networking. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code F2.1 Learning the importance of team

From interviewing participants, this code refers to when crisis emerges, crisis leaders learn the importance of the teamwork in helping each other to achieve goal.

(2) Code F2.2 Learning the importance of networking

From interviewing participants, this code refers to when crisis emerges, crisis leaders learn the importance of the network that they realize in benefits of knowing a lot of people.

3) Theme F3: Development

This theme refers to some aspects of development that crisis leaders are developed after taking themselves through a crisis. There are several ways that crisis leaders get the development for themselves by experiencing a crisis. For 17 out of 33, participants perceived this development. There were three codes derived from the interview: F3.1: Being adopted as a role model, F3.2: Development of thoughts and problem-solving and F3.3: Networking development. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code F3.1 Being adopted as a role model

From interviewing participants, this code refers to the development of crisis leaders proved by that others adopt them to be the role model.

(2) Code F3.2 Development of thoughts and problem-solving.

From interviewing participants, this code refers to the development of thinking and skills that can help to handle and manage a crisis. this will help them improve abilities to do something else. It is the opportunity in developing themselves. Crisis leaders find a chance to learn something new and then develop themselves.

(3) Code F3.3 Networking development

From interviewing participants, this code refers to the development of new networking that crisis leaders derive during crisis management. It is the opportunity about the future network that crisis leaders find from emerging coordination and cooperation in crisis management.

4.3.2 RSQ 2: Internal mechanism of crisis leadership

The research question for this issue was stated as SQ2 of RQ (RSQ2) - What is the internal mechanism of crisis leadership? (Discovery) This is to explore the

internal mechanism of crisis leadership by Section 2 and Section 4 of the interview section after they recalled and told a case study of their crisis in Section 1. This study investigated what happened inside themselves at the moment of crisis emergence and its sudden impacts. Also, it was the findings of internal processes during crisis handling. Furthermore, this internal mechanism included the rationales for this emergence of crisis leaders in the situation. This helped researchers to explore crisis leaders' internal mechanism since they had received the impacts and what were internal and personal factors that drove and influenced them to succeed in handling a crisis.

In categorizing themes derived from numerous codes, the researcher found the responding information for this RSQ2 had to be categorized as nine categories of findings to answer RSQ2 in describing the internal mechanism of crisis leadership which included Category G: Brain-Body Instant Reactions, Category H: Mental Instant Reactions, Category I: Focus to Control, Category J: Reference to Control, Category K: Pause to Control, Category L: Strategic Crisis-related Intelligence, Category M: Heroism, Category N: Tough attributes, and Category O: Tactical attributes. These categories were generated from an understanding of their codes informed and analyzed by the researcher. Firstly, Category G to J present the internal mechanism when participants got the impacts from facing a crisis and how things inside emerged and be controlled before they started to take actions. Secondly, Category H to O present internal factors that were rationales and inside process for those actions they did in a crisis including what they normally are as their personal factors.

After the analysis process, this study found all participants mentioned these categories by exploring themes and codes. The results of this RSQ2 were presented in Table 4.10 for the internal mechanism: reactions and controls at the moment of the crisis impact and Table 4.11 for the internal mechanism: internal factors affecting mechanism of crisis leadership.

Table 4.10 Findings of RSQ2-The Internal Mechanism: Reactions and Controls at the Moment of Crisis Impact

Categories		Themes	Codes		Participants (n) for code	Participants (n) for theme
G	Brain-Body Instant Reactions (Physical/ Neurological)	G1 Responsive reaction	G1.1	Involuntary responses (Automaticity)	11	32
			G1.2	Surprise and Startle reflex (Unresponsive)	27	
		G2 Excitement	G1.3	Reactive response	10	
			G1.4	Attentive response	5	
		G3 Effects of stress	G2.1	Fidgety	11	
			G2.2	Agitation	23	
			G3.1	Symptoms of stress	9	
H	Mental Instant Reactions	H1 Thought reactions	G3.2	Limited capability	3	29
			H1.1	(Thinking that) Time is limited	10	
			H1.2	(Thinking that) No one is going to take an action	8	
			H1.3	(Thinking that) I must take an action	13	
			H1.4	Being curious why it happened	11	
			H1.5	Thinking repeatedly (Fixation)	20	

Categories		Themes	Codes		Participants (n) for code	Participants (n) for theme
I	Focus to Control	H2 Positive emotional reactions	H2.1	Being challenged	3	8
			H2.2	Having a can-do attitude	5	
		H3 Negative emotional reactions	H3.1	Being fearful and worried	23	
			H3.2	Being discouraged	11	
	I1 Situational engagement		H3.3	Need for a pre-action pause	4	29
			H3.4	Being frustrated and angry	12	
			I1.1	Keeping going and concentration	16	
			I1.2	Focusing solutions and planning	25	
	I2 Deliberate consciousness		I1.3	Writing down their thoughts	5	28
			I2.1	Being consequence-conscious	22	
			I2.2	Being time-conscious	11	
			I2.3	Being aware of the responsibility	15	
J	Reference to Control	J1 Building up confidence	J1.1	Seeking advice	9	23
			J1.2	Being self-confident	9	

Categories	Themes	Codes	Participants (n) for code	Participants (n) for theme
		J1.3 "Doing the right things"	16	
	J2 Adhering to learning and experiences	J2.1 Recalling knowledge and experiences	9	12
		J2.2 Following on procedures and training	5	
	K1 Mindfulness generation	K1.1 Being mindful	20	24
		K1.2 Taking a breather	14	
	K2 Stress relief	K2.1 Talking	3	5
		K2.2 Escaping	3	
K Pause to Control				

Table 4.11 Findings of RSQ2-The Internal Mechanism: Internal Factors Affecting Mechanism of Crisis Leadership

Categories		Themes	Codes		Participants (n) for code	Participants (n) for theme
L Strategic Crisis-related Intelligence	L1	Vigilance	L1.1	Ability to detect signals	23	28
			L1.2	Readiness	14	
	L2	Sense-making capability	L2.1	Ability to foresee	24	30
			L2.2	Ability to assess, analyze, and generate options	24	
	L3	Situation awareness	L3.1	Time awareness	26	32
			L3.2	Impact awareness	29	
			L3.3	Punishment awareness	8	
			L3.4	Need-help awareness	24	
			L3.5	Stakeholder awareness	25	
	L4	Adaptability and applicability of learning	L4.1	Knowledge	17	31
			L4.2	Work experience and skills	27	
			L4.3	Past experiences and skills	13	
			L4.4	Creativity and innovative ideas for problem-solving	24	

Categories		Themes		Codes	Participants (n) for code	Participants (n) for theme
M Heroism (Heart)	M	Altruism	M1.1	Belief that no one is going to take action	16	24
			M1.2	Voluntary	10	
			M1.3	Sacrifice	6	
	M2	Kindness	M2.1	Loyalty	5	23
			M2.2	Caring the team and others	23	
	M3	Courage	M3.1	Bravery	26	28
			M3.2	Assertiveness	12	
	M4	Action-oriented personality	M4.1	Leading by example	7	29
			M4.2	Self-reliance	14	
			M4.3	Agility	19	
			M4.4	Pragmatism	16	
	M5	Integrity	M5.1	Moral	16	30
			M5.2	Responsibility	24	
			M5.3	Dignity	4	
			M5.4	Sincerity	7	
N Tough attributes	N1	Tenacity	N1.1	Patience	5	27
			N1.2	Diligence	8	

Categories	Themes	Codes	Participants (n) for code	Participants (n) for theme
O Tactical attributes	N2 Resilience	N1.3 Perseverance	13	28
		N1.4 Commitment (Do the best)	24	
		N2.1 "Never give up" attitude/ Bouncing back/ Adaptability	18	
	N3 Growth mindset	N2.2 Positive attitude	14	22
		N2.3 Instinct, intuition, and improvisation	8	
		N2.4 Development-oriented person	12	
		N3.1 Self-confidence and can-do-attitude	13	
	O1 Interpersonal intelligence and habit	N3.2 Recognizing own leadership and competence	16	28
		N3.3 Seeking challenges as adventurous learning	10	
		O1.1 Empathy	10	
	O2 Communication ability	O1.2 Social skills and intelligence	22	21
		O1.3 Being communicative	10	
		O1.4 Humility	12	
		O1.5 Courtesy	13	
		O2.1 Communication techniques	20	
		O2.2 Communication strategies	15	
			157	

Categories	Themes	Codes	Participants (n) for code	Participants (n) for theme
O3	Political intelligence and ability	O3.1 Power awareness	21	32
		O3.2 Networking	18	
		O3.3 Reciprocating and negotiation skills	20	

4.3.2.1 Category G-Brain-Body Instant Reactions

This category refers to things that happens as physical and neurological effects to crisis leaders' action. Neurological effects are structural, biochemical or electrical abnormalities in the brain, spinal cord or other nerves can result in a range of symptoms. They are activated after crisis leaders perceive a crisis and its potentials and predicted escalations. Neurological effects are not mental. Mental problems result from chemical in the brain meanwhile neurological problems are caused by physical impacts or damages to the nervous system. These characteristics of their effects will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, 32 participants provided information about this. Their information was allocated to 3 themes; Theme G1: Responsive reaction, Theme G2: Excitement and Theme G3: Effects of stress, by 32, 27, and 9 participants respectively as shown in Table 4.10.

1) Theme G1: Responsive action

This theme refers to the action that respond to a crisis influenced by mental functions after perceiving situations. There were automatic response, unresponsive, reactive response, and also more attentive response. For 32 out of 33, participants described their physical phenomena that occur by perceiving a crisis and the researcher can conclude in several ways. There were four codes derived from the interview: G1.1: Involuntary responses (Automaticity), G1.2: Startle reflex (Unresponsive), G1.3: Reactive responses and G1.4: Attentive responses. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code G1.1 Involuntary actions (Automaticity)

From interviewing participants, this code refers to when facing a crisis, there is an action without occupying the mind with the low-level details required, allowing it to become an automatic response pattern or habit which is involuntary and unconscious. It is usually the result of learning, repetition, and practice. Example are tasks carried out by muscle memory often involve some degree of automaticity. An involuntary action is one that is unintentional. Reflex action is an involuntary and almost instantaneous movement in feedback to a stimulus.

Involuntary actions are the actions which are not controlled by our will. Reflex actions are the sudden action in response to something.

(2) Code G1.2 Surprise and Startle reflex (Unresponsive)

From interviewing participants, this code refers to when crisis leaders face an unexpected event causing a surprise which generate the immediate impact of the startle that may induce a brief period of disorientation as well as short term psychomotor impairment which may well lead to task interruptions and/or a brief period of confusion as it is hard, complex or both to deal with a normal practice. If this happen, a period of time will be required for reorientation and task resumption. Crisis leaders experience sudden exposure to intense stimulation that generates an involuntary physiological reflex which is similar to a flight/fight reaction with an emotional response component and a conditioned behavioral startle response. This surprise or shock disrupts cognitive processing and can negatively influence an individual's decision making and problem-solving abilities. Effects of surprise are accompanied by exclamations from crisis leaders, whether mentally or verbally.

(3) Code G1.3 Reactive responses

From interviewing participants, this code refers to when facing a crisis, there is the sudden action in response to something. It is an action taken as necessary reacting to the event quickly. Crisis leaders might react to situations through emerging emotions.

(4) Code G1.4 Attentive responses

From interviewing participants, this code refers to when facing a crisis, crisis leaders paying attention closely, listening carefully, and observant. this comes from that the challenge or stress makes them increase their level of situational awareness preparing to deal with problems.

2) Theme G2: Excitement

This theme refers to a feeling of eager enthusiasm. A crisis is stimulation causing crisis leaders are excited. For 27 out of 33, participants indicated this happening with themselves. There were two codes derived from the interview: G2.1: Fidgety (Behavioral excitement) and G2.2: Agitation (Physical excitement). Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code G2.1 Fidgety (Behavioral excitement)

From interviewing participants, this code refers to making small movement. It's associated with not paying attention, and often reflects discomfort and restlessness when crisis leaders suddenly get the impact of crisis.

(2) Code G2.2 Agitation (Physical excitement)

From interviewing participants, this code refers to when facing a crisis, there is a mental condition that affects the whole body. Crisis leaders experience of stomach sensations ("butterflies in the stomach"), trembling, weakness, and sweaty palms in response to a state of fear or excitement. These are the body's complex responses. This includes alertness that seems to be positive.

3) Theme G3: Effects of stress

This theme refers to symptoms and other effects that the stress from a crisis affect crisis leaders once they are experiencing it. For 9 out of 33, participants recognized their conditions at that time in getting crisis impacts. There were two codes derived from the interview: G3.1: Symptoms of stress and G3.2: Limited capability. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code G3.1 Symptoms of stress

From interviewing participants, this code refers to when facing a crisis, there are various effects that cause by stress especially to health conditions such as aches and pains, chest pain or a feeling like your heart is racing, exhaustion or trouble sleeping, headaches, dizziness or shaking, high blood pressure, muscle tension or jaw clenching, stomach or digestive problems.

(2) Code G3.2 Limited capability

From interviewing participants, this code refers to when facing a crisis, there is effects of stress in the aspect that it limits performance in actions such as planning and communication. However, crisis leaders experience this in a short time before coping with it.

4.3.2.2 Category H-Mental Instant Reactions

This category refers to thoughts and emotions that rapid emerge due to the impacts of a crisis. There are both positive and negative aspects. These

characteristics of their effects will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes; Theme H1: Thought reactions, Theme H2: Positive emotional reactions and Theme H3: Negative emotional reactions, by 29, 8, and 32 participants respectively as shown in Table 4.10.

1) Theme H1: Thought reactions

This theme refers to reactive thinking that emerges in crisis leaders' mind when they perceive the crisis.

For 29 out of 33, participants informed the thought that reacted to situation. There were five codes derived from the interview: H1.1: (Thinking) Time is limited, H1.2: (Thinking) No one is going to take an action, H1.3: (Thinking) I must take an action, H1.4: Being curious why it happened and H1.5: Thinking repeatedly (Fixation). Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code H1.1 (Thinking) Time is limited

From interviewing participants, this code refers to when facing a crisis, crisis leaders are concerned about the limitation of time. There is little time to handle and manage a crisis. otherwise, it will generate an impact or escalate to be a more severe crisis.

(2) Code H1.2 (Thinking) No one is going to take an action

From interviewing participants, this code refers to when facing a crisis, crisis leaders are concerned that no one will act or lead people to solve a crisis. This happens because a crisis is unexpected and normally outside routine operations. Other people might not be ready and know how to do it. crisis leaders assume that everyone is being unsure about responsibilities.

(3) Code H1.3 (Thinking) I must take an action

From interviewing participants, this code refers to when facing a crisis, there is an inner dialogue in the mind of crisis leaders telling them that they must take action. Something has to be reacted and solved under the situation.

(4) Code H1.4 Being curious why it happened

From interviewing participants, this code refers to when facing a crisis, there is an inner dialogue in the mind of crisis leaders wondering why things happen. They are curious to know causes that will help them to get clear understanding of the emerging situation.

(5) Code H1.5 Thinking repeatedly (Fixation)

From interviewing participants, this code refers to when facing a crisis, crisis leaders fixate to an emerging event. Their decision-making loop is repetitively activated. Even if they start to find a solution or act already, they still keep thinking. this is also the effects of anxiety on their mind having a sense of dread, or fearing the worst. feeling like the world is speeding up or slowing down so they cannot stop worrying, or that bad things will happen if you stop worrying.

2) Theme H2: Positive emotional reactions

This theme refers to the emotion that emerges when crisis leaders firstly got the impact of crisis positively. These emotions come with the readiness to fight with the situation. For 8 out of 33, participants recognized the emotion at that time in this way. There were two codes derived from the interview: H2.1: Being challenged and H2.2: Having a can-do attitude. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code H2.1 Being challenged

From interviewing participants, this code refers to when facing a crisis, crisis leaders feel it is challenging. It motivates them to take that challenge.

(2) Code H2.2 Having a can-do attitude

From interviewing participants, this code refers to when facing a crisis, crisis leaders have a positive attitude that they can go through it. Also, they are confident that they can handle a problem or achieve a plan to fix a situation.

3) Theme H3: Negative emotion reactions

This theme refers to the emotion that emerges when crisis leaders firstly got the impact of crisis negatively. These emotions come with the effects and barriers that crisis leaders have to overcome and control them.

For 28 out of 33, participants recognized the emotion at that time in this way. There were five codes derived from the interview: H3.1: Being surprised, H3.2: Being fearful and worried, H3.3: Being discouraged, H3.4: Need for a pre-action pause and H3.5: Being frustrated and angry. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code H3.1 Being fearful and worried

From interviewing participants, this code refers to the feeling of fear and worry when facing a crisis. crisis leaders predict to the escalation of the situation and its impacts. This can make them scared and afraid or worried with the imagination of worse case scenarios.

(2) Code H3.2 Being discouraged

From interviewing participants, this code refers to when facing a crisis, it can cause crisis leaders feels heavy, stuck, sad, and even hopeless sometimes. your enthusiasm and optimism have been replaced by doubt, disappointed and negativity. However, this emerges in the short moment when perceiving the situation.

(3) Code H3.3 Need for a pre-action pause

From interviewing participants, this code refers to when crisis leaders need to stop for a while before continuing to think and act. This comes from when they feel discouraged, task-overloaded, or overwhelming.

(4) Code H3.4 Being frustrated and angry

From interviewing participants, this code refers to when crisis leaders feel upset, irritated and unsuccessful. This reflects crisis leaders' anger and annoyance about why a crisis happen. Frustration is a slow, steady response, but anger is quick and aggressive.

4.3.2.3 Category I-Focus to Control

This category refers to crisis leaders' controls of instant effects by enhancing more focus to accept and exploit them for responses. These characteristics of their controls will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, 31 participants provided information about this. Their information was allocated to 2 themes; Theme I1:

Situational engagement and Theme I2: Deliberate consciousness by 29 and 28 participants respectively as shown in Table 4.10.

1) Theme I1: Situational engagement

This theme refers to crisis leaders control themselves by focusing current situations and keeping moving on to avoid various emerging emotions. This enhances the energy of thought by facing situation but avoiding distraction. For 29 out of 33, participants indicated this focus in controlling themselves. There were three codes derived from the interview: I1.1: Keeping moving and concentration, I1.2: Focusing solutions and planning and I1.3: Writing down their thoughts. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code I1.1 Keeping moving and concentration

From interviewing participants, this code refers to when crisis leaders control themselves by keep going on what they are doing but might be slow but gradually continue on. Also, they pay more attention on the situation and the action they do.

(2) Code I1.2 Focusing solutions and planning

From interviewing participants, this code refers to when crisis leaders control themselves by focusing on planning a solution. This makes them avoid from perceived impacts and stress.

(3) Code I2.3 Writing down their thoughts

From interviewing participants, this code refers to when crisis leaders control themselves by starting to write down the ideas that might be notes about situation and plans. It is a way to make a mindfulness in focusing things or acts rather than generating many things in their mind that can create negative emotions.

2) Theme I2: Deliberate consciousness

This theme refers to crisis leaders control themselves by facing with emerging situation and considering more details to recognize the level of crisis. This creates the awareness that they have to encounter. For 28 out of 33, participants indicated their various aspects of awareness in controlling themselves. There were three codes derived from the interview: I2.1: Being consequence-conscious, I2.2:

Being time-conscious and I2.3: Being aware of the responsibility. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code I2.1 Being consequence-conscious

From interviewing participants, this code refers to when crisis leaders control themselves by thinking about the consequential impact. It includes the effects on organization, team, and personal issues. This forces them to keep doing things rather than being stuck with the emotion, startle (shock) or hesitation.

(2) Code I3.2 Being time-conscious

From interviewing participants, this code refers to when crisis leaders control themselves by thinking about the time constraint. This forces them to keep doing things rather than being stuck with the emotion, startle (shock) or hesitation.

(3) Code I3.3 Being aware of the responsibility

From interviewing participants, this code refers to when crisis leaders control themselves by thinking about the responsibilities for others, organizations or themselves. This forces them to keep doing things rather than being stuck with the emotion, startle (shock) or hesitation.

4.3.2.4 Category J-Reference to Control

This category refers to crisis leaders' controls of instant effects by referencing other things to reduce them for responses. These characteristics of their controls will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, 25 participants provided this information. It was allocated to 2 themes; Theme J1: Building up confidence and Theme J2: Adhering to learning and experiences, by 23 and 12 participants respectively as shown in Table 4.10.

1) Theme J1: Building up confidence

This theme refers to crisis leaders control themselves by building up confidence from someone's advices, their own competencies, or the value of the right thing to do. The built confident helps crisis leaders to control themselves from instant negative impacts of a crisis.

For 23 out of 33, participants informed these activities to control themselves passing through a crisis's first impact. There were three codes derived from the interview: J1.1: Seeking advice, J1.2: Being self-confident and J1.3: "Doing the right things." Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code J1.1 Seeking advice

From interviewing participants, this code refers to when crisis leaders control themselves by seeking to help or advice. This helps them feel more confident and secured. Then, they can control impacted body and thoughts.

(2) Code J1.2 Being self-confident

From interviewing participants, this code refers to when crisis leaders control themselves by bring the self-confidence that can come from the perceived competence they have.

(3) Code J1.3 "Doing the right things"

From interviewing participants, this code refers to when crisis leaders control themselves by recognizing the authenticity as 'doing the right things' and drives their actions.

2) Theme J2: Adhering to learning and experiences

This theme refers to crisis leaders control themselves by following the procedures or trained practices. They used these steps to guide them rather than the interfered thought.

For 12 out of 33, participants informed about this. There were two codes derived from the interview: J2.1: Recalling knowledge and experiences and J2.2: Following on procedures and training. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code J2.1 Recalling knowledge and experiences

From interviewing participants, this code refers to when crisis leaders control themselves by recalling knowledge and experiences that guide to way to solve a problem and make them feel there is a way out of a crisis.

(2) Code J2.2 Following on procedures and training

From interviewing participants, this code refers to when crisis leaders control themselves by not thinking too much until getting stress but following on procedures and a trained practice.

4.3.2.5 Category K-Pause to Control

This category refers to crisis leaders' controls of instant effects by pausing them for a while before responses. These characteristics of their controls will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, 24 participants provided information about this. Their information was allocated to 2 themes; Theme K1: Mindfulness generation and Theme K2: Stress relief, by 24 and 5 participants respectively as shown in Table 4.10.

1) Theme K1: Mindfulness generation

This theme refers to crisis leaders control themselves by being mindful or practice mindfulness to stay at the present moment. This will be created readiness for further actions.

For 24 out of 33, participants indicated this practice when facing a crisis. There were two codes derived from the interview: K1.1: Being mindful and K1.2: Taking a breather. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code K1.1 Being mindful

From interviewing participants, this code refers to when crisis leaders control themselves by generating a mindfulness directly. This means they keep calm by being conscious and aware of surrounding things as the present moment through sensation by passing emotion from non-judgmental perception.

(2) Code K1.2 Taking a breather

From interviewing participants, this code refers to when crisis leaders control themselves by taking a short break from activities in order to relax. This can reenergize themselves and clear their mind from stress.

2) Theme K2: Stress relief

This theme refers to the other aspect in controlling themselves of crisis leaders. The ways to relieve the stress also can help to make them get readiness in bouncing back to deal with situation and effectively control themselves

under crises. However, this method takes time to do it hence this only the phenomenon happened with the crisis leaders in the type of crisis that is a long-term period. Stress does not only suddenly provide impacts but continuously affect the crisis leaders.

For 5 out of 33, participants informed this way that help them to get through the crisis facing. There were two codes derived from the interview: K2.1: Talking and K2.2: Escaping. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code K2.1 Talking

From interviewing participants, this code refers to when crisis leaders control themselves from the impact of stress by talking to or counselling with someone. This helps to relax their emotion and relieve the overwhelming situation before bouncing back to fight.

(2) Code K2.2 Escaping

From interviewing participants, this code refers to when crisis leaders control themselves from the impact of stress by escaping from the situation. This means they turn to do something else for a while to relieve their stress.

4.3.2.6 Category L-Strategic Crisis-related Intelligence

This category refers to the ability to learn or understand or to deal with new or trying situations specifically in a crisis strategically. They include three types which are practical intelligence, creative intelligence, and analytical intelligence. Also, it is the ability to apply knowledge, experiences and skills to manipulate one's environment or to think abstractly as needed for success and surviving in a crisis. This intelligence in crises is strategic because it is used for carefully assessing and planning to achieve a goal or win the situation. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 4 themes; Theme L1: Vigilance, Theme L2: Sense-making capability, Theme L3: Situation awareness, and Theme L4: Adaptability and applicability of learning by 28, 30, 32, and 31 participants respectively as shown in Table 4.11.

1) Theme L1: Vigilance

This theme refers to the action, quality or state of keeping careful watch, being wakeful and alertness for possible danger or difficulties. It is the process of paying close and continuous or sustained attention to detail. Vigilance can also be thought of as the extent of readiness to detect, or the likelihood of detecting, a stimulus that is imperative to normal operations. It works as an early warning system of crisis leaders.

For 28 out of 33, participants indicated this trait that allow them to anticipate the event or its consequences to consider and plan the action early. There were two codes derived from the interview: L1.1: Ability to detect signals and L1.2: Readiness. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code L1.1 Ability to detect signals

From interviewing participants, this code refers to ability to detect things that will be a threat for operations. It is also about observing somethings that might not be observed as a risk but having a potential. This ability includes the curiosity because when things are detected and observed, crisis leaders are curious to know more for the further crisis leaders' processes.

(2) Code L1.2 Readiness

From interviewing participants, this code refers to the readiness to face a situation that can emerge. Crisis leaders are aware of the possibilities of unexpected circumstances and stay alert. If things happen, they can react suddenly based on what is going on around them to help getting through the situation without formal plans because a crisis is an unexpected event.

2) Theme L2: Sense-making capability

This theme refers to the ability to create and update maps of a complex environment to act more effectively in it. It involves pulling together disparate views to create a plausible understanding of the surrounding complexity and then testing that understanding to refine it or, if necessary, abandon it and start over. Crisis leaders give meaning to their facing situations by attempting to make sense of an ambiguous situation. This capability relates to situation awareness.

For 30 out of 33, participants indicated this capability. There were two codes derived from the interview: L2.1: Ability to foresee and L2.2: Ability to assess, analyze, and generate options. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code L2.1 Ability to foresee

From interviewing participants, this code refers to ability in understanding of the perceived situations and changes. The sensitivity and thinking process of crisis leaders tend to react stimuli. This helps them to link the emerging changes to the relevant risk that causes predictability as an intuition about the becoming crisis and impacts.

(2) Code L2.2 Ability to assess, analyze, and generate options

From interviewing participants, this code refers to ability in knowing what is unnecessary information and then the necessary inputs are selected to attention. This will be the starting point of the comprehensive interpretation. Then, this includes assessment of the relevant factors to the analysis process. The external and internal environment of team and organization are considered and brought to the mind before crisis leaders are able to create an appropriate solution or several courses of actions to be made a decision.

3) Theme L3: Situation awareness

This theme refers to understanding of an environment, its elements, and how it changes with respect to time or other factors. Situational awareness is important for effective decision making in many environments. Crisis leaders recognize and understand a situation or environment and identify possible threats which are crisis incubation to be a crisis.

For 32 out of 33, participants described various dimensions of awareness that support this crisis-related intelligence in planning strategies for problem-solving. There were five codes derived from the interview: L3.1: Time awareness, L3.2: Impact awareness, L3.3: Punishment awareness, L3.4: Need-help awareness and L3.5: Stakeholder awareness. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code L3.1 Time awareness

From interviewing participants, this code refers to an awareness of time that crisis leaders understand the concept of time. They know that the availability of time is enough or not. This means they realize the feasibility by considering time and potential workload.

(2) Code L3.2 Impact awareness

From interviewing participants, this code refers to that crisis leaders understand the potential impacts of an event. They know the potential result if the event is escalated. This includes they realize the relevant stakeholders that get the consequences.

(3) Code L3.3 Punishment awareness

From interviewing participants, this code refers to an awareness of situations and impacts that related to responsibility in the team and organization. Crisis leaders are aware of punishment if the crisis could not be solved.

(4) Code L3.4 Need-help awareness

From interviewing participants, this code refers to when crisis leaders are aware of their own capability or organizational capability. They realize the more needs from team supports, manpower, and external helps respectively.

(5) Code L3.5 Stakeholder awareness

From interviewing participants, this code refers to when crisis leaders also are aware of factors related to stakeholders. They understand capabilities, feeling, rationales, and situations of stakeholders that they are both a group getting impacts and a group of cooperators and supporters. Also, environmental situations cause crisis leaders understand surrounding factors including threats, opportunities, consequences, and perception of stakeholders.

4) Theme L4: Adaptability and applicability of learning

This theme refers to knowledge and past experiences including skills that has practical applications for crisis leaders to apply in a new situation such a facing crisis. It is a process that crisis leader acquired information from sources before becoming as knowledge. They not only see what they have as knowledge and experiences, but also see that they have learned. This happens when available

knowledge and experiences are used to make decisions and perform actions in a crisis. Crisis leaders recall them and apply to the situation. It might be gained from completing one task to solve a different problem but related. Furthermore, a crisis is unexpected hence most of solutions are creative ways or innovation to solve a crisis.

For 31 out of 33, participants indicated about utilizing learning, experiences and knowledge. There were four codes derived from the interview: L4.1: Knowledge, L4.2: Work experience and skills, L4.3: Past experiences and skills and L4.4: Creative and innovative ideas for problem-solving. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code L4.1 Knowledge

From interviewing participants, this code refers to formal knowledge from education and training including the understanding of situation derived from working in the specific area and domain. This comes from training, practices, normal and emergency procedures, book reading, or any result of their learning.

(2) Code L4.2 Work experiences and skills

From interviewing participants, this code refers to experience from working in the specific area and domain. This means experiences in creating skills, problem-solving and judgment in practices.

(3) Code L4.3 Past experiences and skills

From interviewing participants, this code refers to skills, practical knowledge and understandings that crisis leaders get from their life experiences. This comes from family, childhood, workplace or other personal life issues.

(4) Code L4.4 Creative and Innovative ideas for problem-solving

From interviewing participants, this code refers to a new idea that crisis leaders design solution to handle situations. As a crisis is unusual event, the practices used to fix a problem have to be newly designed or creatively applied from the normal practices. This comes from creativity as a cognitive function that the is ability to generate, create, or discover new ideas, solutions, and

possibilities. It helps crisis leaders have abilities in problem-solving that include thinking, skills and attitude in facing a crisis. Crisis leaders have ability to understanding the characteristics of crisis and know how to create an appropriate attitude in the situation and how to create choices of action.

4.3.2.7 Category M-Heroism

This category refers to the character of heroic conduct especially as exhibited in fulfilling a high purpose or attaining a noble end. It is great acts of bravery when facing a danger. Heroism consists of putting others first, even at own peril. Crisis leaders have or display the character or attributes of a hero which are, for example, extraordinarily daredevil, altruistic, determined, or others in order to save people lives and save some situations. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 5 themes; Theme M1: Altruism, Theme M2: Kindness, Theme M3: Courage, Theme M4: Action-oriented personality and Theme M5: Integrity by 24, 23, 28, 29 and 30 participants respectively as shown in Table 4.11.

1) Theme M1: Altruism

This theme refers to voluntary behavior that benefits another individual at a cost to oneself. It is willingness of crisis leaders driving them to do things that bring advantages to others even if it is not their duty.

For 24 out of 33, participants indicated this characteristic in leading when the crisis emerged. There were three codes derived from the interview: M1.1: Belief that no one is going to take action, M1.2: Voluntary and M1.3: Sacrifice. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code M1.1 Belief that no one is going to take action

From interviewing participants, this code refers to the thought that crisis leaders believe that on one is going to take action. This comes from various reasons such as time constraints, unexpected issues, others' ability, or others' awareness that it is a gap to make crisis leaders have to rapidly fulfil in the situation.

(2) Code M1.2 Voluntary

From interviewing participants, this code refers to a characteristic that crisis leaders are willing to do without someone or something force them to do. They intend to act by themselves.

(3) Code M1.3 Sacrifice

From interviewing participants, this code refers to a characteristic that crisis leaders are willing to helps others or achieve the goal even they have to lose something such as time, energy, and own risk in handling a crisis. In this context, the goal is to handle a crisis that causes impacts to many people. Therefore, crisis leaders sacrifice themselves for others that will get the direct and indirect consequences.

2) Theme M2: Kindness

This theme refers to the quality of being friendly, considerate and generous. In other words, a kind person thinks about other people's feelings and like to help others. Affection, gentleness, and care are some qualities that go hand in hand with kindness. There are various ways to practice kindness such as words, gestures, or helping someone. In a crisis, there is the state that crisis leaders and the others are connected and it drives crisis leaders to act in a crisis. This social connection included their loyalty to higher-ups and their citizenship to the team.

Crisis leaders might also have generosity that means the quality of being selfless and willing to give freely. It is about being understanding and not selfish. It is willingness to give more help without expecting anything return. it refers to a habit that crisis leaders always would like to help others. They are concern the others' needs and problems. They even help giving more than people needs. When a crisis comes, it causes impacts to others that need helps from the crisis leaders who have goodwill which is helpful and cooperative feeling and attitude directed toward helping others. This also drives the crisis leaders' action in helping people. The key difference between kindness and generosity is that kindness refers to being helpful to and considerate of other people whereas generosity basically refers to the action of giving something, either abstract or concrete.

For 23 out of 33, participants indicated these personalities that consisted in their crisis leadership. There were two codes derived from the interview:

M2.1: Loyalty and M2.2: Caring the team and others. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code M2.1 Loyalty

From interviewing participants, this code refers to the feeling that crisis leaders would like to help their boss. This comes from the relationship in the workplace that builds loyalty and makes them desire to help by solving a crisis. They know that their higher-up will be a person who gets the full impact of crisis.

(2) Code M2.2 Caring the team and others

From interviewing participants, this code refers to feeling that crisis leaders care the team members and others who are getting impacts. It comes from when crisis leaders want help the team or crisis victims to deal with a crisis. They also are aware of the impact that each individual team member will get.

3) Theme M3: Courage

This theme refers to the ability to control fear and to be willing to deal with something that is dangerous, difficult, or unpleasant. The difficulties include the situations in coordinating others and working in the team. For 28 out of 33, participants indicated this ability and action that presented this characteristic. There were two codes derived from the interview: M3.1: Bravery and M3.2: Assertiveness. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code M3.1 Bravery

From interviewing participants, this code refers to the quality or state of having or showing mental or moral strength to face danger, fear, or difficulty. Crisis leaders perform this when crises emerge by having a mindset to fight and not giving up.

(2) Code M3.2 Assertiveness

From interviewing participants, this code refers to the quality that crisis leaders respect themselves in standing up for their interest and express their thought which means solution in facing with crisis. Meanwhile, the others might do nothing or there are various opinions under complex situations. When

crisis leaders are confident in their thought, they assert to action or provide suggestion to do something with the situation.

4) Theme M4: Action-oriented personality

This theme refers to ones who are willing or likely to take practical action to deal with a problem or situation. Crisis leaders like to get things done and they tend to be hands-on person. While their output may not be perfect, they keep things moving along, and a lot gets done in a relatively short period of time. For 29 out of 33, participants indicated this personality. There were four codes derived from the interview: M4.1: Leading by example, M4.2: Self-reliance, M4.3: Agility and M4.4: Pragmatism. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code M4.1 Leading by example

From interviewing participants, this code refers to that crisis leaders would like to act or lead in the situation because they want others or team take their action as an example. This might affect others' motivation.

(2) Code M4.2 Self-reliance

From interviewing participants, this code refers to that crisis leaders have the quality of depending on themselves instead of relying on others. Therefore, when this means the ability to take care of themselves, they tend to take action by themselves during many situations.

(3) Code M4.3 Agility

From interviewing participants, this code refers to that crisis leaders have ability to move, think, and understand quickly and easily. This speed then causes them to react by themselves because it is the fastest responses in the situation after their quick thought.

(4) Code M4.4 Pragmatism

From interviewing participants, this code refers to the being pragmatic of crisis leaders. they are practical and focused on reaching a goal. For the real-world problems such a crisis, pragmatism has an approach as taking things as they come rather than leaning on theoretical approach. Therefore, they tend to act responsively and not spending much time to think or let someone else do.

(5) Theme M5: Integrity

This theme refers to the quality and the practice of being honest and showing a consistent and uncompromising adherence to strong moral and ethical principles and values. For 30 out of 33, participants indicated this quality for being a crisis leader. There were four codes derived from the interview; M5.1: Moral, M5.2: Responsibility, M5.3: Dignity and M5.4: Sincerity. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(6) Code M5.1 Moral

From interviewing participants, this code refers to crisis leaders' own principles regarding right and wrong. Morals are what you believe to be right and wrong especially how they should act and treat other people. Moral individuals hold high principles for proper conduct.

(7) Code M5.2 Responsibility

From interviewing participants, this code refers to that crisis leaders are responsible. They recognize their relevance of emerging situation or tend to include themselves with the situation. Responsibility means that the state or fact of being responsible, answerable, or accountable for something within one's power, control, or management such as job functions at work.

(8) Code M5.3 Dignity

From interviewing participants, this code refers to the quality of being worthy, honored, or esteemed. Crisis leaders have a sense of pride in themselves or self-respect.

(9) Code M5.4 Sincerity

From interviewing participants, this code refers to the quality of being open and truthful. Crisis leaders' actions to solve a crisis are free from pretense, deceit, or hypocrisy. They are serious and genuine in achieving a goal. Therefore, there is the virtue of crisis leaders in actions and communications in accordance with the entirety of their feelings, beliefs, thoughts, and desires in a manner that is honest and genuine to help others in a crisis. It refers to the quality of being open and truthful. Crisis leaders are honest and genuine. They keep their word and express their gratefulness for what others do for them.

4.3.2.8 Category N-Tough attributes

This category refers to attributes which are elements of crisis leaders related to the toughness. It means the willpower and maintaining the motivation to achieve a goal whether crisis leaders face obstacles or disappointments. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes; Theme N1: Tenacity, Theme N2: Resilience and Theme N3: Growth mindset, by 27, 28 and 22 participants respectively as shown in Table 4.11.

1) Theme N1: Tenacity

This theme refers to the quality displayed by someone who will not quit and keeps trying until they reach their goal. Crisis leaders are very determined that they have the determination to continue what they are doing. For 27 out of 33, participants explained this quality in putting tough efforts to move forward to the objective. There were four codes derived from the interview: N1.1: Patience, N4.2: Diligence, N4.3: Perseverance and N4.4: Commitment (Do the best). Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code N1.1 Patience

From interviewing participants, this code refers to ability to accept, wait for, or tolerate problems or impacts from situation even suffering without complaint. Crisis leaders keep doing things responding to emerging situations even they feel suffered from a crisis impact.

(2) Code N1.2 Diligence

From interviewing participants, this code refers to steady, earnest, and energetic effort of crisis leaders. They are careful and hardworking in solving a crisis.

(3) Code N1.3 Perseverance

From interviewing participants, this code refers to continued effort to do or achieve something despite difficulties, failure, or opposition that crisis leaders perform in a crisis in achieving success.

(4) Code N1.4 Commitment (Do the best)

From interviewing participants, this code refers to the quality of being dedicated to an activity aiming for the future. Also, it means when crisis leaders have the act of binding themselves (intellectually or emotionally) to a course of action until achieving a goal.

2) Theme N2: Resilience

This theme refers to is the ability to withstand adversity, adapt to changes and bounce back from impacts. Resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands. For 28 out of 33, participants indicated these resilient attributes. There were four codes derived from the interview: N2.1: "Never give up" attitude/ Bouncing back/ Adaptability, N2.2: Positive attitude, N2.3: Instinct, intuition, and improvisation, and N2.4: Development-oriented person. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code N2.1 "Never give up" attitude/ Bouncing back/ Adaptability

From interviewing participants, this code refers to the attitude of crisis leaders that after they fall down, they never give up, they adapt to changes and they think that every problem can have a solution. Even they got the impact from unexpected situation, it can cause them surprised just a moment before they get back on track to continue solving a problem.

(2) Code N2.2 Positive attitude

From interviewing participants, this code refers to a mindset that helps to see the bright side of life or recognize opportunities when crisis leaders try to maintain a positive thinking in controlling their feeling and emotions. Even a crisis provides a negative impact, crisis leaders have to take it as a challenge or things to do.

(3) Code N2.3 Instinct, intuition, and improvisation

From interviewing participants, this code refers to a feeling or reaction based on an instinctive emotional response rather than considered thought

that it might come from their past experience by informal learning. Some mentioned the instinct that they explained it relating to the intuition. Crisis leaders also have an intuition and gut feeling in responding to a situation or a signal that will escalate to be a crisis. It also means a way of behaving, thinking, or feeling that is not learned. It is a natural desire or tendency that makes crisis leaders want to act in a particular way rapidly. Therefore, crisis leaders might have both. Instinct is a feeling or reaction based on a person's past experiences. Intuition, on the other hand, is a feeling or reaction based on a person's gut feeling.

This also includes improvisation which is the ability to create and implement a new or an unplanned solution in the face of an unexpected problem or change. It is often seen as a spontaneous, intuitive, creative problem-solving behavior that mostly

(4) Code N2.4 Development-oriented person

From interviewing participants, this code refers to characteristics that crisis leaders have a desire on developing their work and organization. They have developmental learning that try to facilitate every day learning to be the development and improvement of themselves, team and organization.

3) Theme N3: Growth mindset

This theme refers to persons who believe that their success depends on time and effort. People with a growth mindset feel their skills and intelligence can be improved with effort and persistence. Crisis leaders see opportunities instead of obstacles, choosing to challenge themselves to learn more rather than sticking in their comfort zone. For 22 out of 33, participants indicated this mindset. There were three codes derived from the interview: N3.1: Self-efficacy and can-do attitude, N3.2: Recognizing own leadership competence and N3.3: Seeking challenges/ Adventurous. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code N3.1 Self-efficacy and can-do attitude

From interviewing participants, this code refers to crisis leaders' attitude about their skills and abilities. It means they accept and trust themselves and have a sense of control in the situation. Crisis leaders know their

competencies that can apply to deal with a crisis. They have the strong, positive belief that they have the capacity and the skills to achieve goals.

(2) Code N3.2 Recognizing own leadership competence

From interviewing participants, this code refers to crisis leaders specifically know their leadership that can lead people to actions in a crisis.

(3) Code N3.3 Seeking challenges as adventurous learning

From interviewing participants, this code refers to that crisis leaders love to be challenged or take on their own challenges. They know that they grow best by pushing themselves embracing challenges as self-directed learning. Challenges motivate, interest and engage them and fulfil pleasure of the overcoming. They are adventurous and willing to take risks and try new ideas including proving themselves in their performance. Crisis leaders perceive these challenges as learning as well to improve themselves.

4.3.2.9 Category O-Tactical attributes

This category refers to attributes that play a tactical role in building healthy relationships, managing conflicts, and working collaboratively with others in achieving a strategic goal. Crisis leaders have this as a people skill to support situational awareness and enhances their ability to get a job done. Meanwhile the strategic aspect of crisis leaders focuses on output as the results they and the business want to achieve, then establishing a plan or series of plans, processes, and systems to reach the goals or results, the tactical aspect focuses on input which is the elements or work that go into that plan to make it happen. Crisis leaders have this as people skills and political skills to support situational awareness and enhances their ability to get a job done. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 3 themes; Theme O1: Interpersonal intelligence and habits, Theme O2: Communication ability and Theme O3: Political intelligence and ability, by 28, 21, and 32 participants respectively as shown in Table 4.11.

1) Theme O1: Interpersonal intelligence and habits

This theme refers to attributes that play a crucial and tactical role in building healthy relationships, managing conflicts, and working collaboratively with others. Crisis leaders have this as a people skill and people-oriented personality to support situational awareness and enhances their ability to get a job done. For 28 out of 33, participants indicated about attributes that were interpersonal that helped to reach a goal. There were five codes derived from the interview: O1.1: Empathy, O1.2: Social intelligence and skills, O1.3: Being communicative, O1.4: Humility and O1.5: Courtesy. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code O1.1 Empathy

From interviewing participants, this code refers to the practice of being attentive and responsive to others' input during conversation. Listening empathically entails making an emotional connection with the other person and finding similarities between their experience and your own so you can give a more heartfelt response.

(2) Code O1.2 Social intelligence and skills

From interviewing participants, this code refers to crisis leaders' ability to understand and manage interpersonal relationships. It is not IQ but ability to understand, and act on, the feelings, thoughts, and behaviors of other people. Also, crisis leaders have a social skill which helps to facilitate interaction and communication with others.

(3) Code O1.3 Being communicative

From interviewing participants, this code refers to that crisis leaders like to share information to other. They have readiness to communicate both in their job and personal life.

(4) Code O1.4 Humility

From interviewing participants, this code refers to the quality that crisis leaders are not too proud about themselves or not believing and being over-confident that they are important or better than other people. Humility and humbleness are quite similar but have some differences. Participants performed humility rather than humbleness. Meanwhile humbleness is a sense of low regard for

oneself and modesty in avoiding arrogance and downplaying their abilities and success, humility means that individuals understanding their strengths and weaknesses in appreciating the contributions of others whether personal or professional aspect.

(5) Code O1.5 Courtesy

From interviewing participants, this code refers to the showing of politeness in crisis leaders' attitude and behavior toward others.

2) Theme O2: Communication ability

This theme refers to a set of skills of crisis leaders in communicating effectively in a crisis. These skills used for communication planning, design and techniques that have to continuously assess situations and stakeholders during a crisis. The techniques are also relevant to negotiation and creation of networks. For 21 out of 33, participants indicated various abilities that related to communication that were important to deal with different people. There were two codes derived from the interview: O2.1: Communication techniques and O2.2: Communication strategies. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code O2.1 Communication techniques

From interviewing participants, this code refers to skills and techniques in communication. Crisis leaders are aware of the perception of communication that needs detailed design and uses of means and messages.

(2) Code O2.2 Communication strategies

From interviewing participants, this code refers to applying strategic thinking in communication. Crisis leaders clearly identify and know the objective of communication which is not only communication itself but the objective of the planned task to handle of the crisis. This helps to plan the communication strategically in generating effective results.

3) Theme O3: Political intelligence and ability

This theme refers to a deeper understanding of the complex political and social environments in which crisis leaders operate which makes their abilities and skills in tactical ways through awareness of people and power. It means the process of getting stakeholders to agree to their ideas and help to achieve goals. Crisis leaders who possess political intelligence are more adept at navigating complex

power structures and building strategic partnerships that help drive their organizations forward. It involves understanding the motivations and perspectives of various stakeholders. In addition, political intelligence enables crisis leaders' skills to build strong relationships with key stakeholders and to influence their actions affecting a crisis solving. By leveraging them, crisis leaders can develop strategies that also help and reciprocate them achieve their goals as well and build long-term success.

For 32 out of 33, participants described these attributes that were used in taking actions. There were three codes derived from the interview: O3.1: Power awareness, O3.2: Networking and O3.3: Reciprocating and negotiating skills. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code O3.1 Power awareness

From interviewing participants, this code refers to when crisis leaders are aware of their own capability. They know the need of authorization and power to control situations through different systems and resources.

(2) Code O3.2 Networking

From interviewing participants, this code refers to the action or process of interacting with others to exchange information and develop professional or social contacts. It is to make the relationship and creating networks in a crisis. they are important in coordinating and finding support. As a crisis emerge unexpectedly, the supports mostly come from the ask for help. Only the easiest and fastest way to get support from other people and organization outside the team. Crisis leaders have to create relationships and networks with the others for achieving a goal.

(3) Code O3.3 Reciprocating and negotiating skills

From interviewing participants, this code refers to crisis leaders have a way of reaching agreement in which each person or group gives up something that was wanted in order to end an argument or dispute. Also, this includes a process of exchanging things with other people to gain a mutual benefit. it can be equivalent exchange or a paying back of what has received.

4.3.3 RSQ 3: External mechanism of crisis leadership

The research question for this issue was stated as SQ3 of RQ (RSQ3) - What is the external mechanism of crisis leadership? (*Discovery*) This is to explore the external mechanism of crisis leadership by Section 5 of the interview. This study explored the external factors that were mechanism affecting crisis leaders on both in action and in being themselves.

In categorizing themes derived from numerous codes, the researcher found the responding information for this RSQ3 had to be categorized as three categories of findings to answer RSQ3 in describing the internal mechanism of crisis leadership which included Category P: External Driving Forces, Category Q: External Enablers and Category R: External Influences. These categories present factors that did not come from inside crisis leaders but the outside that affected to crisis leaders through various conditions.

After the analysis process, this study found all participants mentioned these categories by exploring themes and codes. The results of this RSQ3 were presented in Table 4.12.

Table 4.12 Findings of RSQ3-The External Factors of Crisis Leadership

Categories		Themes		Codes	Participants (n)	Participants (n) for theme
P External driving forces	P1	Systems vulnerability	P1.1	Gaps of a system and team	19	26
			P1.2	Possible lack of action/possibility of inaction	16	
	P2	Pressure	P2.1	Impacts affecting stakeholders	33	33
			P2.2	Time pressure	25	
			P2.3	Workload	5	
Q External Enablers	Q1	Power	Q1.1	Higher-ups' supports	21	31
			Q1.2	Autonomy	29	
	Q2	Supporting resources	Q2.1	Good resources	26	30
			Q2.2	Familiar resources	13	
R External Influences	R1	Factors fulfilling human safety needs	R1.1	Life and family security	9	12
			R1.2	Potential returns and rewards	7	
	R2	Models	R2.1	Role models	9	11
			R2.2	Books	3	

4.3.3.1 Category P-External Driving Forces

This category refers to external factors that are driving forces in motivating or forcing crisis leaders to take an action. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 2 themes; Theme P1: Systems vulnerability and Theme P2: Pressure, by 26 and 33 participants respectively as shown in Table 4.12.

1) Theme P1: Systems vulnerability

This theme refers to a quality of an organization, a system, or a team that can be easily attacked, harmed, or affected by a crisis. Crisis leaders perceive that their organization, system or team would get the impact of an emerging crisis. Then, this drives crisis leaders to do something to prevent an occurrence or contain a damage.

For 26 out of 33, participants described this type of external factor. There were two codes derived from the interview: P1.1: Gaps of a system and team and P1.2: Possible lack of action/possibility of inaction. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code P1.1 Gaps of a system and team

From interviewing participants, this code refers to external factors that there are gaps or weakness of a system, a team or an organization. Crisis leaders are aware of these lacks and this rationale drives them to take responsive actions.

(2) Code P1.2 Possible lack of action/possibility of inaction

From interviewing participants, this code refers to assumption of crisis leaders that no one will take action. This might come from people are not aware of problems. Sometimes people acknowledge a crisis but slow to take actions. Gradually think and act might be not fast enough to solve or contain a problem before escalation.

2) Theme P2: Pressure

This theme refers to difficult situations that force crisis leaders to actions. If they do not, it will provide significant negative results. For 33 out of 33, participants indicated this driving force. There were three codes derived from the interview: P2.1: Impacts affecting stakeholders, P2.2: Time pressure and P2.3: Workload. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code P2.1 Impacts affecting stakeholders

From interviewing participants, this code refers to inputs from stakeholders when a crisis emerges. Crisis leaders get requests to help or understand suffers or impacts of people involved with the situation.

(2) Code P2.2 Time pressure

From interviewing participants, this code refers to the limitation of time for crisis leaders to manage a crisis. The time constraint relates to the potential consequences of emerging situations.

(3) Code P2.3 Workload

From interviewing participants, this code refers to the scope of activities that crisis leaders have to do in handling a crisis. The workload is usually high because a crisis is not a normal problem that cannot be solved by normal practices and efforts.

4.3.3.2 Category Q-External Enablers

This category refers to external factors that enable the mission of crisis leaders. They need these enablers to achieve a goal effectively and timely. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 2 themes; Theme Q1: Power, and Theme Q2: Supporting resources, by 31 and 30 participants respectively as shown in Table 4.12.

1) Theme Q1: Power

This theme refers to ability to direct the others or possession of authority and control that crisis leaders need to find from someone or be delegated to be able to direct and manage resources in facing a crisis.

For 31 out of 33, participants indicated this need for external factors. There were two codes derived from the interview: Q1.1: Higher-ups' supports and Q1.2: Autonomy. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code Q1.1 Higher-ups' supports

From interviewing participants, this code refers to people at higher levels who help crisis leaders to enable plans and actions. This could be executives, higher managers, or supervisors who have the authority to allow crisis leaders or facilitate resources to achieve a goal.

(2) Code Q1.2 Autonomy

From interviewing participants, this code refers to an organizational environment and context that allow crisis leaders have ability to act on his or her own values and interests. They have a freedom that makes them think and act by self-determination.

2) Theme Q2: Supporting resources

This theme refers to the relevant resources that in the context that crisis leaders participate including people, workplace, and systems. They help crisis leaders in succeed the mission in aspects of their familiarity and also suitability or effectiveness of them.

For 30 out of 33, participants described this enabler to succeed the mission. There were two codes derived from the interview: Q2.1: Good resources and Q2.2: Familiar resources. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code Q2.1 Good resources

From interviewing participants, this code refers to the resources around crisis leaders such as team, colleagues and systems are the effective or suitable part of the success through participation, coordination and application.

(2) Code Q2.2 familiar resources

From interviewing participants, this code refers to the resources around crisis leaders such as team, colleagues and systems that crisis leaders get familiar to engage for the success through participation, coordination and application.

4.3.3.3 Category R-External Influences

This refers to factors that are external and have influences to crisis leaders. However, these factors are neither driving forces nor enablers to crisis leaders directly. It is a part of rationales that generate some of their attributes. This category will be explained by relevant themes and detailed codes derived.

After analyzing all of the transcripts, all 33 participants provided information about this. Their information was allocated to 2 themes; Theme R1: Factors fulfilling human safety needs and Theme R2: Models, by 12 and 11 participants respectively as shown in Table 4.12.

1) Theme R1: Factors fulfilling human safety needs

This theme refers to one's personal advantage or benefit. Self-interested behavior of crisis leaders means when they concern their life security, future opportunity, or rewards.

For 12 out of 33, participants also described this thing that influenced the success of the mission. There were two codes derived from the interview: R1.1: Life and family security and R1.2: Potential returns and rewards. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code R1.1 Life and family security

From interviewing participants, this code refers to awareness that crisis leaders focus about themselves as same as handling a crisis. They also think that the success is relates to their financial or job security. Crisis leaders also think of this as they are further concerned of their family security.

(2) Code R1.2 Recognizing potential returns and rewards

From interviewing participants, this code refers to crisis leaders recognize and expect what they get when they succeed. This also helps to motivate them at work and guarantee their career success or job security.

2) Theme R2: Models

This theme refers to demonstrative knowledge or persons that crisis leaders have learned and apply for taking action in a crisis.

For 11 out of 33, participants indicated this type of external factors. There were two codes derived from the interview: R2.1: Role models and

R2.2: Books. Some examples of the interview quotes supported each code from data analysis were presented in Appendix B.

(1) Code R2.1 Role models

From interviewing participants, this code refers to persons that crisis leaders adopted their characters, traits, qualities, actions or other relevance to be an example and guiding action in performing for a crisis.

(2) Code R2.2 Books

From interviewing participants, this code refers to books that crisis leaders adopted the contents, knowledge, practices or other relevance to be an example and guiding action in performing for a crisis.

4.3.4 RSQ 4: Elements and Process of Crisis Leadership

From the RSQ4-What are elements and process of crisis leadership? (Construction), the answer for this question was not explored from the interviews. Rather, this part was a theory construction by the researcher as usual in the grounded theory method (Creswell & Creswell, 2017). It is the last part of analysis in the selective coding process that describes the interrelationships among categories and themes as a story line. Grounded theory methodology allows the researcher to move qualitative data from the inquiry to construct a theory. Therefore, the results from RSQ1 to 3 were combined as a storyline or proposed model of elements and process.

The study developed the model that describes a phenomenon of crisis leadership according to the definition of theory (Torraco, 1997) by the research part of construction after the discovery (Charmaz, 2006; Egan, 2002). It depicts the meaning of crisis leadership phenomenon and its mechanism as elements and processes to answer RSQ4. This ultimate finding included activities of crisis leaders in crisis and the outcomes they received, and mechanisms since the crisis emergence until it was terminated. Figure 4.2 presents the proposed emerging storyline of crisis leadership in details meanwhile Figure 4.3 illustrated an overview of this model of elements and processes. Also, each interrelation of categories as crisis leadership elements was presented in Table 4.13 for explaining the external and internal mechanisms including actions and outcomes. However, the specific tests for each correlation or causalities of variables and factors were not in the scope of this study because this study aimed for

study the crisis leadership phenomenon as a whole process with understanding the elements and relational mechanisms from the interviews as qualitative inquiry from participants and derived understanding of the researcher through the grounded theory research process (Charmaz, 2006; Egan, 2002).

This finding provided not only the focus on leader actions and rationales separately, but also depicted them as a story line (Charmaz, 1996; Creswell & Creswell, 2017) as a whole phenomenon of crisis leadership referring to Naushad (2021) suggesting that “leadership theories are the explanations of how and why certain people become leaders.” (p. 226). Theories of leadership then should be developed under the aim to explain how and why leadership emerges. Thus, the researcher responded to RSQ4 by illustrating this as to explain what crisis leaders do and how they do and reasons and processes behind them.

Besides this study describes actions and mechanisms internally and externally through Figure 4.2, the researcher also adopted the Van der Merwe and Verwey (2007) view on that the leadership is an inside-out approach to illustrate the words inside and outside in the figure as well. This presented that for crisis leadership phenomenon it is the outside-in to inside-out approach.

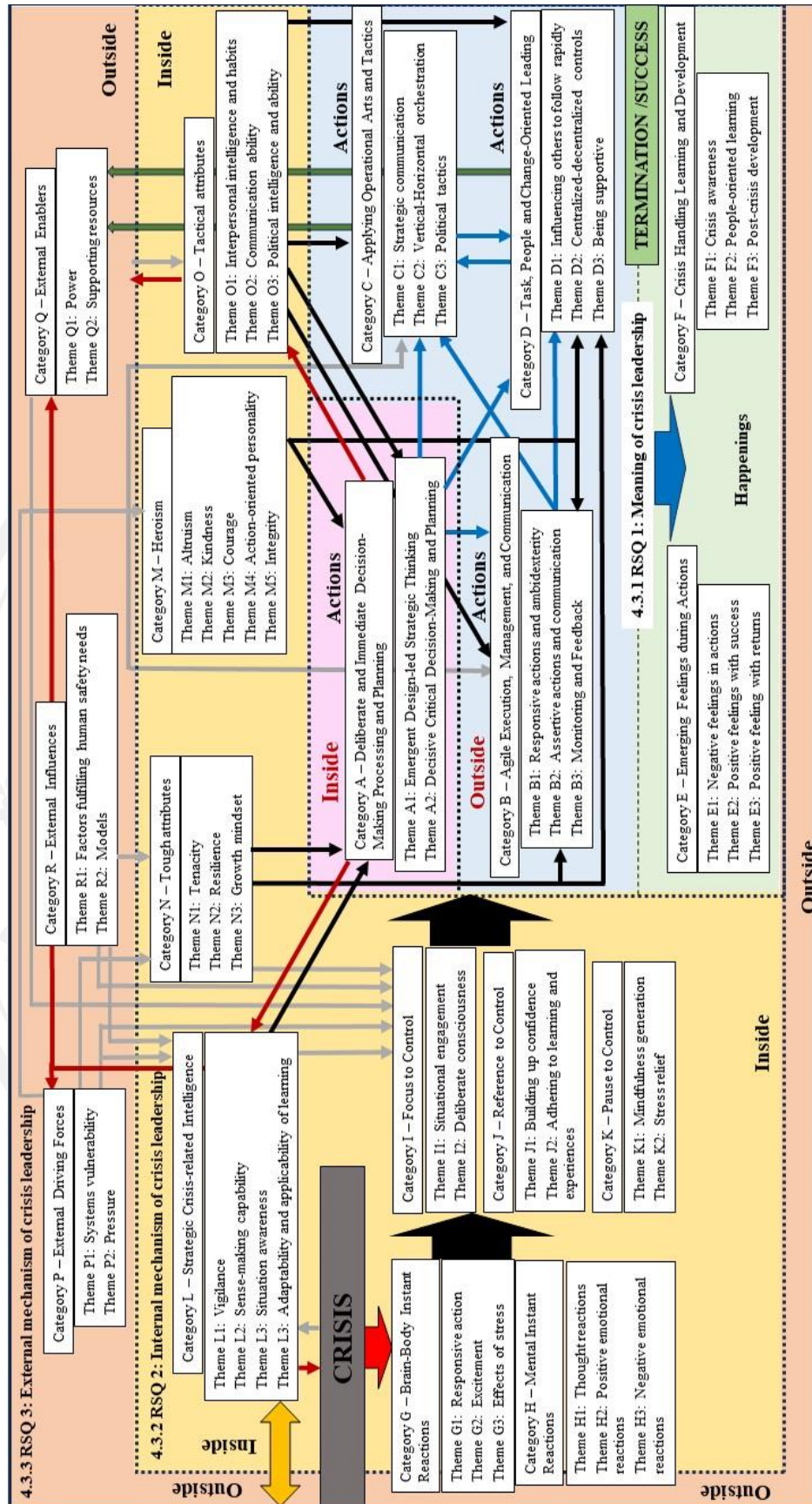


Figure 4.2 Storyline of Crisis Leadership Phenomenon: Elements and Processes

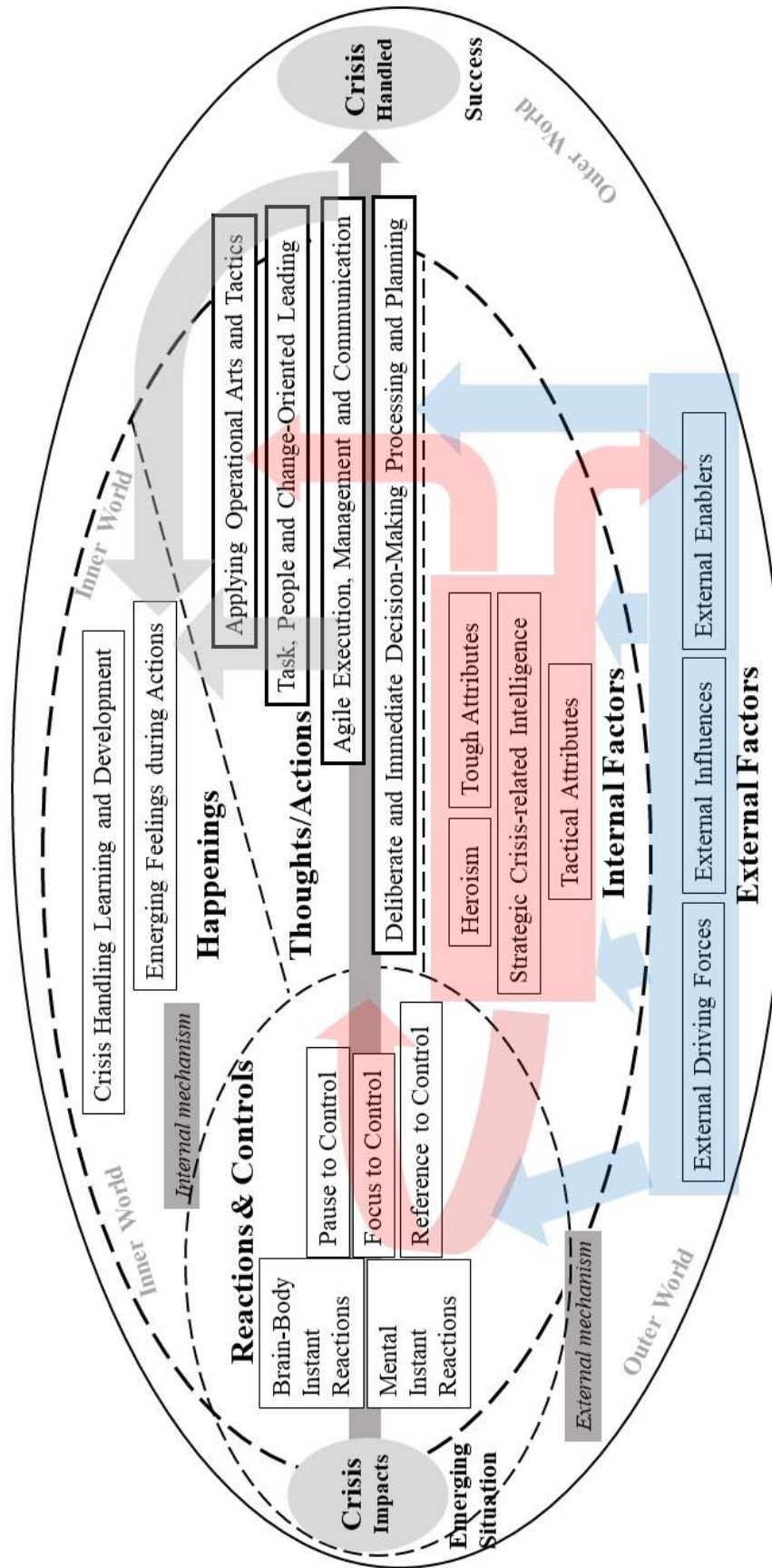


Figure 4.3 Overview of Crisis Leadership Theoretical Model: Elements and Processes

Table 4.13 Finding of Interrelation among the External and Internal Mechanisms Including thoughts, Actions and Happenings

Outside	to	Inside	Interrelations
CRISIS/ EMERGING SITUATION		Category G – Brain-Body Instant Reactions	Causing impacts of crisis
CRISIS/ EMERGING SITUATION		Category H – Mental Instant Reactions	
		Category L – Strategic Crisis-related Intelligence	Causing awareness and assessment
Category P – External Driving Forces		Category L – Strategic Crisis-related Intelligence	Causing sense-making of needs
Category P – External Driving Forces		Category I – Focus to Control	Causing keep moving on
Category P – External Driving Forces		Category M – Heroism	Causing desire for action taken to help
Category P – External Driving Forces		Category N – Tough attributes	Causing toughness (tenacity, resilience, and growth mindset) for surviving
Category Q – External Enablers		Category O – Tactical attributes	Causing assessment of power and resources
Category Q – External Enablers		Category J – Reference to Control	Causing confidence
Category R – External Influences		Category L – Strategic Crisis-related Intelligence	Causing recalling role models
Category R – External Influences		Category I – Focus to Control	Causing assessment of consequences and human safety needs

Category R – External Influences	Category J – Reference to Control	Causing recalling role models
Category R – External Influences	Category N – Tough attributes	Causing toughness for survival in personal security
Inside	Outside	Interrelations
Category L – Strategic Crisis-related Intelligence	POTENTIAL CRISIS/ CRISIS INCUBATION	Seeking for signaling to foresee situations
Category L – Strategic Crisis-related Intelligence	Category P – External Driving Forces	Seeking for weak points to assess situations
Category L – Strategic Crisis-related Intelligence	Category Q – External Enablers	Seeking for supports to assess situations
Category O – Tactical attributes	Category Q – External Enablers	Seeking for weak points to assess situations
Inside	Inside	Interrelations
Category G – Brain-Body Reactions	Instant	Causing the need for self-control
Category H – Mental Instant Reactions	Category J – Reference to Control	
Category L – Strategic Crisis-related Intelligence	Category K – Pause to Control	
	Category I – Focus to Control	Causing ability of self-control
	Category J – Reference to Control	
	Category K – Pause to Control	
	Category I – Focus to Control	
Category M – Heroism	Category I – Focus to Control	Causing ability of self-control

Category N – Tough attributes	Category J – Reference to Control			Causing ability of self-control
	Category K – Pause to Control			
	Category I – Focus to Control			
	Category J – Reference to Control			
	Category K – Pause to Control			
Outside	to	Thoughts/Actions	Interrelations	
Category Q – External Enablers		Category B – Agile Execution, Management and Communication	Causing sufficient resources for success	
Category Q – External Enablers		Category C – Applying Operational Arts and Tactics	Causing sufficient power and special help for success	
Inside	to	Thoughts/Actions	Interrelations	
Category I – Focus to Control		Category A – Deliberate and immediate	Causing the start of activities	
Category J – Reference to Control		Decision-Making Processing and Planning		
Category K – Pause to Control ⁴		Category B – Agile Execution, Management and Communication		
Category L – Strategic Crisis-related Intelligence		Category A – Deliberate and immediate Decision-Making Processing and Planning	Causing sufficient information for making decisions and planning	

Category N – Tough attributes	Category A – Deliberate and immediate Decision-Making Processing and Planning	Causing positive attitude and energy for making decisions and planning
Category N – Tough attributes	Category B – Agile Execution, Management and Communication	Causing effective attitude and energy for execution
Category N – Tough attributes	Category D – Task, People and Change-Oriented Leading	Causing effective attitude and confidence for leading people
Category M – Heroism	Category A – Deliberate and immediate Decision-Making Processing and Planning	Causing desires to make decisions and planning
Category M – Heroism	Category B – Agile Execution, Management and Communication	Causing desires to take actions
Category M – Heroism	Category D – Task, People and Change-Oriented Leading	Causing desires to lead others
Category O – Tactical attributes	Category A – Deliberate and immediate Decision-Making Processing and Planning	Causing awareness of power
Category O – Tactical attributes	Category B – Agile Execution, Management and Communication	Causing interpersonal techniques in actions
Category O – Tactical attributes	Category C – Applying Operational	Causing political skills in networking,

Category O – Tactical attributes	Arts and Tactics		reciprocation and negotiation
	Category D – Task, People and Change-Oriented Leading		Causing interpersonal techniques in leading
Thoughts/Actions	to	Inside	Interrelations
Category A – Deliberate and immediate Decision-Making Processing and Planning	Category L – Strategic Intelligence	Crisis-related	Enhancing awareness of situations
Category A – Deliberate and immediate Decision-Making Processing and Planning	Category O – Tactical attributes		Enhancing awareness of power and more helps
Thoughts/Actions	to	Thoughts/Actions	Interrelations
Category A – Deliberate and immediate Decision-Making Processing and Planning	Category B – Agile Execution, Management and Communication		Causing the next successful actions
Category A – Deliberate and immediate Decision-Making Processing and Planning	Category C – Applying Operational Arts and Tactics		Causing the next successful tactics
Category A – Deliberate and immediate Decision-Making Processing and Planning	Category D – Task, People and Change-Oriented Leading		Causing the lead of people
Category B – Agile Execution, Management and Communication	Category C – Applying Operational Arts and Tactics		Seeking for arts and tactics
Category B – Agile Execution, Management and Communication	Category D – Task, People and Change-Oriented Leading		Seeking for followship

Category C – Applying Operational Arts and Tactics	Category D – Task, People and Change-Oriented Leading	Causing the successful leading
Category D – Task, People and Change-Oriented Leading	Category C – Applying Operational Arts and Tactics	Causing the successful networking
Thoughts/Actions	to	Outside
Category D – Task, People and Change-Oriented Leading	Category Q – External Enablers	Causing people to help
Category C – Applying Operational Arts and Tactics	Category Q – External Enablers	Causing power to help
Thoughts/Actions	to	Happenings
Category A – Deliberate and immediate Decision-Making Processing and Planning	TERMINATION /SUCCESS	Causing success/ crisis termination or containment
Category B – Agile Execution, Management and Communication		
Category C – Applying Operational Arts and Tactics		
Category D – Task, People and Change-Oriented Leading		
Category A – Deliberate and immediate	Category E – Emerging Feelings during	Causing perception of emerging feeling and

Decision-Making Processing and Planning	Actions	emotions
Category B – Agile Execution, Management and Communication		
Category C – Applying Operational Arts and Tactics		
Category D – Task, People and Change-Oriented Leading		
Category A – Deliberate and immediate Decision-Making Processing and Planning	Category F – Crisis Handling Learning and Development	Causing perception of learning and development
Category B – Agile Execution, Management and Communication		
Category C – Applying Operational Arts and Tactics		
Category D – Task, People and Change-Oriented Leading		

4.3.5 RQ: Crisis Leadership Theory

From all four RSQs, the researcher had explored the deep understandings of meaning and mechanisms. Also, the model of elements and processes was organized to present the interrelations, rationales, influences, and attributes of crisis leadership phenomenon. This study found that there are numerous concepts and theories which were later discussed in Chapter 5 that support this simply named theory of crisis leadership in aspects of emergence, performance, and causality. Finally, at this stage, this study can propose the statement of the Crisis Leadership Theory as illustrated as the model presented in Figure 4.2 and Figure 4.3 above.

As mentioned as a background and an objective of this study, the form of theory that can explain a phenomenon of crisis leadership in terms of what, why, and how was needed. Therefore, all of these findings derived through this research methodology can help to provide knowledge to be a theory of crisis leadership. This theory explains that crisis leadership is a phenomenon that individuals think and take actions to succeed in responding to a crisis meanwhile having positive and negative feelings during actions including getting learning and development in crisis handling. Under these unexpected sudden occurrences that cause brain-body and mental instant reactions and then individuals take controls these stressful impacts, their thoughts and actions to lead and manage things in the crisis come from various internal and external factors.

Linking to the findings in RQ1-4, the statement of the Crisis Leadership Theory from this study is as the following.

“Under the crisis that causes brain-body and mental instant reactions, crisis leadership is a phenomenon that individuals can take a focus, reference, or pause to control stressful impacts. Then, individuals think and take actions through deliberate and immediate decision-making processing, agile executing, managing resources, and communicating, and leading a team by task-, people- and change-orientation, and applying operational arts and tactics to succeed in responding to a crisis meanwhile having emerging positive and negative feelings during actions including getting learning and development in crisis handling. These thoughts and actions to lead people and manage resources in the crisis come from their strategic crisis-related intelligence, heroism, tough attributes, and tactical attributes internally and external

driving forces, enablers and influences from other negative and positive surroundings including each individual's background".

Statement referring to Finding Categories:

"Under the crisis that causes *brain-body* and *mental instant reactions*, crisis leadership is a phenomenon that individuals can take a *focus, reference, or pause* to control stressful impacts. Then, individuals perform A, B, C, and D to succeed in responding to a crisis meanwhile having E and F. These thoughts and actions to lead people and manage resources in the crisis come from their L, M, N, and O internally and P, R, and Q externally".

Finally, this study states the Crisis Leadership Theory as the following.

Crisis leadership is "a phenomenon that an individual can take a control of emerging instant reactions from stressful impacts under a crisis and then has to think strategically rapidly in making decisions critically, agilely taking actions, managing resources and communication artfully, and influencing others by intelligence, heroism, toughness and tactics internally incorporating with external driving forces, enablers and influences to handle the situation effectively that feelings, learning, and development also happen to the individual during this phenomenon".

4.4 Chapter Summary

This chapter displayed the findings from 33 participants from various domains under the same context of crisis that participated in the individual interviews. The purpose of this study was to explore the following research questions.

RQ - What is the Crisis Leadership Theory?

RSQ1 - What is the meaning of crisis leadership? (Discovery)

RSQ2 - What is the internal mechanism of crisis leadership? (Discovery)

RSQ3 - What is the external mechanism of crisis leadership? (Discovery)

RSQ4 - What are elements and process of crisis leadership? (Construction)

From the interview for answering these research questions, the researcher finally derived 152 codes which generated 50 themes and 18 categories respectively for the whole research project. They came from each research sub-questions and were reported separately in this chapter as listed above.

The findings of this study explored a variety of aspects to described the phenomenon of crisis leadership. First, the meaning which identified individuals are defined as crisis leaders with crisis leadership performed and achieved during the crisis. Second, the study found internal and external elements that are parts of crisis leadership mechanism. Finally, the model integrating actions, happenings, elements and processes was drawing and present as the developed model and statement of Crisis Leadership Theory that Crisis leadership is “a phenomenon that an individual can take a control of emerging instant reactions from stressful impacts under a crisis and then has to think strategically rapidly in making decisions critically, agilely taking actions, managing resources and communication artfully, and influencing others by intelligence, heroism, toughness and tactics internally incorporating with external driving forces, enablers and influences to handle the situation effectively that feelings, learning, and development also happen to the individual during this phenomenon”.

The summary of the findings of RSQ1-3 were demonstrated in Table 4.14 below. Then, the discussion of the findings, as well as recommendations for future research and implementation, were presented in Chapter 5.

Table 4.14 Summary of RSQ1-3 Findings

RQ	Categories	Themes	Codes
RSQ1	Deliberate and immediate Decision-Making Processing and Planning	Emergent	Deliberately assessing situations
		Design-led	Designing solutions and preparing for the worst
		Strategic	Considering stakeholders
		Thinking	Rapidly and strategically considering solutions
		Decisive	Deciding to do or not (Being hesitant)
		Critical	Prioritizing and sequencing actions
	Agile Execution, Management and Communication	Decision-Making and Planning	Taking immediate actions
		Responsive	Containing the impacts
		actions and ambidexterity	Doing multi-tasks at the same time

RQ	Categories	Themes	Codes
			Managing resources
		Assertive actions and communication	Responsively notifying for understanding Reporting to higher-ups Suggesting solutions Making argument assertively Supporting knowledge and experiences
		Monitoring and Feedback	Monitoring Debriefing
	Applying Operational Arts and Tactics	Strategic communication	Communication Planning Communication Design
		Vertical-Horizontal orchestration	Brainstorming with the team Opening for ideas Vertically-horizontally coordination, cooperation and collaboration
		Political tactics	Finding special supports Reciprocation and Negotiation Utilizing relationships, networking, and power
	Task, People and Change-Oriented Leading	Influencing others to follow rapidly	Persuading Building trustworthiness
		Centralized-Decentralized Controls	Commanding Delegating
		Being supportive	Participating with the team Comforting and complimenting the team

RQ	Categories		Themes	Codes
	Emerging Feelings during Actions		Negative feelings in actions	Teaching
				Being open-minded for listening
				Anxiety
			Positive feelings with success	Communication concern
				Frustration
				Tiredness
				Satisfied with the success
				Relieved from stress
				Happy and proud about the success
	Crisis Handling Learning and Development		Positive feeling with returns	Work engagement
				More confident from the right decision making
				Valuable for organization and team
			Crisis awareness	Successful in keeping self-image
				Successful in keeping an organizational image
				Happy and proud about rewards
				Relieved, happy and proud with being accepted and followed
				Learning the hardness
People-oriented learning		Post-crisis development	Learning the solvability	
			Learning the possibility of the future crisis	
			Learning importance of teamwork	
		Networking development	Learning importance of networking	
			Being adopted as a role model	
Instant Responsive			Development of thoughts and problem-solving	
			Networking development	
RSQ	Brain-Body	Instant	Responsive	Involuntary responses

RQ	Categories	Themes	Codes
	Reactions (Physical/ Neurological)	reaction	(Automaticity) Startle reflex (Unresponsive) Reactive response Attentive response
		Excitement	Fidgety Agitation
		Effects of stress	Symptoms of stress Limited capability
	Mental Instant Reactions	Thought reactions	(Thinking that) Time is limited (Thinking that) No one is going to take an action (Thinking that) I must take an action Being curious why it happened Thinking repeatedly (Fixation)
		Positive emotional reactions	Being challenged Having a can-do attitude
		Negative emotional reactions	Being surprised Being fearful and worried Being discouraged Need for a pre-action pause Being frustrated and angry
	Focus to Control	Situational engagement	Keeping going and concentration Focusing solutions and planning Writing down their thoughts
		Deliberate consciousness	Being consequence-conscious Being time-conscious Being aware of the responsibility
	Reference to Control	Building up	Seeking advice

RQ	Categories	Themes	Codes
		confidence	Being self-confident “Doing the right things”
		Adhering to learning and experiences	Recalling knowledge and experiences Following on procedures and training
	Pause to Control	Mindfulness generation Stress relief	Being mindful Taking a breather Talking Escaping
	Strategic Crisis- related Intelligence	Vigilance Sense-making capability Situation awareness	Ability to detect signals Readiness Ability to foresee Ability to assess, analyze, and generate options Time awareness Impact awareness Punishment awareness Need-help awareness Stakeholder awareness
		Adaptability and applicability of learning	Knowledge Work experience and skills Past experiences and skills Creativity and innovative ideas for problem-solving
	Heroism (Heart)	Altruism	Belief that no one is going to take action Voluntary Sacrifice
		Kindness	Loyalty

RQ	Categories	Themes	Codes
			Caring the team and others
		Courage	Bravery
			Assertiveness
		Action-oriented personality	Leading by example
			Self-reliance
			Agility
			Pragmatism
		Integrity	Moral
			Responsibility
			Dignity
			Sincerity
	Tough attributes	Tenacity	Patience
			Diligence
			Perseverance
			Commitment (Do the best)
		Resilience	"Never give up" attitude/ Bouncing back
			Positive attitude
			Instinct, intuition, and improvisation
			Development-oriented person
		Growth mindset	Self-confidence and can-do-attitude
			Recognizing own leadership and competence
			Seeking challenges as adventurous learning
	Tactical attributes	Interpersonal intelligence and habit	Empathy
			Social skills and intelligence
			Being communicative
			Humility

RQ	Categories	Themes	Codes
RSQ3	External forces		Courtesy
		Communication	Communication techniques
		ability	Communication strategies
		Political	Power awareness
		intelligence and	Networking
		ability	Reciprocating and negotiation skills
		Systems	Gaps of a system and team
		vulnerability	Possible lack of action/possibility of inaction
		Pressure	Impacts affecting stakeholders
			Time pressure
			Workload
	External Enablers	Power	Higher-ups' supports
			Autonomy
		Supporting	Good resources
		resources	Familiar resources
	External Influences	Factors	Life and family security
		fulfilling	Potential returns and rewards
		human safety	
		needs	
		Models	Role models
			Books

CHAPTER 5

DISCUSSION AND RECOMMENDATION

This chapter presents a summary, discussion and recommendation. The researcher reviews the background and purposes of the study, including the research questions along with a summary of the findings. Next, the researcher discusses the findings and presents the limitations of this study. The implications and recommendations for both scholars and practices are presented at the end of this chapter. The following topics are presented:

5.1 Summary

5.2 Discussion of the Research Findings

5.2.1 Discussion for RSQ 1: Meaning of crisis leadership

5.2.1.1 Category A-Deliberate and immediate Decision-Making Processing and Planning

- 1) Theme A1: Emergent Design-led Strategic Thinking
- 2) Theme A2: Decisive Critical Decision-Making and Planning

5.2.1.2 Category B-Agile Execution, Management and Communication

- 1) Theme B1: Responsive actions and ambidexterity
- 2) Theme B2: Assertive actions and communication
- 3) Theme B3: Monitoring and Feedback

5.2.1.3 Category C-Applying Operational Arts and Tactics

- 1) Theme C1: Strategic communication
- 2) Theme C2: Vertical-Horizontal orchestration
- 3) Theme C3: Political tactics

5.2.1.4 Category D-Leading with Agility

- 1) Theme D1: Influencing others to follow rapidly
- 2) Theme D2: Centralized-decentralized controls

- 3) Theme D3: Being supportive
- 5.2.1.5 Category E-Emerging Feelings during Actions
 - 1) Theme E1: Negative feelings in actions
 - 2) Theme E2: Positive feelings with success
 - 3) Theme E3: Positive feeling with returns
- 5.2.1.6 Category F-Crisis Handling Learning and Development
 - 1) Theme F1: Crisis awareness
 - 2) Theme F2: People-oriented learning
 - 3) Theme F3: Post-crisis development
- 5.2.2 Discussion for RSQ 2: Internal mechanism of crisis leadership
 - 5.2.2.1 Category G-Brain-Body Instant Reactions
 - 1) Theme G1: Responsive action
 - 2) Theme G2: Excitement
 - 3) Theme G3: Effects of stress
 - 5.2.2.2 Category H-Mental Instant Reactions
 - 1) Theme H1: Thought reactions
 - 2) Theme H2: Positive emotional reactions
 - 3) Theme H3: Negative emotional reactions
 - 5.2.2.3 Category I-Focus to Control
 - 1) Theme I1: Situational engagement
 - 2) Theme I2: Deliberate consciousness
 - 5.2.2.4 Category J-Reference to Control
 - 1) Theme J1: Building up confidence
 - 2) Theme J2: Adhering to learning and experiences
 - 5.2.2.5 Category K-Pause to Control
 - 1) Theme K1: Mindfulness generation
 - 2) Theme K2: Stress relief
 - 5.2.2.6 Category L-Crisis-related Intelligence
 - 1) Theme L1: Vigilance
 - 2) Theme L2: Sense-making capability
 - 3) Theme L3: Situation awareness
 - 4) Theme L4: Adaptability and applicability of learning

5.2.2.7 Category M-Heroism

- 1) Theme M1: Altruism
- 2) Theme M2: Kindness
- 3) Theme M3: Courage
- 4) Theme M4: Action-oriented personality

5.2.2.8 Category N-Tough attributes

- 1) Theme N1: Tenacity
- 2) Theme N2: Resilience
- 3) Theme N3: Growth mindset

5.2.2.9 Category O-Tactical attributes

- 1) Theme O1: Interpersonal intelligence and habits
- 2) Theme O2: Communication ability
- 3) Theme O3: Political intelligence and ability
- 4) Theme O4: Integrity

5.2.3 Discussion for RSQ 3: External mechanism of crisis leadership

5.2.3.1 Category P-External Driving Forces

- 1) Theme P1: Vulnerability
- 2) Theme P2: Pressure

5.2.3.2 Category Q-External Enablers

- 1) Theme Q1: Power
- 2) Theme Q2: Supporting resources

5.2.3.3 Category R-External Influences

- 1) Theme R1: Factors fulfilling human safety needs
- 2) Theme R2: Models

5.2.4 Discussion for RSQ 4: Elements and process of crisis leadership

5.2.5 Discussion for the Main Research Question: Crisis Leadership

Theory

5.2.5.1 Discussion by meanings of a theory

5.2.5.2 Discussion by the repetitive test in this research method

5.2.5.3 Discussion by the paradigm of the grounded theory

development method

5.2.5.4 Model of Crisis Leadership Theory

- 5.3 Leadership Theory Paradigm Discussion for Crisis Leadership Theory
- 5.4 Limitations of the Study
- 5.5 Implications and Recommendations for Scholars
- 5.6 Implications and Recommendations for Practices
- 5.7 Chapter Summary

5.1 Summary

Under rapid change, chaos, and disruption in this era, approaches in dealing with crisis are the needs of organization and human resource development practitioners in this era, along with the academic theory underlying those practices. The situations, background concepts for handling, and needs, led to this research objectives and questions. Then, the appropriate methods were designed as the grounded theory method (Egan, 2002) to achieve the goals contributing to practical and academic significance from this studying of crisis leadership theory development as the conceptualization phase from five phases of (Lynham, 2002).

The researcher considered to set a main research question (RQ) and sub-questions (SQ) to achieve the research objectives in theory development by an initial inductive approach (Lynham, 2000), and to support the composition of theory explanation by exploring constructs and their interactions (Bacharach, 1989). Furthermore, this study in building a theory proposed SQ to find the results of both critical perspectives of data *discovery* (Glaser & Strauss, 1967) and researchers' construction (Charmaz, 2006) as the followings.

RQ - What is the Crisis Leadership Theory?

RSQ1 - What is the meaning of crisis leadership? (Discovery)

RSQ2 - What is the internal mechanism of crisis leadership? (Discovery)

RSQ3 - What is the external mechanism of crisis leadership? (Discovery)

RSQ4 - What are elements and process of crisis leadership? (Construction)

This study presented the research result from 33 participants including two pilot test participants and one additional participant that the research had prepared in case the study needs one more after 30 participants to be a discriminant sample. In the final decision, the researcher did not exclude them from the data to be analyzed. In

qualitative research, pilot data is often used as a part of the main study (Teijlingen & Hundley, 2001). Participants were grouped by their domains or work context that set up only for this research operation according to their natures of operations and challenges that might be faced to, and interrupted by different forms of crisis. This study categorized numerous types of industry to be six groups. They were based on the contexts including kinds of crisis impact, operational characteristics, objectives and expected achievement, and stakeholders' expectation. As mentioned in Chapter 3 that the groups have different challenges on complexity and safety, people's perception, continuing operational or production performance, customers' satisfaction and services, and business profits. From the study and theoretical sampling, the researcher practically assigned the participants' information to six groups.

This section aimed for increasing trustworthiness in qualitative research by explaining the research operations in collecting and analyzing data. The research result came from interview protocol that was categorized in six general sections as followings: 1) experience and meaning of crisis, 2) meaning of crisis leadership, 3) internal backgrounds, processes and mechanisms of individuals who perform crisis leadership, 4) external environment and mechanisms influencing individuals who perform crisis leadership, 5) deep elements relating to crisis leadership, and 6) interaction and causal relationship among internal and external elements relating to crisis leadership. At the starting point of the research project during the pilot phase, the researcher discussed with the Advisor again about the interview questions and was suggested to cut the Section six because it would be a further analyzed and constructed part by the researcher rather than directly questioning. Then, after the pilot test, the researcher decided to reorder the sections from the difficulty of the story-telling issue from interviewees found at the pilot interview. Therefore, the researcher finally organized the interview protocol as five sections which are matched with four sub-questions of the research question as shown in Table 4.5.

During the collection and analysis of data which are inseparable in grounded theory, this study applied codes from line-by-line codes found in the open coding step to examine, rephrase and group into the themes. Then, the researcher studied codes' relations and causations in the step of axial coding to generate categories. At the next phase as the selective coding step, the categories will be analyzed back and forth with

the raw data to explain the linkage and process among constructs and shape the result. Each step of coding in this grounded theory research provided codes, themes and categories by concepts of open coding, axial coding, and selective coding through theoretical sampling and theoretical sensitivity thereby each data at certain points was constantly compared to other data points to form themes, categories and finally concepts of element and process. As this research under the grounded theory paradigm that bridges an interpretivist with traditional positivist assumptions, the researcher did not only discover the information but also had to construct the theory from information. It was getting deep understanding participants from the inside and analyzing the phenomenon to be a theory for the view from the outside (Charmaz, 1996; Creswell & Creswell, 2017).

The key findings of this study included the factors from each SQ provide the overall result for a main research question. This study was able to construct the statement to explain the Crisis Leadership Theory. It comes from the meaning of crisis leadership, elements and mechanisms.

First, there were two parts that explained the meaning of crisis leadership for RSQ1 which are thoughts and actions of crisis leaders, and happenings in them during actions. In the actions, there were four categories including 1) deliberate and immediate decision-making processing and planning, 2) agile execution, management and communication, 3) applying operational arts and tactics, and 4) task, people and change-oriented leading. In the happenings in themselves, there were two themes including 1) emerging feeling during actions, and 2) crisis handling learning and development.

Second, there were two parts that explained the internal mechanism of crisis leadership for RSQ2 which are reactions to impact and internal factors. In the reactions to impact, there were five categories including 1) brain-body instant reactions, 2) mental instant reactions, 3) focus to control, 4) reference to control, and 5) pause to control. In the internal factors, there were four categories including 1) strategic crisis-related intelligence, 2) heroism, 3) tough attributes, and 4) tactical attributes.

Third, there was external factors that represented the external mechanism of crisis leadership for RSQ3. In the external factors, there were three categories including 1) external driving forces, 2) external enablers, and 3) external influences.

Fourth, RSQ4 questioned for elements and processes that the researcher found them by constructing from findings discovered by RSQ1, 2, and 3 from participants. As the grounded theory researcher (Charmaz, 2006), this is the part that the researcher made the theory construction from the data as mentioned by Egan (2002)'s grounded theory-building research method. Therefore, this study illustrated the overall theoretical model to summarize to findings from RSQ1 to 3 for exploring the process of elements in crisis leadership phenomenon.

The details of each component of crisis leadership phenomenon and further proposed theoretical model and theory were discussed in the next section.

5.2 Discussion of the Research Findings

In this section, the research findings were discussed based on the research questions. Further, the findings from the present study are referred to previous literature. The following discussion of all findings (RSQ1-4) begins with meaning of crisis leadership, internal and external mechanisms, and the illustrated model of elements and process of crisis leadership from Chapter 4 which was discussed by the model of leadership theory structure from Chapter 2

This study is not aimed to generalize the conclusion about crisis leadership phenomenon, rather, to reveal the situational context of crisis that was hidden as similar threats and challenges across industries and domains. In this study, the research found that individuals who stood up as crisis leaders have the same crisis leadership in each domain as it is a phenomenon of human natures and functions under the same unique leadership level in handling crises because even if crises occurred in different domains, these crises had indifferent criteria.

5.2.1 Discussion for RSQ 1: Meaning of Crisis Leadership

This section discussed RSQ1 as follows.

What is the meaning of crisis leadership?

Grounded in this study, there were 6 categories of information that explained a meaning or phenomenon of crisis leadership: Category A: Deliberate and immediate Decision-Making Processing and Planning, Category B: Agile Execution, Management and Communication, Category C: Applying Operational Arts and Tactics, Category D: Task, People and Change-Oriented Leading, Category E: Emerging Feelings during Actions, and Category F: Crisis Handling Learning and Development. These categories were generated from an understanding of their codes informed and analyzed by the researcher. Category A, B, C, and D describe the meaning of crisis leadership on what participants as normal people who became so-called crisis leaders reacted to the situation hence this presents about the action of crisis leaders meanwhile Category E and F describe on what happened to them as the other emergences, feedbacks and outcomes besides the success in solving a crisis when they had performed crisis leadership in actions. These groups of findings were consistent with Zaccaro et al. (2004) who proposed that leadership performance or outcomes are presented through leader emergence, leader effectiveness, and leader advancement and promotion as this study found meaning of crisis leadership phenomenon were both actions and returns. The latter included emerging feelings promoting leadership and development of leadership. The discussion of each theme under these categories and groups was presented as the followings.

5.2.1.1 Category A-Deliberate and Immediate Decision-Making Processing and Planning

This category refers to the first mental activity when crisis leaders respond to the crisis after they perceive an impact and its effects. This category means when crisis leaders started to solve or handle a crisis, they thought of what, when, where, why and how to do including by whom. Therefore, these thinking activities are the action of management. Before actions, crisis leaders have to think and make a decision. Boin, t Hart, Stern, and Sundelius (2005) mentioned that crisis leaders are crisis decision makers. Characteristics of crisis decision making are unique such as high consequences, price of both right and wrong choices, dilemmas of problem solving by trade-off choices or tragic choices, and time pressure. These natures put crisis leaders to a difficult spot that they then have a unique decision-making process.

Under pressure, Boin et al. (2005) explained about crisis leaders that “their personality and style may predispose them to consider all sides of a problem and therefore insist upon extensive analysis, multiple sources of advice, and extensive deliberation with and among advisers before making a decision” (p. 44).

The derived information was analyzed to be 2 themes: Theme A1: Emergent Design-led Strategic Thinking and Theme A2: Decisive Critical Decision-Making and Planning by 33 and 32 participants respectively.

1) Theme A1: Emergent Design-led Strategic Thinking

This theme refers to the analysis process that emerges suddenly as driven by the facing situation. However, crisis leaders did it strategically which considered various factors that need to consider in designing or sketching solutions. The design became a key process because a crisis is an unusual problem that cannot be fixed by normal actions. Then, the further planning and actions had to be done in time and also anticipating the worst-case scenarios that can emerge and escalate. The essence of strategic perspective is about overall factors including internal and external environments are assessed to generate the appropriate options for further action.

For 33 out of 33, participants indicated their analysis process that it had to be done quickly and deliberately to respond to a crisis by having several choices in mind. There were three elements regarding this theme: deliberately assessing situations, designing solutions and preparing for the worst, and considering stakeholders.

Crisis leaders assess surrounding and relevant situations in detail, analyzing or investigating the causes, and identify their own resources and information including the needs of additional resources. Under the limit of time, crisis leaders can make it fast and it helps to design good options for more effective decisions. These various processes reflecting deliberation of assessment prior to making a decision in crises even the time is limited. Crisis leaders think of the worst case and then preparation is included in a part of options before it might become a plan. This would help to contain damages in case the solving problem cannot be done and can help to foresee the escalation of crises by thinking the worst-case scenario thinking when a crisis came. The most severe probable event was aware of. Also, crisis leaders consider all relevant stakeholders involving with a crisis such as ones

potentially getting impacts or ones can help to fix a situation. This causes crisis leaders to rapidly inform the relevance and assess factors for planning. This is consistent with the learning agility that is “the willingness and ability to learn new competencies to perform under first-time, tough, or different conditions” (p. 323).

The derived information from the interview aligned with various scholars that mentioned this process of thinking of leadership in crisis (Abraham, 2005; Freeman, 2010, 2020; Harrison & Thompson, 2014). This theme is consistent with the definition of strategic thinking (Heracleous, 1998; Liedtka, 1998; Steptoe - Warren, Howat, & Hume, 2011). Bonn (2005) stated the definition of strategic thinking as “a way of solving strategic problems that combine a rational and convergent approach with creative and divergent thought processes” (p. 337). Mintzberg (1994) clarified that strategic thinking consists of planning and thinking. Strategic planning focuses analysis involving establishing and formalizing a system and a procedure. On the other hand, strategic thinking concerns intuitive, creative and innovative thinking for solutions. It is a thinking of possible scenarios and strategy for creative actions that will be relatively free from a boundary (Drejer, Olesen, & Strandkov, 2005; Steptoe - Warren et al., 2011).

Additionally, design thinking might be involved in this process as in unusual situations, crisis leaders have to design a creative way of problem-solving. Design thinking is a solution-based approach that focuses on finding solutions through creativity to fix the problems. This is different from the problem-based thinking approach that focuses on finding obstacles and limitations on why a problem exists and apply or find only typical ways to solve problems that might not be enough (T. Brown, 2008; Dorst, 2011; Elsbach & Stigliani, 2018; Knight, Daymond, & Paroutis, 2020). This causes crisis leaders to apply arts and tactics during actions in dealing with a crisis (Taylor, 1997; Ucko & Marks, 2018).

2) Theme A2: Decisive Critical Decision-Making and Planning

This theme refers to refers to decision-making based on options that the mind generates including the complex planning. This is the same as the strategic planning process in strategic management. Crisis leader have to generate and compare options by evaluating pros and cons including feasibility, suitability, and

effectiveness. This is critical because of the time constraint and significance of the result of decision. Especially, for crisis leaders, there is a moment that is about deciding to do or not to because they might not have to do or not have their own direct responsibility to do. They have a choice to not do it and let someone else reacts. Before they executed an action, the detailed plan with sequencing priority also has to be made in mind effectively and quickly.

For 32 out of 33, participants informed the moment of making a decision between doing or not doing, or between courses of action. However, each option does not mean only one action solely but they are many things to perform and planning. There were three elements regarding this theme: rapidly considering options, deciding to do or not, and prioritizing and sequencing actions.

Crisis leaders consider the way to solve a problem or relief the impact of crisis. These solutions can be options or courses of action to be compared and made a selection or a decision. However, crisis leaders create these options with the high speed enough in dealing with situations. This rapid creation of choices covered how to fix a problem, limit escalation, offering innovative solutions and restoration of normal state by also applying strategic thinking (Boin & Hart, 2003).

Crisis leaders have decision-making based on options that the mind generates. This is the same as the strategic planning process in strategic management. Crisis leader have to compare operations by evaluating pros and cons including feasibility, suitability, and effectiveness. This is critical because of the time constraint and significance of the result of decision (Boin & Hart, 2003). They prioritize actions. In crisis with time limit, scarce resources available and high impact, sequences of action have to be prioritized (Boin et al., 2005). The most important thing for reducing impacts, handling situations or fixing problems have to do first.

Furthermore, it is comparable to the study result of Oscarsson and Danielsson (2018) from the interview of staff in social services regarding refugees. In the study of crisis management by operative staff facing a crisis, they found the practices of prioritization under the pressure and workload as stated as “working with two different groups at the same time was perceived as problematic by the staff, and the only way to handle the situation was to prioritize the tasks” (p. 231). Also, it is consistent with Forster, Patlas, and Lexa (2020) stating that “leadership is

not confined to those at the top of the organizational chart.....The great leader anticipates and plans for significant disruptions” (p. 421).

Furthermore, a decision-making process in crisis is also involved with intuition as it can be intuitive decision-making. It happens under stress that cannot apply a rational approach effectively. Emotions activate an adaptive function in uncertainty by minimizing emotional impacts and focusing the present (Sayegh, Anthony, & Perrewé, 2004).

5.2.1.2 Category B-Agile Execution, Management and Communication

This category refers to the main phenomenal action which crisis leaders deal with a crisis in actions. It includes hands-on action, communication, managing resources, and follow-up. There are characteristics involving with the detailed and timely execution (Boin et al., 2005) responding to the event such elaborate actions and procedures (Boin & Hart, 2003). Agility represents the effectiveness in doing things fast and covering various activities at the same time and communicating rapidly as the first wave of information for collaborative actions that sensitively adapting to the presence and embracing scenario planning (Boin et al., 2005; Oscarsson & Danielsson, 2018). Boin et al. (2005) mentioned this proactive and agile action during a crisis is comparable to “high-reliability organizations have somehow developed a capacity for thorough yet fast-paced information processing under stressful conditions” (p. 35).

This study found the executions or actions of crisis leaders were agile as the concept of agility as scholars mentioned (M. K. Petermann & Zacher, 2020; M. K. H. Petermann & Zacher, 2021; Prange, 2016; J. Singh, Sharma, Hill, & Schnackenberg, 2013; Walter, 2021). M. K. H. Petermann and Zacher (2021) mentioned that “agility matters (why) because almost all aspects of the external business environment are changing dramatically, especially due to technological and digital disruption. Agility has many definitions (what), but we can simplify this into four characteristics: create a future, anticipate opportunity, adapt quickly and learn always. There are four stakeholders where agility characteristics apply (where): strategic, organization, leadership and individual” (p. 18). Medinilla and Medinilla (2012) pointed the practices of agile management including motivating and developing agile teams, managing self-organizing teams and aligning their efforts

with the purpose and goals of the company, creating an agile structure, managing workload (the project portfolio) and capacity in an agile way, building an Agile corporate culture and driving change (de Borba, Trabasso, & Pessôa, 2019; Theobald, Prenner, Krieg, & Schneider, 2020; Weber & Wild, 2005).

The derived information was analyzed to be 3 themes: Theme B1: Responsive actions and ambidexterity, Theme B2: Assertive communication, and Theme B3: Monitoring and feedback, by 33, 33 and 14 participants respectively.

1) Theme B1: Responsive actions and ambidexterity

This theme refers to main actions in handling a crisis. Actions of crisis leaders have specific purposes in stopping the impact and unique characteristics because of contextual constraints. It has to be fast and multi-dimensional as Boin and Hart (2003) mentioned that “people experience crises as episodes of threat and uncertainty, a grave predicament requiring urgent action” (p. 544). It seems to fit to the word ‘ambidexterity’ that nowadays is applied in the organizational context means individuals who use both hands equally well. Crisis do both action and coordination including both direct people and ask for help from people. This therefore reflects ambidexterity as one of crisis leaders’ ability that this study had found (Papachroni & Heracleous, 2020; N. Turner & Lee-Kelley, 2013). Also, it means when they applied various styles of leadership to influence people differently for solving a crisis.

For 33 out of 33, participants indicated their responsive and agile action in doing various things. There were four elements regarding this theme: taking immediate actions, containing the impact, doing multi-tasks at the same time, and managing resources.

In managing a crisis, crisis leaders take quick actions after deciding to do. The speed of response is important for handling a crisis. Sometimes, this can mean responsive action from automaticity as by the instinct to react to situations (Boin et al., 2005). For crisis leaders. Their role is not only solving problems or fixing situation, but also the action in stopping escalation of crisis’s impacts and damages. This is not the termination of crisis rather it is about control or contain the crisis impact within a minimum or optimum boundary (Boin & Hart, 2003). Gogalniceanu et al. (2021) supported this as they conducted the field work

study on crisis interviewing 17 interviews and 3 focus groups. Twenty-two aviation and healthcare experts informed the practice of crisis containment.

Furthermore, crisis leaders have to do various tasks at the same time such as hand-on actions (Dasborough & Scandura, 2022), coordination, and communication, managing resources and systems or etc. (Vaajala, Arminen, & De Rycker, 2013). This is consistent with L. Wu et al. (2014) mentioning that “to simulate the additional cognitive load and multi-tasking required in crises” (p. 320) in the study for introducing Dynamic Procedure Aids to solve problems in using checklist supporting crisis responses in medicine.

The use of the word ambidexterity in scholarly debate has risen rapidly in multiple areas of research, including strategic management, innovation and technology management, organizational learning, and organizational behavior. Although the generic meaning of ambidexterity is the ability to pursue two different paths simultaneously, there is no consistent definition. The term refers variously to adaptability and alignment, controllability and responsiveness, innovation and efficiency and incremental and revolutionary change. For the purposes of this article, we take ambidexterity to mean the ability to refine existing domain knowledge (exploitation) and create new knowledge to overcome knowledge deficiencies or absences identified within the execution of the work (exploration) (Turner & Lee-Kelley, 2013).

In aspect of managing resources, crisis leaders cannot succeed alone in handling a crisis due to difficulties of crisis, they have to utilize other persons and things to achieve goals. This is the relationship between leadership and management that one who leads effectively also are able to manage things which mean allocate resources including people effectively (Vaajala et al., 2013). Resources mean various things that can be managed by individuals. Gaba (2010) applied Crew/Cockpit Resource Management (CRM) in aviation to be Crisis Resource Management in medicine for improving patient safety. Even if many concepts in safety and human factors of aviation were adopted to healthcare through the concept of non-technical skills already (Flin & O'Connor, 2017; Reader, Flin, Lauche, & Cuthbertson, 2006), Gaba (2010) mentioned directly to support the crisis management by comparing training syllabuses for the crisis management in anesthesia. L. Wu et al.

(2014) also pointed that resource management is one of key features in crisis management and responses.

2) Theme B2: Assertive actions and communication

This theme refers to an action related to communication and behaviors that are direct and respectful. Being assertive makes crisis leaders the advantages in successfully delivering the message. If communicative actions are too passive or too aggressive, the messages may get lost because people might be not ready or open for the message delivery. Also, crisis leaders generate effective meanings of communicated messages. Most of actions need the mean of communication to send messages of assigning tasks, informing situations, coordinating for supports. Assertive behavior is the way to express opinions effectively and stand up for the point of view. It is an honest manner without intentionally hurting anyone's feelings (Brindley & Reynolds, 2011).

For 33 out of 33, participants indicated about this kind of communication which is needed in a crisis. There were five elements regarding this theme: responsively notifying for understanding, reporting to higher-ups, suggesting solutions, making argument assertively and supporting knowledge and experiences.

Crisis leaders notify involving stakeholders. There are various relevant aspects of crisis that each stakeholder can be related to and they need to be notified and understood as soon as possible. It is consistent with literature mentioning crisis leaders and their communication and meaning making (Boin & Hart, 2003; Boin et al., 2005; Jong, 2017; E. Stern, 2013). Boin et al. (2005) stated that “leaders must stimulate their organizations to launch an enduring awareness-raising” (p. 154).

Crisis leaders actively inform the higher-ups to acknowledge the situation in creating collective understanding in an organization and receiving authority for further actions. Also, crisis leaders keep reporting to their higher-ups from the recognition of power structure to achieve a goal. This is supported by Burstein, W Holsapple, van de Walle, and Turoff (2008) mentioning the importance of top management reporting in practices of crisis management team.

When crisis leaders in the non-management role, they might not be able to manage resource to fix problems by their power. However, they offer solutions and suggest the way to handle the situation to the higher-ups even they do

not ask for. This agreed with Barton (2008) that mentioned several techniques needed for suggesting impacted and relevant people. Crisis leaders have to assertively communicate to higher-ups and team when the ideas are different and crisis leaders believe that the right idea will help to fix problems. They can argue with them to create the understanding and acceptance.

Burstein et al. (2008) supported the need of assertiveness by stating that “some believe the root cause of Chernobyl was the lack of local authority of the professional operators of the plant to veto decisions by the higher ups that decided to take the plant operation outside the limits of the original performance specifications for the technology. Consider the comparison where a commercial airplane pilot in most countries has the right to veto the flight of the plane if he or she feels something is not right with respect to the readiness state of the aircraft” (p. 304).

Furthermore, crisis leaders have the way to make an understanding of situations and planned actions to the team and stakeholders by referencing knowledge and sharing experiences. Barton (2008)’s literature also supported the application of knowledge in communication.

3) Theme B3: Monitoring and feedback

This theme refers to activities that are also a part of management that crisis leaders do after executing the decided plan. Not only they follow up the overall action performance, but also provide feedback to the team.

For 14 out of 33, participants indicated this action. There were two elements regarding this theme: monitoring and debriefing.

Crisis leaders follow up the result of execution or monitoring the on-process activities which have been coordinated or assigned to someone. Also, crisis leaders provide feedbacks on the evaluation of actions but mostly crisis leaders at post-crisis compliment the team in collective success and conclude the lesson learned for development (Boin & 't Hart, 2010). Barton (2008) mentioned various aspects monitoring such as actions, communication, and delegation for monitoring. After crisis events, debriefing is important on all aspects. Communication, actions, teamwork, development have to be addressed (Curtin, 2004).

5.2.1.3 Category C-Applying Operational Arts and Tactics

This category is subsequent from strategic thinking and design thinking in a part of crisis leaders' emergent design-led strategic thinking that creative solutions consisting with various arts and tactics have to be generated to deal with unexpected and stressful events (Brown, 2008; Dorst, 2011; Elsbach & Stigliani, 2018; Knight et al., 2020). It refers to the concept that the researcher adopted from a military concept which consists of knowledge and experience in operations used to understand a specific problem as a social phenomenon and to direct the activities of people. It is the practical pursuit of strategic objectives, in whole or in part, through the arrangement of tactical actions in time, space, and purpose. In military, it is the employment of military forces to attain strategic and/or as objectives through the design, organization, integration, and conduct of campaigns, major operations, and battles. In crisis management such as disaster relief operations (Dixon, 2006), it is comparable to the employment of resources and networks to attain strategic and operational objectives through the design, organization, integration, and conduct of plan, major actions, and detail activities (Marks, 2005; Ucko & Marks, 2018). Then, this applies arts and tactics that not only tangible action, but also intangible techniques such as creative and innovative thinking for solution designs or the interpersonal and political skills (Blythe, 2018; Fleming, 2011; J. Kelly & Brennan, 2009; Piatt, 1999; Schnaubelt, 2009; Slavković, Talić, & Jelić, 2013).

Schnaubelt (2009) defined operational arts as “the application of creative imagination by commanders and staffs—supported by their skill, knowledge, and experience—to design strategies, campaigns, and major operations and organize and employ military forces.” Although the comparison is not exact, it could be argued that the civilian equivalent of operational art is policy implementation, variously defined as “the carrying out of a basic policy decision” or “what develops between the establishment of an apparent intention on the part of government to do something, or to stop doing something, and the ultimate impact in the world of action.”

In addition, Esmaeili (2015) mentioned that strategic management consists of the art and science of formulation of the activities of organizations and evaluation of the multidimensional decisions for achieving objectives through integration of management factors and actions. Strategic management is also

considered as the art and science of taking, implementing, and evaluating decisions about multiple activities to enable and accomplish objectives (Chu & Tse, 1992; Maranville, 2011; O'Dowd & Waldron, 1991; Zafar, Babar, & Abbas, 2013). Lykke (1989) explained the mechanism of strategic management through defining three key components of ends, ways, and means.

The derived information was analyzed to be 3 themes: Theme C1: Strategic communication, Theme C2: Vertical-Horizontal orchestration, and Theme C3: Political tactics, by 28, 33 and 23 participants respectively.

1) Theme C1: Strategic communication

This theme refers to using a specialized or tactical approach to distributing and receiving information other than typical communication that crisis leaders have to firstly rapidly inform stakeholders. This second wave of communication means communicating the appropriate message, through the correct channels, to the right people, at the right time and using feedback from this process to stay focused on ultimate goals. This will help to effectively disseminate information and organize cooperation as scholars proposed (Argenti, Howell, & Beck, 2005; Hallahan, Holtzhausen, Van Ruler, Verčič, & Sriramesh, 2007; Halloran, 2007; Sandhu, 2009; G. F. Thomas & Stephens, 2015). Hallahan et al. (2007) stated that “strategic communication is the idea of influence” (p. 24).

For 28 out of 33, participants indicated this ability and technique of communication in their consideration for achieving a goal. There were two elements regarding this theme: communication planning and communication design.

Crisis leaders concern the specific detail of using communication in planning to achieve a goal. It is about considering means, contents, and the right time to send information. These skills and techniques are used in both provide information to stakeholder and coordinating with others. Crisis leaders also have details of designing communication. It is about considering the scope of messages and words used. These also skills and techniques are used in both provide information to stakeholder and coordinating with others. There are various literatures mentioned necessity of communication in a crisis (Coombs, 1999, 2004, 2007b, 2014a; Coombs & Holladay, 2011).

Hallahan et al. (2007) explained that “strategic communication is about informational, persuasive, discursive, as well as relational communication when used in a context of the achievement of an organization’s mission” (p. 17). Additionally, Hallahan et al. (2007) argued that strategic communication is not only for influencing people and mutual understanding between an organization and its publics as Pavlik (1987) observed, but they stated that “in an organizational context, strategic communication involves describing how entities intentionally attempt to communicate or create meaning, as well as understanding factors that confound the sharing of meaning between an organization and its various constituents” (p. 22-23).

2) Theme C2: Vertical-horizontal orchestration

This theme refers to the coordination and management of multiple systems and resources and stringing together multiple tasks in order to execute a holistic plan and process to handle a crisis situation. This coordination in crisis need to orchestrate both vertical and horizontal directions. The horizontal scheme means available resources and assets at the same level but includes inside and outside the loop of management and authority meanwhile the vertical scheme is the management and resources at the higher or lower levels that provide various roles, supports and relevance to crisis leaders.

This complexity is represented by the word 'orchestration' instead of just coordination as a crisis needs intense cooperation among a variety of organizations because many parties may have never worked together before (Boin & 't Hart, 2012; Boin et al., 2013). The orchestrating action means a dynamic point on a continuum between the extremes of persuasion and commanding control that crisis leaders have to consider in shifting from managerial actions to take leadership and apply leadership skills in the situation.

This research finding is comparable to the work of crisis leadership by Boin et al. (2013) who coined the term “orchestrating vertical and horizontal coordination” (p. 83) as one of the tasks of crisis leadership. Boin et al. (2013) explained that Such cooperation across vertical and horizontal borders must be orchestrated to accomplish a state of coordinated behavior. The activity of ‘orchestrating’ behavior lies somewhere on a continuum between the extremes of ‘persuasion’ and ‘command and control.’ Persuasion is not enough to bring all parties

to a state of optimal cooperation. Command and control, on the other hand, tends to backfire” (pp. 83-84).

For 33 out of 33, participants indicated this phenomenon that help to manage a crisis effectively. There were four elements regarding this theme: brainstorming with the team, opening for ideas, vertically-horizontally coordinating, coordination and collaboration and finding supports.

Crisis leaders use a method of generating ideas and sharing knowledge together with the team to solve a crisis (Al-Adwani, AL-Hamdany, & AL-Saher, 2010; Hassan, 2021). They are ready to receive the ideas and suggested solutions from some else. This can be both vertical and horizontal that means crises leaders are open-minded for colleagues, their team members and their higher-ups (Lagadec, 1997). Working together with others can help or joining as a teamwork, collectively generating a new outcome in dealing with a crisis (Weaver, 2012).

In the study of crisis management of COVID-19 pandemic through China’ strategy, Zhong, Liu, and Christensen (2022) also found that crisis coordination was vertical-horizontal and internal-external framework. Results of their study and this study supported the proposition of (Boin et al., 2013). Furthermore, there are various literature defining differences and relevance of coordination, cooperation, and collaboration (Castañer & Oliveira, 2020; Ghasemi, Lehoux, & Rönnqvist, 2023; Griesemer & Shavit, 2023; Wankmüller & Reiner, 2020). T. Christensen, Andreas Danielsen, Laegreid, and H. RYKKJA (2016) specifically mentioned these coordination, cooperation, and collaboration in crisis management study of six countries.

Crisis leaders put efforts to find people and things to enable the plan to achieve crisis leaders' objectives such as consults, specialists, equipment and systems including budgets. As in crisis, there are various kinds of support needed more than usual or expected problems. Most of essential things are out of the existing system. Nash and Churchill (2020)’s study also found the special supports finding was a part of crisis response to the pandemic Australian university.

3) Theme C3: Political Tactics

This theme refers to practices that come from crisis leaders are aware of power, authority, network, and reciprocation in organizational management.

With organizational politics, crisis leaders ally themselves with like-minded others in an attempt to win the scarce resources. They engage in behavior typically seen in government organizations, such as bargaining, negotiating, alliance building, and resolving conflicting interests. Also, these tactics are ways in which individuals translate power bases into specific actions. The nine influence tactics are legitimacy, rational persuasion, inspirational appeals, consultation, exchange, personal appeals, ingratiation, pressure and coalitions (Mintzberg, 1983).

This is the same as this study found in the study of Rahim, Garrett, and Buntzman (1992) presenting political tactics used in conflict management. They also mentioned that this tactic is not always unethical. However, this is important for ones who become leaders in managing a crisis as in crises, there are issues of organizational politics. At least five literatures mentioned its emergence in crisis management ('t Hart, 1997; Bhaduri, 2019; Fischer, 2004; N. Pidgeon, 1997; N. Pidgeon & O'Leary, 2000).

For 23 out of 33, participants informed that they used these tactics in coordinating for agreed solution with other stakeholders. There were two elements regarding this theme: reciprocation and negotiation and utilizing relationships, networking and power.

Crisis leaders act in negotiating with others for requesting helps. As in crisis, the supports needed mostly are outside the control. Special tactics should be applied to get what crisis leaders need by exchanging things with others for mutual benefit. However, sometimes organization politics and power help in successful negotiation. These reciprocation and networking were mentioned in crisis leadership study of Marr (2021).

Crisis leaders apply the relationship and networks in a crisis. They are important in coordinating and finding support. As a crisis emerge unexpectedly, the supports mostly come from helps. Only the easiest and fastest way to get support from other people and organization outside the team. It comes when crisis leaders have relationships and networks with people who can support or have power enough.

Mintzberg (1983) suggested that political skill referred to the exercise of influence through persuasion, manipulation, and negotiation meanwhile

Ferris et al. (2007) elaborated that political skills have four dimensions which are social astuteness, interpersonal influence, networking ability, and apparent sincerity.

Young, Camp, and Bushardt (2020)' s study supported this study that political skills are needed to work on crisis and for followship. Also, Kalkman (2020) studied crisis management by conducting 26 interviews of civil and military representatives in Netherland in inter-organizational boundaries. In the literature review papers of crisis leadership, some researchers found that application of personal power, management level power, and negotiation were involved with practices in managing crisis of crisis leaders (Collins et al., 2022; Y. L. Wu, Shao, Newman, & Schwarz, 2021).

5.2.1.4 Category D-Task-, People-, and Change-Oriented Leading

This category refers to the ability of crisis leaders that they can lead people to achieve goals. In their leading, they concern various dimension including achieving the task, caring people, and adapting for change. Consistent with this finding, Derue et al. (2001) proposed the integrated model of traits, behaviors, and effectiveness, mentioning leadership behaviors from traits and characteristics can be task-oriented, relational-oriented, and change-oriented that lead to effectiveness. Also, this is closely associated with the proposition of B. Joiner (2019) in leader agility. They mentioned the four competencies of leadership agility which are 1) context-setting agility, consisting of situational awareness and sense of purpose, 2) stakeholder agility, consisting of stakeholder understanding and power style, 3) creative agility, consisting of reflective judgement and connective awareness, and 4) self-leadership agility, consisting of developmental motivation and self-awareness (B. Joiner, 2019; B. Joiner & Josephs, 2007).

Crisis leaders perform leadership by combining, balancing, and sequencing some key features of Agile (Aftab, Khalid, Waheed, Aftab, & Adnan, 2022; Çobanoğlu & Demir, 2022; B. Joiner & Josephs, 2007), Directive (Bowers et al., 2017; Post, De Smet, Uitdewilligen, Schreurs, & Leysen, 2022; Rico, Uitdewilligen, & Dorta, 2022), Transformational (Bass & Riggio, 2006), and Servant (Greenleaf, 2002; Spears & Lawrence, 2002; Zada, Zada, Ali, et al., 2022) Leadership styles.

Furthermore, Karelaia and Van der Heyden (2020) strongly supported this study finding that crisis leaders have different behaviors or leadership styles in one person. Karelaia and Van der Heyden (2020) stated that, for crises, “effective leadership in the face of wicked problems calls for a very different set of virtues than those traditionally associated with leadership. These virtues include both confidence and humility, decisiveness and fairness, empathy and courage. We discuss the specific leadership behaviors through which leaders can enact these virtues. Importantly, we suggest that in the face of wicked problems, different behaviors are required at each of the five stages of making decisions: framing the problem, exploring alternatives, “taking” decision, execution, and learning” (p. 1).

Crisis leaders have to be ready and fast in changing environments, decisive in taking reaction, influential in leading and transforming others mindset, and caring, interacting, and trusting others, respectively. This is consistent with various concepts of leadership and ambidexterity (Papachroni & Heracleous, 2020; N. Turner & Lee-Kelley, 2013) as mentioned in crisis leaders’ agile management and execution as one of this research findings. Furthermore, by theoretical sensitivity and sampling, this study found the involvement with the authentic leadership concepts as Avolio, Luthans, and Walumbwa (2004) defined as well.

On the other hand, situational leadership was included to this discussion in the other perspective because the research finding of this study found that crisis leadership phenomenon showed that crisis leaders present various styles in one person. However, it depends on dynamic situations and timeframe of events. As Hersey, Blanchard, and Natemeyer (1979) proposed the situation leadership theory, it was clear at first that they did not provide a specific style of leadership, rather they analyzed and discussed relevant factors, which mainly are power and situation to illustrate the prescriptive curve presenting four styles of leaders: telling, selling, participating, and delegating that came from two dimension generating four quadrants of relationship behavior (low-high) and task behavior (low-high).

This proposition was applied as a tool for consideration and it was based on the aim of their work as Hersey et al. (1979) stated that “this article integrates the concept of power with situational leadership by relating the perception of a leader’s power bases with various leadership styles. The sources of power are

identified; situational leadership is reviewed; and a new instrument, the Power Perception Profile, is described and discussed. Maturity levels are defined, and their relationships to power sources and leadership styles are discussed” (p. 418). They mentioned seven bases of power which are coercive power, connection power, expert power, information power, legitimate power, referent power, and reward power. These kinds of power also affect the determination of followers and relationship, not only the will to achieve tasks of leaders (Hersey et al., 1979).

In the area of crisis research, Islam, Juraybi, and Alraythi (2021) studies effectiveness of situational leadership style in managing workplace crisis through relevant literature. They stated that “the situational leader seamlessly switches between different leadership styles to suit the organizational needs and develop trust and confidence among the followers. It encourages the employees to reach the leader and seek guidance regarding the resolution of difficult situations like risk and reduce it considerably. It helps the team to make the rightful decision and mitigate the risk or crisis” (p. 362). Thus, this research result was agreed with their finding. They also mentioned that crisis leaders that differently performed leadership styles such as flexibility, coaching, delegating, participating, humility, and others to ensure that decision-makings were made for dissimilarity of threats or crisis situations faced by teams or organizations (Islam et al., 2021). The derived information was analyzed to be 3 themes; Theme D1: Influencing others to follow rapidly, Theme D2: Centralized-decentralized controls, and Theme D3: Being supportive, by 33, 20 and 29 participants respectively.

1) Theme D1: Influencing others to follow rapidly

This theme refers to the ability to achieve the expected results by changing behaviors and inspiring others to follow and take action rapidly in a crisis. It means crisis leaders can affect the character, behavior and development of other people. This is an important part of the meaning of leadership.

For 33 out of 33, participants indicated this leadership performance that influenced others to follow in the situation. There were two elements regarding this theme: persuasion and building trustworthiness.

Crisis leaders have the ability of crisis leadership in persuading others to follow (Lussier & Achua, 2015). No one declines their direction and plan.

This is also a skill including communication that affect others to follow. Also, they generate trust for people around crisis leaders to believe that they will do the right things. This also means they support information in working on crisis is that generates trustworthiness, reliability, validity, or credibility. Therefore, others perceive crisis leaders as persons who have reliability and credibility from their information and also backgrounds. This builds acceptance from the other team members who have different ideas.

As described in transformational leadership, they inspire people to achieve unexpected or remarkable results. It gives workers autonomy over specific jobs, as well as the authority to make decisions once they have been trained. This induces a positive change in the followers' attitudes and the organization as a whole (Bass & Riggio, 2006). Pillai (2013) emphasized the importance of transformational leadership in a crisis.

2) Theme D2: Centralized-Decentralized Controls

This theme refers to the unique way of crisis leaders can agilely decide to execute their full authority of controls, delegation the controllability to others, or both to enhance leadership and management performance of the team. They execute power and command on both styles of centralization and decentralization. In centralized controls, emerging crisis leaders take a command directly by themselves.

In contrast, in decentralized controls, formal decision-making power is distributed or delegated across multiple individuals or teams. In case of crisis leaders do not have a formal power, this decentralization means they asks others to help managing some parts of crisis management which only a crisis leader is not able to take control for a whole situation that the span of controls in the emerging crisis managerial organization have to be concerned and structured by agile decision-making of crisis management of crisis leaders.

For 20 out of 33, participants indicated this balancing control during the crisis management. There were two elements regarding this theme: command and delegation. Crisis leaders take an action in telling someone to do something which is directive that they expect the others to follow. At the same time, crisis leaders cannot do everything by themselves. They delegate power to someone else with trust to help and make a decision.

Boin and Hart (2003) argued the traditional belief that crisis leaders manage a crisis by only the centralization scheme. Their argument supported this study that crisis management also needs the effort of decentralization as they stated as “the operational-response level, centralization is near impossible, because many dynamic, situation-specific, and urgent problems arise simultaneously at different places and nodes in the response network” (p. 547).

Boin et al. (2005) mentioned that centralization in crisis can be a potential liability but actual crises always are different from prepared ones on which formal crisis management structures are predicated. They suggested that “protocols may turn out to be time consuming. Channels of centralization may lead to powerless or incapable agencies, bypassing and effectively neutralizing those that are actually capable of making a difference. As Weick (1988) observes: The danger in centralization and contraction of authority is that there may be a reduction in the level of competence directed at the problem [. . .] The person in authority is not necessarily the most competent person to deal with a crisis, so a contraction of authority leads either to less action or more confusion” (p. 14). Centralization of crisis operations provided policies that the staff ‘on the ground’ experienced them as insufficient or ineffective.

In the organizational theory aspect, some organizations are aware of these problems has led to pre-planned, formalized decentralization of authority for certain vital points or levels of crisis response (Boin et al., 2005). The ‘high-reliability organization’ theory of Roberts (1990) has adopted decentralization as a defining characteristic of safety culture in industries facing highly dynamic and technically complex crises. Operators on the ground who identify risk can call for an immediate stop of the production process (Perrow, 1984; N. F. Pidgeon, 1991; Reason, 2016; Roberts, Rousseau, & La Porte, 1994). In the research area of crisis leadership and management, Boin et al. (2013) stated that “crisis managers must figure out which systems should be switched off and which ones should be put on life support. This not only requires an intimate knowledge of complex systems, but also capacities for transboundary cooperation” (p. 84).

Various leadership concepts support this research finding. Directive leaders take responsibility for decision-making rather than collaborating

with their team or incorporating employee feedback. They tell their followers what needs to be done and how it needs to be done, rather than letting them make their own decisions or choose their own path for accomplishing tasks. It is consistent with many scholars analyzing that directive leadership style involves with leading in a crisis (Bowers et al., 2017; Post et al., 2022; Rico et al., 2022; Trainor & Velotti, 2013). These researchers also mentioned participative leadership comparing to directive leadership. Post et al. (2022) conducting randomized experiments on 72 crisis management teams and presented the finding as “participative leadership improves decision accuracy in unfamiliar emergencies, whereas directive leadership improves accuracy in familiar crises; directive leadership produces speedier decisions than participative leadership when the team is familiar with the crisis” (p. 692).

Agile leaders concern fast responsive and collaborative actions, sensitively adapting to the presence, embracing scenario planning, sharing information, delegating decision-makers, and unlocking people potential (Aftab et al., 2022; Çobanoğlu & Demir, 2022; B. Joiner & Josephs, 2007). Agile leaders set direction and never afraid to stand up and take charge, agile leaders have a clear sense of direction and communicate it with ease. They understand how organizations, teams and other constituents can respond to a changing industry. They see the big-picture vision and the path to getting there. Whereas traditional leaders focus on hierarchical systems, failure avoidance and retaining decision-making power.

Furthermore, the researcher found that Çobanoğlu and Demir (2022) studied 406 teachers to test hypotheses on crisis management in education. Their study presented “a moderate, positive, and significant relationship between crisis management, agile leadership, and organizational culture” (p. 92). Aftab et al. (2022) supported that agile leaders in a crisis can management followers to achieve a goal. Aftab et al. (2022) stated that “Agile leadership behaviors are positive supervisory behaviors that promote flexibility, adaptability, innovation, and creativity. Leaders’ social and communal sensitivity in times of crisis helps realize the importance of leadership agility within organizations” (p. 14). These abilities are associated with ambidexterity in leadership as Kustyadi and WIJAYANTI (2021) found in their study of micro-small-medium enterprises’ leadership agility.

3) Theme D3: Being supportive

This theme refers to the character of giving help or assistance, or to hold something or someone up. Crisis leaders provide the other with care, encouragement, and compassion, especially when they need it and get impacts of a crisis. For 29 out of 33, participants described their supports to the team in dealing with situation and caring of their team members' feelings and emotions under crisis impacts. There were four elements regarding this theme: participating with the team, comforting and complimenting the team, teaching and being open-minded for listening.

Crisis leaders join their team in taking actions in specific tasks. They participate them to do a task together for both physical and mental supports. This also helps to encourage the team to achieving the goal together. Secondly, they try to support the team members that also get the impact and have negative feeling emotion by making conversation or encouraging team to achieving the goal together. Also, crisis leaders are supportive which not only compliment and comfort others, but also teach and transfer their knowledge, experiences and skills to the team during participating them in actions. It includes teaching as the way to make them remember the mistake and act more conscious for the next time. Lastly, crisis leaders are open-minded to listen to problems, mistakes and difficulties of the team.

As a result, it is aligned with the essence of servant leadership. Servant leaders help their team members become leaders themselves by leading by example and providing their team with opportunities to grow and develop. They also find out what their employees' personal goals are and give them projects or more responsibilities to help them achieve those goals. Theoretically, servant leadership means leaders who emphasize increased service to others, apply a holistic approach to work, build a sense of community, and share the power in decision making (Greenleaf, 2002; Spears & Lawrence, 2002). Eva, Robin, Sendjaya, Van Dierendonck, and Liden (2019) recently conducted systematic review and stated that "Servant leadership is an (1) other-oriented approach to leadership (2) manifested through one-on-one prioritizing of follower individual needs and interests, (3) and outward reorienting of their concern for self towards concern for others within the organization and the larger community" (p. 114). Firestone and Firestone (2020b) analyzed and concluded that servant leadership is the most appropriate leadership

style in crises. Piorun, Raboin, Kilham, Meacham, and Okyere (2021) presented case study research of crisis in moving the library campus during the pandemic that the result from leaders who adopted servant leadership showed the applicability of this leadership style in achieving the mission.

Furthermore, the researcher found the relevance of the other leadership concepts. Transformational leadership is one that proposed by Kouzes and Posner (2002) and tested by Abu-Tineh, Khasawneh, and Omary (2009). It consists of five practices which are model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart, are aligned to what this study found from crisis leaders' interviews. Similarly, Avolio, Gardner, Walumbwa, Luthans, and May (2004) define that authentic leaders are deeply aware of how they think and behave and are perceived by others as being aware of their own and others' values and moral perspectives, knowledge, and strengths including aware of the context in which they operate. Authentic leaders also are confident, hopeful, optimistic, resilient, and of high moral character (Avolio & Gardner, 2005; Avolio, Gardner, et al., 2004).

Through the analysis of current research on transformational and authentic leaders in crisis (Celik, Akgemci, & Akyazi, 2016), it shows that both leadership styles involve developing a shared vision and encouraging the followers for the attainment of this vision. Another similarity between transformational and authentic leaders is that they both empower their followers and care about their individual needs. Therefore, leaders in both concepts might be able to navigate through the crisis with mutual collaboration with their followers. Also, authentic leaders demonstrate transparent values and emotions that result from their self-awareness, which allows them to act in an unbiased way when evaluating information and to place their ego aside. Celik et al. (2016) concluded that one can claim that authentic leaders are not easily deceived by disinformation especially during crisis situations. Thus, they can handle the crisis in a coldblooded manner and evaluate the options more objectively.

The research found that this study might respond to Celik et al. (2016)'s recommendation that asked for more empirical studies to support the similarity of transformational and authentic leadership that emerge in crisis situation. They stated that "Although there is plenty of research on leadership and crisis

management, research on transformational and authentic leadership during crisis still needs more attraction. Case studies involving transformational and authentic leaders are recommended. Cross-cultural empirical studies regarding post-modern leadership styles during crisis should be considered as well” (p. 206). As a result of this empirical study, the research agreed that crisis leadership phenomenon contained the phenomenon of authentic leadership as well.

5.2.1.5 Category E-Emerging Feelings during Actions

This category refers to the feedback emerging after crisis leaders start actions until a crisis is terminated. The derived information was analyzed to be 3 themes; Theme E1: Negative feelings in actions, Theme E2: Positive feelings with success, and Theme E3: Positive feeling with returns by 22, 32, and 15 participants respectively.

1) Theme E1: Negative feelings in actions

This theme refers to negative emotions that crisis leaders perceive feedbacks from various aspects during taking action and coordination.

For 22 out of 33, participants perceived this kind of bad feeling during taking action in solving a problem. There were four elements regarding this theme: anxiety, communication concerns, frustration and tiredness.

Crisis leaders feel unease during starting of actions. They wish the outcome were successful but still be worried during process. Also, it might cause crisis leaders to sweat, feel restless and tense, and have a rapid heartbeat as same as the moment when they firstly got impact of crisis. Furthermore, there is feeling of unease on communication that crisis leaders are going to send or already sent to others. Miscommunication or misperception of messages can cause problems.

This finding is consistent with literature by Madera and Smith (2009) that mentioned the negative emotion in sadness and anger of crisis leaders in crisis. Furthermore, they also studied the evaluation from others' perception. Nevertheless, it still presented the same phenomenon of crisis leadership when facing a crisis. Meisler, Vigoda-Gadot, and Drory (2013) and Shaver, Schwartz, Kirson, and O'connor (1987) emphasized and interested in the emotions of leaders during a crisis. They cited that Erika Hayes James et al. (2011) found that “leaders experience negative emotions, such as fear and anxiety, due to crisis events” (p. 112). Also, an

organizational crisis can increase the anxiety level of crisis leaders (Fein & Isaacson, 2009; Mitroff, 2004; Mitroff & Anagnos, 2001)

Not only anxiety, crisis leaders also feel annoyed or less confident because crisis leaders cannot achieve what they want. Also, it happens when the team cannot act as expectation. Some situations cause crisis leaders having a question to themselves why they have to do this while others do nothing. Mitroff (2004) discussed a crisis phenomenon with psychoanalysis in organizations as Gabriel (1999) stated that “.... a degree of paranoia helps to protect organizations...” (p. 209). Mitroff (2004) mentioned that the denial is a significant barrier to effective crisis management hence for breaking through it, “one first needs to find ways of magnifying potential crises without becoming paralyzed. To magnify fears without being overwhelmed by them is precisely why one needs pre-crisis, advanced psychological training” (p. 42).

Meisler, Drory, and Vigoda-Gadot (2020) examined hostility as a mediator of the relationship between perceptions of organizational politics (POP) and counterproductive work behavior (CWB). They found that POP was positively associated with hostility, as well with both forms of CWB on organizational and interpersonal aspects (O-CWB and I-CWB). They measured POP by using the six-item scale of Hochwarter et al. (2003) that the sample items include: “there is a lot of self-serving behavior going on. People do what’s best for them, not what’s best for the organization” (p. 1509). Therefore, this reflects that the conditions in crisis such as no one wants to help or fix a problem can cause CWB or negative emotions such as frustration or tiredness to crisis leaders. Nevertheless, this study found that these emotions just had emerged in the short time before they controlled and regulated themselves to keep going on to solve the crisis.

2) Theme E2: Positive feelings with success (Self-esteem)

This theme refers to positive emotions that crisis leaders perceive from the successful actions and the various outcomes. For 32 out of 33, participants also perceived this kind of good feeling during taking action in solving a problem. There were eight elements regarding this theme: satisfied with the success, relieved from stress, happy and proud with the success, work satisfaction, more

confident from the right decision making, valuable for organization and team, successful in keeping self-image, and successful in keeping an organizational image.

Crisis leaders are happy and proud about the successful action. This also includes proud of their problem-solving ideas. The success in crisis handlings makes crisis leaders increase their job satisfaction and love their work. They also have positive emotions that crisis leaders perceive from the successful actions and the various outcomes. They are happy because their work that facing crises motivate or engage them and makes them perceived the self-values. It also makes crisis leaders increase their confidence in the judgement and decision-making. Crisis leaders perceive their value in helping the organization to deal with a crisis and helping the team to accomplish a task.

Furthermore, crisis leaders have the feeling successful in maintaining their self-image. They can present their competency in solving a crisis or other problems. Also, there is perception of successful in maintaining the image of organization as the important thing that they can help organization. These findings of feeling are consistent with the concept of self-esteem (Orth & Robins, 2014). Self-esteem refers to an individual's subjective evaluation of his or her worth as a person (Donnellan et al., 2011; MacDonald, 2012). Importantly, self-esteem does not necessarily reflect a person's objective talents and abilities, or even how a person is evaluated by others. Moreover, self-esteem is commonly conceptualized as the "feeling that one is 'good enough,'" and consequently, individuals with high self-esteem do not necessarily believe they are superior to others (Donnellan, Trzesniewski, & Robins, 2011; MacDonald, 2012; Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004).

Additionally, crisis leaders feeling of ease. They alleviate or free from distress, anxiety or stress after successful actions. In this happening, Pyszczynski et al. (2004) referred to Terror Management Theory (Greenberg & Kosloff, 2008) in explaining that "why do people need self-esteem? is that self-esteem functions to shelter people from deeply rooted anxiety inherent in the human condition. Self-esteem is a protective shield designed to control the potential for terror that results from awareness of the horrifying possibility that we humans are merely

transient animals groping to survive in a meaningless universe, destined only to die and decay” (p. 436).

3) Theme E3: Positive feelings with returns

This theme refers to positive emotions that crisis leaders perceive from the returns as external motivation from others that they got from the successful actions. For 15 out of 33, participants added more information about the positive feeling that related to their self-interest. There were two elements regarding this theme: happy and proud with rewards and compliments, and relieved, happy and proud with being accepted and followed.

After getting the success, crisis leaders are happy and proud when they receive the rewards. Also, crisis leaders feel relieved, happy and proud when others in the team accepts them and their ideas. This is closely associated to the study on employee engagement in crisis management by Xu and Thomas (2011) and later salim Saji (2014) that found rewards and other factors such as perceived values are antecedences of employee engagement which cause organization citizenship behavior (OCB) in crisis responses.

5.2.1.6 Category F-Crisis Handling Learning and Development

This category refers to the crisis aspects of learning and results of them that crisis leaders receive during a crisis and have been developed after crisis termination. This can be seen as the outcomes of crisis leadership actions apart from the success in handling a crisis. The derived information was analyzed to be 3 themes; Theme F1: Crisis awareness, Theme F2: People-oriented learning and Theme F3: Post-crisis development, by 24, 5 and 17 participants respectively.

1) Theme F1: Crisis awareness

This theme refers to the awareness relating to a crisis and its nature that crisis leaders have learned from experiencing and taking actions in a crisis. For 24 out of 33, participants indicated this aspect of learning. There were three elements regarding this theme: learning the hardness, learning the solvability and learning the possibility of the future crisis. Crisis leaders perceive hardness and learn that this is a phenomenon of crisis, perceive solvability and learn that problems finally can have solutions, and be aware of possibility to face a crisis in their context. They feel that they are learning everything for the next crisis if it happens (Tanifuji, 2000).

2) Theme F2: People-oriented learning

This theme refers to the issues relating to crisis management activities that crisis leaders have learned during action about importance of people in supporting through various aspects. For 5 out of 33, participants recognized this kind of learning. There were two elements regarding this theme: learning importance of teamwork and learning importance of networking. When crisis emerges, crisis leaders learn the importance of the teamwork in helping each other to achieve goal and learn the importance of the network that they realize in benefits of knowing a lot of people (Kaylor, 2015).

3) Theme F3: Development

This theme refers to some aspects of development that crisis leaders are developed after taking themselves through a crisis. There are several ways that crisis leaders get the development for themselves by experiencing a crisis. For 17 out of 33, participants perceived this development. There were three elements regarding this theme: being adopted as a role model, development of thoughts and problem-solving, and networking development. There are outcomes related to the development. Firstly, it is development that crisis leaders become a role model to be adopted by others. The second one is the development of thinking and skills that can help to handle and manage a crisis. this will help them improve abilities to do something else. It is the opportunity in developing themselves. Crisis leaders find a chance to learn something new and then develop themselves. Thirdly, it is the development of new networking that crisis leaders derive during crisis management. It is the opportunity about the future network that crisis leaders find from emerging coordination and cooperation in crisis management (Kaylor, 2015; Scott & Webber, 2008).

These three themes above are consistent with interests of scholars who studied learning process, organizational learning, and development in crises (Antonacopoulou & Sheaffer, 2014; Lagadec, 1997; Lalonde, 2007; Moynihan, 2008; Veil, 2011; Wang, 2008). Examples of supporting literature were about mindful learning (Veil, 2011), networks learning (Moynihan, 2008), a learning in crisis (LiC) mode (Antonacopoulou & Sheaffer, 2014), developing organizational capability (Wang, 2008), and crisis management and organization development (Lalonde, 2007).

5.2.2 Discussion for RSQ 2: Internal Mechanism of Crisis Leadership

This section discussed RSQ2 as follows.

“What is the internal mechanism of crisis leadership?”

Grounded in this study, there were 9 categories of information that explained internal mechanisms that emerge inside crisis leadership: Category G: Brain-Body Instant Reactions, Category H: Mental Instant Reactions, Category I: Focus to Control, Category J: Reference to Control, Category K: Pause to Control, Category L: Strategic Crisis-related Intelligence, Category M: Heroism, Category N: Tough attributes, and Category O: Tactical attributes. These categories were generated from an understanding of their codes informed and analyzed by the researcher. Firstly, Category G to J present the internal mechanism when participants got the impacts from facing a crisis and how things inside emerged and be controlled before they started to take actions. Secondly, Category H to O present internal factors that were rationales and inside process for those actions they did in a crisis including what they normally are as their personal factors.

5.2.2.1 Category G – Brain-Body Instant Reactions

This category refers to things that happens as physical and neurological effects to crisis leaders' action. Neurological effects are structural, biochemical or electrical abnormalities in the brain, spinal cord or other nerves can result in a range of symptoms. They are activated after crisis leaders perceive a crisis and its potentials and predicted escalations. Neurological effects are not mental. Mental problems result from chemical in the brain meanwhile neurological problems are caused by physical impacts or damages to the nervous system (Ruderman et al., 2014). The derived information was analyzed to be 3 themes; Theme G1: Responsive action, Theme G2: Excitement and Theme G3: Effects of stress, by 31, 27, and 9 participants respectively.

1) Theme G1: Responsive action

This theme refers to the action that respond to a crisis influenced by mental functions after perceiving situations. There were automatic response, unresponsive, reactive response, and also more attentive response. For 32 out of 33, participants described their physical phenomena that occur by perceiving a crisis and the researcher can conclude in several ways. There were four occurrences

regarding this theme: involuntary responses (automaticity), surprise and startle reflex (unresponsive), reactive responses and attentive responses.

When facing a crisis, crisis leaders might have reactions without occupying the mind with the low-level details required, allowing it to become an automatic response pattern or habit which is involuntary and unconscious as a reflex action or a reactive response (Ajzen, 1991). It is usually the result of learning, repetition, and practice. Example are tasks carried out by muscle memory' often involve some degree of automaticity. An involuntary action is one that is unintentional. Reflex action includes an involuntary and almost instantaneous movement in feedback to a stimulus (Berger & Rae, 2012; Moors & De Houwer, 2006) which is one that is unintentional. Meanwhile, involuntary actions are the actions which are not controlled by our will such as breathing, reflex actions can be the sudden action under responsive and rapid control automatically in reacting to something but still contain intention with less consciousness as these actions emerge under critical situations (Ajzen, 1985, 2011; Kuhl & Beckmann, 2012; Shand, 1895).

Mostly crisis leaders are surprise and startle that become an immediate impact inducing a brief period of disorientation as well as short term psychomotor impairment which may well lead to task interruptions and/or a brief period of confusion as a crisis is unexpected which is hard and complex to deal with normal practices. If this happen, a period of time was required for reorientation and task resumption. Crisis leaders experience sudden exposure to intense stimulation that generates an involuntary physiological reflex which is similar to a flight/fight reaction with an emotional response component and a conditioned behavioral startle response (Martin, Murray, Bates, & Lee, 2015). This surprise or shock disrupts cognitive processing and can negatively influence an individual's decision making and problem-solving abilities. These surprised effects come with exclamation by crisis leaders as observed in the interview. There are many scholars studying this phenomenon in crisis and high-risk domains (Barnett, Wong, Westley, Adderley, & Smith, 2011; Bhangu, Bhangu, Stevenson, & Bowley, 2013; Ekman, Friesen, & Simons, 1985; Landman, Groen, Van Paassen, Bronkhorst, & Mulder, 2017; Martin, Murray, & Bates, 2012; Martin et al., 2015; Rivera, Talone, Boesser, Jentsch, & Yeh, 2014; Robinson, 1995).

Rivera et al. (2014) state that “startle is typically elicited by sudden exposure to intense stimulation that generates: (a) an involuntary physiological reflex, similar to a flight/fight reaction, with an emotional response component, and (b) a conditioned, behavioral startle response. The involuntary startle reflex is fast and involves the contraction of muscles (e.g., eye-blinks, head ducks, shoulders crouched up) to prepare the body for protection against adverse situations. The startle response includes the involuntary muscle contractions typical of the startle reflex, but also other physiological, emotional, and cognitive responses (e.g., stress-related enervation of the sympathetic nervous system, orientation of attention to the startling stimulus)” (p. 1047). Ekman et al. (1985) collected data from various scholars and mentioned that “all considered startle to be an emotion, related to the emotion of surprise” (p. 1416).

The startle reflex can be elicited through auditory, visual, or tactile stimuli, and has been found to have a fixed and short latency (i.e., time delay between a stimulation and a response), which always begins within 100 milliseconds or 1/10 of a second of a stimulus being sensed. In terms of duration, the reflex lasts less than one second for a mild response (duration of 0.3 seconds) and between one to one and a half second for a high-intensity response (Carlsen et al., 2008; Rivera et al., 2014). Additionally, the startle reflex is increased in situations where the individual’s arousal or stress level is at the extremes when both highly aroused such as when stressed, anxious, threatened, or intensely operating, and very low aroused such as when resting or drowsy (Larson, Ruffalo, Nietert, & Davidson, 2000).

Startle relates to surprise which is defined as a cognitive-emotional response to something unexpected, which results from a mismatch between one’s mental expectations and perceptions of one’s environment (Rivera et al., 2014). In contrast to startle which always happens as a response to the presence of a sudden high-intensity stimulus, surprise can occur by an unexpected stimulus or by the unexpected absence of a stimulus. Surprise can be a combination of physiological, cognitive, and behavioral responses, including increased heart rate, increased blood pressure, an inability to process information or recall memory, freezing, and loss of situation awareness (Bürki-Cohen, 2010). Although humans may experience startle and surprise together in certain situations, a surprise response can be experienced in

the total absence of a startle reflex. The element of surprise can also disappear in anticipation of a stimulus. For example, Ekman et al. (1985) found that when participants anticipated the exact moment in which an unexpected stimulus would occur, the element of surprise was eliminated. However, the startle reflex was still present, although response intensity was lower.

Furthermore, scholars described in the surprise literature focuses on schemas, which are defined as knowledge structures that play a role in comprehending events (Meyer et al., 1991). Normally, after an unexpected event, a cognitive response is produced in which the individual performs an appraisal of an unexpected situation that individuals can revise, correct, and extend a current schema in order to anticipate similar future deviating events, and react effectively (Horstmann, 2006; Meyer et al., 1997; Schützwohl, 1998).

The primary concern with surprises is that they generally interrupt an ongoing task. For example, in a study investigating the effects of surprise on action interruption, Horstmann (2006) found that a surprising event interrupted the continuous action of 78% of the participants. In that study, on average, the duration of the interruption lasted 995 milliseconds thus about one second. The length of an interruption can varies based on the magnitude of the schema-discrepant event. Therefore, the surprising event differs substantially from what was expected can impact the duration of the analysis of the event and produce a longer interruption duration than a startle reflex. For crisis, these phenomena also were mentioned in studying individuals under a crisis (Landman et al., 2017; Martin et al., 2015).

However, some crisis leaders are not startle or surprised but have sudden action with consciousness when facing a crisis, there is the sudden action consciously in response to something. It is an action taken as necessary reacting to the event quickly. Crisis leaders might react to situations through emerging emotions (Rumman, 2022) but not unconscious actions as involuntary responses or reflex actions.

On the other hand, some crisis leaders pay attention closely, listening carefully, and observant. This comes from that the challenge or stress makes them increase their level of situational awareness preparing to deal with problems. This type of responsive action is consistent with scholars in stress and coping (Roth &

Cohen, 1986). Roth and Cohen (1986) stated that “The study of stress and coping points to two concepts central to an understanding of the response to trauma: approach and avoidance. This pair of concepts refers to two basic modes of coping with stress. Approach and avoidance are simply metaphors for cognitive and emotional activity that is oriented either toward or away from threat. An approach-avoidance model of coping is presented in the context of contemporary theoretical approaches to coping” (p. 813).

2) Theme G2: Excitement

This theme refers to a feeling of eager enthusiasm. A crisis is stimulation causing crisis leaders are excited. For 27 out of 33, participants indicated this happening with themselves. There were two elements regarding this theme: fidgety (Behavioral excitement) and agitation (Physical excitement).

Crisis leaders make a reactive behavioral movement when getting the crisis impact. It often reflects discomfort and restlessness when crisis leaders suddenly get the impact of crisis. Essangri et al. (2021) also found the medical student had restless and fidgety in crisis of pandemic as same as Jeong, Gong, and Zhong (2023) who studied on crisis and creativity of employees that explored fidgety and nervous. When facing a crisis, there is a mental condition that affects the whole body. Crisis leaders physically experience of stomach sensations (“butterflies in the stomach”), trembling, weakness, and sweaty palms in response to a state of fear or excitement. These are the body's complex responses. This includes alertness that seems to be positive. Scholars also mentioned agitation in crisis facing and stress effects (Darling & Young, 2018; Magers, 2007; Wright-Reid, 2018).

Theme G3: Effects of stress

This theme refers to symptoms and other effects that the stress from a crisis affect crisis leaders once they are experiencing it. For 9 out of 33, participants recognized their conditions at that time in getting crisis impacts. There were two elements regarding this theme: symptoms of stress and limited capability.

When crisis leaders face the situation, there are various effects that cause by stress especially to health conditions such as aches and pains, chest pain or a feeling like your heart is racing, exhaustion or trouble sleeping, headaches, dizziness or shaking, high blood pressure, muscle tension or jaw clenching, stomach

or digestive problems. In some aspects, stress limits performance in actions such as planning and communication. However, crisis leaders experience this in a short time before coping with it.

This research finding is consistent with (Janka et al., 2015a; Weisæth, Knudsen Jr, & Tønnessen, 2002). Kowalski-Trakofler, Vaught, and Scharf (2003) suggested the ‘interplay’ between stress and judgment that explains how people reach the choices they make in emergencies upon assessment of nature of threat, degree of available resources and information, timeframe, and control and communication efforts. These factors can be physical and mental stressors.

Nevertheless, Janka et al. (2015a) systematically analyzed the stress in crisis managers. Their study found that crisis managers increased behavioral and psychophysiological adjustment to the extreme demands of their missions. Dhabhar (2014) emphasized that “although the concept of stress has earned a bad reputation, it is important to recognize that the adaptive purpose of a physiological stress response is to promote survival during fight or flight” (p. 193).

5.2.2.2 Category H-Mental Instant Reactions

This category refers to thoughts and emotions that rapid emerge due to the impacts of a crisis. There are both positive and negative aspects as the inner contents of crisis leaders (Ruderman et al., 2014). Also, emotions might trigger or disrupt expected behaviors. Nevertheless, arousal is an automatized physiological and psychological reaction that triggers flight (hyper-arousal), freeze (hypo-arousal) and fight activations by different positive and negative intense and ambivalent stress emotions that affect crisis leadership (Mitroff, 2007; James et al., 2011) which has to manage them to survival of individuals and groups (Lazarus, 1991).

The derived information was analyzed to be 3 themes; Theme H1: Thought reactions, Theme H2: Positive emotional reactions and Theme H3: Negative emotional reactions, by 29, 8, and 32 participants respectively.

1) Theme H1: Thought reactions

This theme refers to reactive thinking that emerges in crisis leaders' mind when they perceive the crisis. For 29 out of 33, participants informed the thought that reacted to situation. There were five elements regarding this theme: (Thinking) Time is limited, (Thinking) no one is going to take an action, (Thinking) I

must take an action, being curious why it happened and thinking repeatedly (Fixation).

When facing a crisis, crisis leaders are concerned that no one will act or lead people to solve a crisis. This happens because a crisis is unexpected and normally outside routine operations. Other people might not be ready and know how to do it. Crisis leaders assume that everyone is being unsure about responsibilities. Also, there is an inner dialogue in the mind of crisis leaders telling them that they must take action. Something has to be reacted and solved under the situation. This part of thought reaction is closely associated with a part of OCB as crisis leaders have altruism. Kuknor and Bhattacharya (2021) mentioned this in the time of crisis that “altruism is demonstrated when an employee helps their peers in the smooth functioning of work” (p. 97).

Focusing on the crisis, crisis leaders are concerned about the limitation of time. There is little time to handle and manage a crisis. Otherwise, it will generate an impact or escalate to be a more severe crisis. Furthermore, there is an inner dialogue in the mind of crisis leaders wondering why things happen. They are curious to know the reasons that will help them to get clear understanding of the emerging situation. However, this can cause them to fixate to the emerging event. Their decision-making loop is repetitively activated. Even if they start to find a solution or act already, they still keep thinking. This is also the effects of anxiety on their mind having a sense of dread, or fearing the worst. In this case, it relates to the stress that they keep feeling like the world is speeding up or slowing down that they cannot stop worrying or that bad things will happen if you stop worrying.

For discussion, all of information that this study found during data collection presented that participants’ thoughts were relevant to their situation awareness (Endsley, 1995) that is consistent with many scholars that emphasized situation awareness in managing a crisis (Marcus et al., 2020; Sapateiro & Antunes, 2009; Van de Walle, Brugghehans, & Comes, 2016). All of these research studies aimed for improving situation awareness in responding to a crisis. Marcus et al. (2020) attempted to connect the situation awareness as the analytic side as perceive, orient, and predict, with the action side as decide, operationalize, and communicate (POC-DOC). These two parts adopted the concept of Boyd’s OODA (observe, orient,

decide, and act) loop since 1976 that was used in the military rapid decision-making cycle method (Boyd, 2018; Von Lubitz, Beakley, & Patricelli, 2008).

Endsley (1995) defines situation awareness as the perception of the elements in the environment, the comprehension of their meaning and the projection of their status in the near future. Thus, there are three levels that the success of the higher depending on the success of the lower levels (Endsley, 1995; Wickens, 2008).

2) Theme H2: Positive emotional reactions

This theme refers to the emotion that emerges when crisis leaders firstly got the impact of crisis positively. These emotions come with the readiness to fight with the situation. For 8 out of 33, participants recognized the emotion at that time in this way. There were two elements regarding this theme: being challenged and having a can-do attitude.

When facing a crisis, crisis leaders feel challenging. It motivates them to take that challenge. Crisis leaders have a positive attitude that they can go through it. Also, they are confident that they can handle a problem or achieve a plan to fix a situation. Kuklan (1988) mentioned that people involved with crisis can perceive the situation as a challenge. Furthermore, an effect on goal orientation was also mentioned as stated as “under great stress, the decision-maker becomes increasingly oriented to achieving short-term goals, often at the expense of long-range outcomes” (p. 184).

This can be discussed as the self-efficacy (Bandura, 1982) that can relate to crisis leaders as the finding of this study. Bandura (2006) mentioned that self- efficacy is not only a predictor of behaviors, but also broader effects including positive emotion that this study found as “efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically. They also influence the courses of action people choose to pursue, the challenges and goals they set for themselves and their commitment to them, how much effort they put forth in given endeavors, the outcomes they expect their efforts to produce, how long they persevere in the face of obstacles, their resilience to adversity, the quality of their emotional life and how much stress and depression they experience in coping with taxing

environmental demands, and the life choices they make and the accomplishments they realize” (p. 309).

3) Theme H3: Negative emotion reactions

This theme refers to the emotion that emerges when crisis leaders firstly got the impact of crisis negatively. These emotions come with the effects and barriers that crisis leaders have to overcome and control them. For 28 out of 33, participants recognized the emotion at that time in this way. There were five elements regarding this theme: being surprised, being fearful and worried, being discouraged, need for a pre-action pause and being frustrated and angry.

Crisis leaders have feelings of fear and worry when facing a crisis. Crisis leaders predict to the escalation of the situation and its impacts. This can make them scared and afraid or worried with the imagination of worse case scenarios. Besides worrying, a crisis can cause crisis leaders feels heavy, stuck, sad, and even hopeless sometimes. Your enthusiasm and optimism have been replaced by doubt, disappointed and negativity. However, this emerges in the short moment when perceiving the situation. Some crisis leaders need to stop for a while before continuing to think and act. This comes from when they feel discouraged, task-overloaded, or overwhelming.

On the other hand, in some situations and some factors, crisis leader might feel upset, irritated and unsuccessful. Crisis leaders can be angry and annoyed about why a crisis happen including feeling these things to themselves, not from someone else or external situation. Frustration is a slow, steady response, but anger is quick and aggressive (Kim & Cameron, 2011). Scholars such as Jin, Pang, and Cameron (2007) also studied the emotion-driven conceptualization in crisis. In a crisis, Lazarus (1991a) mentioned that there are predominantly six negative emotions: anger, fright, anxiety, guilt, shame, and sadness; based upon different appraisal driven by different rationales.

5.2.2.3 Category I-Focus to Control

This category refers to crisis leaders' controls of instant effects by enhancing more focus to accept and exploit them for responses. This category and next two category are consistent with Ruderman et al. (2014) proposed the conscious engagement in the model of leadership beyond competencies. Ruderman et al. (2014)

stated that “conscious engagement also allows for the possibility of shifting the response. Once we understand our circuitry and have identified our inner contents, we can begin to recognize how our minds influence our behaviors and actions. The next step is to learn how to break down unwanted automatic reactions, emotional cycles, and thought spirals to actively redirect our minds in ways that will help support desired behaviors and responses” (p. 10).

As conscious engagement is the ability to observe, modify, and regulate mental processes, Ruderman et al. (2014) mentioned that “conscious efforts can increase feelings of reward and positivity. While we cannot change our past experiences, we can learn to change the influence they have on us, our relationships, and our behavior through conscious awareness and active engagement with our inner world” (p. 10). According to Roth and Cohen (1986)’s literature, this conscious engagement reflects the approach concept of stress coping rather than avoidance concept.

This finding also relates to meaning of mental agility in learning agility from four of them: people agility, results agility, mental agility, and change agility (Lombardo & Eichinger, 2000). Meanwhile De Meuse (2022) presented the importance of learning agility in leadership, J. S. Williams and Nowack (2022) studied learning agility for leadership in neuroscience. In emphasizing on mental agility, J. S. Williams and Nowack (2022) explains that

“an individual embraces complexity, examines problems in unique and unusual ways, is inquisitive, and can make fresh connections between different concepts. Mentally agile individuals are self-reflective and self-determined. They adopt a play-to-win approach instead of playing out of fear of losing. Through mental toughness, they intentionally place themselves outside of their comfort zones to address work and life demands. Through understanding and managing one’s emotions, mentally agile individuals are better able to shift more rapidly from feeling ill at ease to eventually becoming more comfortable. Through curiosity, research, and exploration, they can increase knowledge and create future options. This openness to change and alternative possibilities (one of the Big Five personality factors) helps the learning agile to learn more rapidly and increase their “ability to pick up on things easily” (p. 293).

The explanation of conscious engagement was related to self-regulation. Schmeichel (2007) defined self-regulation as any attempt of an individual to override or alter thoughts, feelings, or behaviors. Self-regulation and executive control are highly conceptual overlapping meanwhile relevant theories and research were mainly separate.

Schmeichel (2007) suggested the relative to research on self-regulation which is research on executive control. It focused intensively on identifying the specific processes that enable the flexible modification of thought and behavior. For example, Shimamura (2000) proposed the dynamic filtering model that four executive control processes: selecting, maintaining, updating, and rerouting, are under the self-regulation of behavior. Firstly, selecting is focusing attention on particular subsets of the mental or physical environment. Maintaining is keeping goals or other information active in working memory over time. Updating is manipulating the contents of working memory and finally rerouting is switching from one task or mental set to another. It is similar to Miyake et al. (2000) that studied factor analytic revealing three moderately distinct executive control functions: inhibiting prepotent responses, updating working memory, and set shifting or rerouting.

Nevertheless, there is an issue of self-regulation and executive control that was studied by Bratslavsky, Muraven, and Tice (1998) and found that the self-regulation in resisting temptation can later undermine task persistence which was involved with executive control as well. Thus, it shows that both self-regulation and task persistence, as associated to this research finding in Category I, J, and K as focus to control, reference to control, and pause to control respectively, need functions and workload in executive control process. Schmeichel (2007) mentioned that “task persistence probably required several executive control processes, such as focusing attention, inhibiting the impulse to give up, and updating working memory to meet the requirements of the task. (p. 242)”.

The derived information was analyzed to be 2 themes; Theme I1: Situational engagement and Theme I2: Deliberate consciousness by 29 and 28 participants respectively.

1) Theme I1: Situational engagement

This theme refers to crisis leaders control themselves by focusing current situations and keeping moving on to avoid various emerging emotions. This enhances the energy of thought by facing situation but avoiding distraction. For 29 out of 33, participants indicated this focus in controlling themselves. There were three elements regarding this theme: keeping moving and concentration, focusing solutions and planning and writing down their thoughts.

Crisis leaders control themselves by keep going on what they are doing but might be slow but gradually continue on. They pay more attention on the situation and the action they do. Also, they focus on planning a solution. This makes them avoid from perceived impacts and stress. Furthermore, some have responses and self-control by starting to write down the ideas that might be notes about situation and plans. It is a way to make a mindfulness in focusing things or acts rather than generating many things in their mind that can create negative emotions.

Roth and Cohen (1986) presented that this as the approach concept as it is “attention to threatening elements of perceptual field” (p. 814) in coping formulation of selective attention (Kahneman, 1973), “orientation toward stressor” in coping formulation of attention (Mullen & Suls, 1982), and “curiosity about the experience, taking self-responsibility, positive view of episode, incorporation of episode into the person's life” (p. 814) in coping formulation of integration (McGlashan, Levy, & Carpenter, 1975).

This finding again is associate with human conditions of fight or flight (Iserson et al., 2008). Furthermore, Bracha (2004) explained sequences of these conditions when humans face with unexpected or stressful situations like a crisis as starting from considering to freeze, flight, fight, and until fright.

2) Theme I2: Deliberate consciousness

This theme refers to crisis leaders control themselves by facing with emerging situation and considering more details to recognize the level of crisis. This creates the awareness that they have to encounter. For 28 out of 33, participants indicated their various aspects of awareness in controlling themselves. There were three elements regarding this theme: being consequence-conscious, being time-conscious, and being aware of the responsibility.

Crisis leaders control themselves by thinking about the consequential impact. It includes the effects on organization, team, and personal issues. This forces them to keep doing things rather than being stuck with the emotion, startle (shock) or hesitation. Besides, thinking about the time constraint drives them to keep doing things as well. Involving with situation awareness (Endsley, 1995), crisis leaders are also aware of their responsibilities for others, organizations or themselves. This forces them to move on because of stakeholders' impact related to their jobs.

According to relevant literature, this is also consistent with the approach concept of stress coping that Roth and Cohen (1986) stated. Roth and Cohen (1986) mentioned this as the approach concept as “having accurate information about what to expect regarding a threatening situation” (p. 814) in coping formulation of accurate expectations (Johnson & Leventhal, 1974), “vigilance, anxiety, and orientation toward threat” (p. 814) in coping formulation of monitoring (Miller & Mangan, 1983), and “integration of threat into the self-system” (p. 814) in coping formulation of encounter (Shontz, 1975). This finding also is associated with the concept of self-responsibility. Maier (2019) defined that it means “the accountability of an individual or collective actor for actions that have already been performed or are going to be performed in the future” (p. 27). Besides crisis leaders are conscious about situations, they further think of their responsibilities.

5.2.2.4 Category J-Reference to Control

This category refers to crisis leaders' controls of instant effects by referencing other things to reduce them for responses. According to relevant literature, this reflects the approach concept of stress coping (Roth & Cohen, 1986). Also, this type of control is closely aligned with one of executive control functions that Schmeichel (2007) stated. It is updating or manipulating the content of working memory. Crisis leaders control themselves by bringing things inside to be direction to keep moving on to deal with crisis. However, Schmeichel (2007) mentioned an effect of it as “it was plausible that memory updating would be particularly likely to deplete executive capacity, insofar as updating requires more executive control than maintenance does” (p. 242) because it needs transformative cognitive operations

whereas it is no need for maintaining function in executive control process (Schmeichel, 2007).

The derived information was analyzed to be 2 themes; Theme J1: Building up confidence and Theme J2: Adhering to learning and experiences, by 23 and 12 participants respectively.

1) Theme J1: Building up confidence

This theme refers to crisis leaders control themselves by building up confidence from someone's advices, their own competencies, or the value of the right thing to do. The built confident helps crisis leaders to control themselves from instant negative impacts of a crisis.

For 23 out of 33, participants informed these activities to control themselves passing through a crisis's first impact. There were three elements regarding this theme: seeking advice, being self-confident and "Doing the right things."

Crisis leaders control themselves by seeking to help or advice. This helps them feel more confident and secured. Then, they can control impacted body and thoughts. For the second way, crisis leaders control themselves by generating or bringing the self-confidence that can come from the perceived competence they have. Furthermore, this study also found that they recognized the authenticity as 'doing the right things' and letting it leads and drives their actions.

Roth and Cohen (1986) mentioned this as the approach concept as "relative readiness to perceive threatening stimuli" (p. 814) in coping formulation of perceptual vigilance (Bruner & Postman, 1947) and "alertness; self-responsibility; thorough, active searching; seeking knowledge; careful appraisal and planning" (p. 814) in coping formulation of vigilance (Cohen & Lazarus, 1973).

Sayegh et al. (2004) proposed the model explaining that intuitive decision process mainly comes from perception and interpretation of event, explicit and tacit knowledge, and emotional response. Meanwhile tacit knowledge is generated by cognitive schema, emotional response comes from emotional memory and efficacy. All of these factors causing intuitive decision process are developed by experiences, education and training. For leadership in crisis, a factor of efficacy underlying emotional response is a key. Sayegh et al. (2004) mentioned emotional

intelligence which is the ability to recognize emotional states of oneself and others causes the sense of belief and confidence in individuals to solve a problem and regulate behaviors. Therefore, this supports that various conditions in a context of crisis are factors in emergence of leadership in a crisis.

2) Theme J2: Adhering to learning and experiences

This theme refers to crisis leaders control themselves by following the procedures or trained practices. They used these steps to guide them rather than the interfered thought. For 12 out of 33, participants informed about this. There were two elements regarding this theme: recalling knowledge and experiences and following on procedures and training.

Crisis leaders control themselves by recalling knowledge and experiences that guide to way to solve a problem and make them feel there is a way out of a crisis. This helps to reduce stress too as crisis leaders do not think too much and they avoid negative emotions by following on procedures and a trained practice. This one is also consistent with Roth and Cohen (1986) pointing the concepts of avoidance and approach in coping stress that they mentioned about the approach as “alertness; self-responsibility; thorough, active searching; seeking knowledge; careful appraisal and planning” (p. 814) (Cohen & Lazarus, 1973).

5.2.2.5 Category K-Pause to Control

This category refers to crisis leaders' controls of instant effects by pausing them for a while before responses. Ruderman et al. (2014) mentioned that “conscious engagement allows individuals to choose a more mindful response to difficult situations. It gives leaders the ability to “hit the pause button” in a heated situation or take in complex, discordant information more accurately” (p. 10). The derived information was analyzed to be 2 themes; Theme K1: Mindfulness generation and Theme K2: Stress relief, by 24 and 5 participants respectively.

1) Theme K1: Mindfulness generation

This theme refers to crisis leaders control themselves by being mindful or practice mindfulness to stay at the present moment. It creates readiness for further actions. For 24 out of 33, participants indicated this practice when facing a crisis. There were two elements regarding this theme: being mindful and taking a breather.

Crisis leaders control themselves by generating a mindfulness directly. This means they keep calm by being conscious and aware of surrounding things as the present moment through sensation by passing emotion from non-judgmental perception. Also, they might decide to take a short break from activities in order to relax. This can reenergize themselves and clear their mind from stress. Roth and Cohen (1986) mentioned this as the avoidance concept as “inattention to selected (e.g., threatening) elements of the perceptual field” in coping formulation of selective inattention (Kahneman, 1973), and “preferences for unsignaled shock, even when avoidance possible” in coping formulation of non-vigilant (Averill & Rosenn, 1972). Ruderman et al. (2014) stated that “learning to become aware and identify sensations, emotions, and thought processes helps us to manage them. By observing reactions to different stimuli, it is possible to learn what triggers an emotion, a pattern of thinking, or a physiological change. The experiences we chose can help to shape the brain” (p. 1).

Furthermore, as this study found crisis leaders partly have a style of servant leadership. This is supported by Zada, Zada, Khan, et al. (2022) that they studied servant leadership in controlling psychological distress in a crisis. They found work engagement mediates the relationship between servant leadership and psychological distress meanwhile mindfulness also moderates this direct relationship.

2) Theme K2: Stress relief

This theme refers to the other aspect in controlling themselves of crisis leaders. The ways to relieve the stress also can help to make them get readiness in bouncing back to deal with situation and effectively control themselves under crises. However, this method takes time to do it hence this only the phenomenon happened with the crisis leaders in the type of crisis that is a long-term period. Stress does not only suddenly provide impacts but continuously affect the crisis leaders.

For 5 out of 33, participants informed this way that help them to get through the crisis facing. There were two elements regarding this theme: talking and escaping.

Crisis leaders control themselves from the impact of stress by talking to or counselling with someone. This helps to relax their emotion and relieve

the overwhelming situation before bouncing back to fight. Janka et al. (2015a) emphasized the importance of conservation for physical and mental health. It improves stress tolerance that might reduce vulnerability to stress-related performance decline.

In another way, crisis leaders might control themselves from stress by escaping from the situation. This means they turn to do something else for a while to relieve their stress. Roth and Cohen (1986) mentioned this as the avoidance concept as “seeking distraction, relaxing, denying threat, practicing detachment and intellectualization” (p. 814) in coping formulation of blunting (Miller & Mangan, 1983), and “orientation away from stressor and one's reactions to it” in coping formulation of rejection (Mullen & Suls, 1982),

5.2.2.6 Category L-Strategic Crisis-related Intelligence

This category refers to the ability to learn or understand or to deal with new or trying situations specifically in a crisis strategically. They include three types which are practical intelligence, creative intelligence, and analytical intelligence. Also, it is the ability to apply knowledge, experiences and skills to manipulate one's environment or to think abstractly as needed for success and surviving in a crisis. This intelligence in crises is strategical because it is used for carefully assessing and planning to achieve a goal or win the situation. Intelligence is defined as a general mental capability involving reasoning, problem solving, planning, abstract thinking, complex idea comprehension, and learning from experience (Gottfredson, 1997). Cognitive intelligence is referred to as human mental ability and understanding developed through thinking, experiences and senses. It is the ability to generate knowledge by using existing information. It also includes other intellectual functions such as attention, learning, memory, judgment and reasoning.

The derived information was analyzed to be 4 themes; Theme L1: Vigilance, Theme L2: Sense-making capability, Theme L3: Situation awareness, and Theme L4: Adaptability and applicability of learning by 28, 30, 32, and 31 participants respectively.

1) Theme L1: Vigilance

This theme refers to the action, quality or state of keeping careful watch, being wakeful and alertness for possible danger or difficulties. It is the

process of paying close and continuous or sustained attention to detail. Vigilance can also be thought of as the extent of readiness to detect, or the likelihood of detecting, a stimulus that is imperative to normal operations. It works as an early warning system of crisis leaders. Both vigilance and strategic vigilance were mentioned in literature on crisis leadership and management (Garcia, 2006; Obeidat, 2022).

For 28 out of 33, participants indicated this trait that allow them to anticipate the event or its consequences to consider and plan the action early. There were two elements regarding this theme: ability to detect signals and readiness.

Crisis leaders have ability to detect things that were a threat for operations. It is also about observing somethings that might not be observed as a risk but having a potential. This ability includes the curiosity because when things are detected and observed, crisis leaders are curious to know more for the further crisis leaders' processes. Also, they are ready to face a situation that can emerge as readiness, response and recovery are foundation of disaster and crisis handling protocols (Farazmand, 2009). Crisis leaders are aware of the possibilities of unexpected circumstances in their context. If things happen, they can react suddenly based on what is going on around them to help getting through the situation without formal plans. As it is a crisis which is an unexpected event, it is just the readiness of crisis leaders. It is hard to be called as preparation because such preparation cannot cover all cases of crisis that provides a stressful impact and non-routine problems.

Rumman (2022) investigated the impact of strategic vigilance and crisis management on business continuity management during the COVID-19 pandemic by emphasizing the business arena's disruptions. Henceforth, integrating vigilance business operations activities is substantial to enhance business-continuity management and risk management. Halawi, Wang, and Hunt III (2020) pointed that leadership, resilience, and vigilance were emerged under the pandemic crisis for the healthcare domain.

Also, readiness was focused by some scholars. Al-Asfour, Charkasova, Rajasekar, and Kentiba (2022) mentioned that no one had predicted the challenging effects of pandemic crisis on higher education institutions in 2020. Their study conducted a cross-sectional study design with a quantitative approach in community colleges, minority-serving institutions, and mainstream higher education

institutions. Then, they found a significant positive association was found between all of the servant leadership behaviors and leaders' readiness to deal with the crisis. Furthermore, all servant leadership behaviors including altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship, significantly predict the officials' level of readiness to the pandemic. This line of inquiry informs a new direction in the theory related to servant leadership and crisis leadership readiness.

Maritsa and Kalemis (2020) attempted to study reasons supporting the way societies respond to protect health, adapt in shifted work conditions and stay resilient throughout the crisis. They mentioned that leadership readiness is formed by human connectivity and their exchanged knowledge. Also, the crisis challenges of the existing systems enhance leadership and organization in knowledge sharing, effective practices and readiness.

2) Theme L2: Sense-making capability

This theme refers to the ability to create and update maps of a complex environment to act more effectively in it. It involves pulling together disparate views to create a plausible understanding of the surrounding complexity and then testing that understanding to refine it or, if necessary, abandon it and start over (Weick, 1995a). Crisis leaders give meaning to their facing situations by attempting to make sense of an ambiguous situation. This capability relates to situation awareness.

For 30 out of 33, participants indicated this capability. There were two elements regarding this theme: ability to foresee and ability to assess, analyze, and generate options.

Crisis leaders have ability in understanding of the perceived situations and changes. The sensitivity and thinking process of crisis leaders tend to react stimuli. This helps them to link the emerging changes to the relevant risk that causes predictability as an intuition about the becoming crisis and impacts. It associates with the ability in knowing what unnecessary information is and then the necessary inputs are selected to attention. This were the starting point of the comprehensive interpretation (Endsley, 1995). Then, this includes scanning the relevant factors to the analysis process. The external and internal environment of team

and organization are considered and brought to the mind before crisis leaders are able to create an appropriate solution or several courses of actions to be made a decision.

Existing literature on crisis leadership agreed with this study finding the sensemaking was one of internal mechanism of crisis leadership (Boin & Hart, 2003; Boin et al., 2013; Boin et al., 2005; E. Stern, 2013). By this view on leadership, it can be consistent with the concept of learning agility too. J. S. Williams and Nowack (2022) studied learning agility for leadership in neuroscience. In learning agility (De Meuse, Dai, Swisher, Eichinger, & Lombardo, 2012), there is a mental agility in learning agility that means an individual embraces complexity, examines problems in unique and unusual ways, is inquisitive, and can make fresh connections between different concepts. Mentally agile individuals are self-reflective and self-determined. They adopt a play-to-win approach instead of playing out of fear of losing (Wilson & Wilson, 2004).

3) Theme L3: Situation awareness

This theme refers to understanding of an environment, its elements, and how it changes with respect to time or other factors. Situational awareness is important for effective decision making in many environments (Endsley, 1995). Crisis leaders recognize and understand a situation or environment and identify possible threats which are crisis incubation to be a crisis.

For 32 out of 33, participants described various dimensions of awareness that support this crisis-related intelligence in planning strategies for problem-solving. There were five elements regarding this theme: time awareness, impact awareness, punishment awareness, need-help awareness and stakeholder awareness.

Crisis leaders understand the concept of time. They know that the availability of time is enough or not. This means they realize the feasibility by considering time and potential workload. They are also aware of the potential impacts of an event. They know the potential result if the event is escalated. This includes they realize the relevant stakeholders that get the consequences. Furthermore, the concern of situations and impacts that related to responsibility in the team and organization is about when crisis leaders think of punishment if the crisis could not be solved. The other important awareness is need-help awareness that crisis leaders know their own

capability or organizational capability. They realize the more needs from team supports, manpower, and external helps respectively that lead to further cooperate, coordinate and collaborate for helps without hesitation.

Crisis leaders have stakeholder awareness that relates to impact awareness. They are aware of factors related to stakeholders. They understand capabilities, feeling, rationales, and situations of stakeholders that they are both a group getting impacts and a group of cooperators and supporters. Also, environmental situations cause crisis leaders understand surrounding factors including threats, opportunities, consequences, and perception of stakeholders. W. B. Joiner and Josephs (2006) stated that “This level of situational awareness allows you to understand any issue or organizational unit in the context of its relationships with its larger environment” (p. 82). This is also associated with leadership agility on context-setting agility (B. Joiner & Josephs, 2007; W. B. Joiner & Josephs, 2006). Also, this finding is closely associated with social astute in political skills (Ferris et al., 2007).

Eid et al. (2023) also supported that “an understanding of how situation awareness in individuals, teams and systems are impacted and evolve are important in developing local crisis response capacities, teamwork, and training” (p. 4). Garcia (2006) studied the situational awareness in effective crisis leadership and pointed the lesson learnt for crisis leaders as the following.

“effective leaders demonstrate situational awareness in a crisis, grasping the significance of the underlying event and its likely impact on the company and its stakeholders. They also demonstrate self-awareness, and the ability to redirect their attention and energy to mobilize a quick response and thereby protect the company’s enterprise value. More than 2,500 years ago the Chinese philosopher-warrior Sun Tzu identified the need for both self-awareness and situational awareness in navigating through perilous times. If you know others and know yourself, you will not be imperiled in a hundred battles; if you do not know others but know yourself, you win one and you lose one; if you do not know others and do not know yourself, you will be imperiled in every single battle” (p. 8).

4) Theme L4: Adaptability and applicability of learning

This theme refers to knowledge and past experiences including skills that has practical applications for crisis leaders to apply in a new situation such

a facing crisis. It is a process that crisis leader acquired information from sources before becoming as knowledge. They not only see what they have as knowledge and experiences, but also see that they have learned. This happens when available knowledge and experiences are used to made decisions and perform actions in a crisis. Crisis leaders recall them and apply to the situation. It might be gained from completing one task to solve a different problem but related. Furthermore, a crisis is unexpected hence most of solutions are creative ways or innovation to solve a crisis as Lombardo and Eichinger (2000) initially defined, learning agility is “the willingness and ability to learn new competencies to perform under first-time, tough, or different conditions” (p. 323).

For 31 out of 33, participants indicated about utilizing learning, experiences and knowledge. There were four elements regarding this theme: knowledge, work experience and skills, past life experience and skills and creative and innovative ideas for problem-solving.

Crisis leaders apply formal knowledge from education and training including the understanding of situation derived from working in the specific area and domain. This comes from training, practices, normal and emergency procedures, book reading, or any result of their learning. They have experiences from working in the specific area and domain that enhance skills, problem-solving and judgment in practices.

Furthermore, crisis leaders have skills, practical knowledge and understandings that they get from their life experiences. This comes from family, childhood, workplace or other personal life issues. As a result of knowledge and experience, crisis leaders adopt, adapt and generate these pieces of knowledge to be new idea through creativity in designing solution to handle situations. As a crisis is unusual event, the practices used to fix a problem have to be newly designed or creatively applied from the normal practices. This comes from creativity as a cognitive function that the is ability to generate, create, or discover new ideas, solutions, and possibilities (Simonton, 2000). It helps crisis leaders have abilities in problem-solving that include thinking, skills and attitude in facing a crisis. Crisis leaders have ability to understanding the characteristics of crisis and know how to create an appropriate attitude in the situation and how to create choices of action.

This finding is closely consistent with transfer of learning. Perkins and Salomon (1992) mentioned that it occurs when learning in one context enhances performance which is positive transfer, or undermines a related performance in another context which is negative transfer. In transfer of training, it includes near transfer to closely related contexts and performances, and also far transfer to different contexts and performances (Royer, 1979).

The finding is aligned with Boet et al. (2014) suggestion that emphasized the transfer of learning is important for crisis management and leader. In aspect of training and preparedness, they found the impact from the understanding of transfer of learning in the crisis management and response training to the expected outcomes.

5.2.2.7 Category M-Heroism

This category refers to the character of heroic conduct especially as exhibited in fulfilling a high purpose or attaining a noble end. It is great acts of bravery when facing a danger. Heroism consists of putting others first, even at own peril. Crisis leaders have or display the character or attributes of a hero which are, for example, extraordinarily daredevil, altruistic, determined, or others in order to save people lives and save some situations.

Franco (2016) emphasized that leadership, tactical behaviors, and heroism are needed and interrelated in crises. Scholars who adopt the objective approach to defining heroism tend to converge on several core ideas. First, heroism involves taking one or more actions that are deemed to be morally good, or that are directed toward serving a noble principle or the greater good. Second, these good actions must be exceptional, not minor or ordinary. Third, heroism involves making a significant sacrifice. Fourth, heroism involves taking a great risk (Franco, 2016). Franco, Blau, and Zimbardo (2011) thus offer this definition: “Heroism is the willingness to sacrifice or take risks on behalf of others or in defense of a moral cause” (p. 113) and “heroism represents the ideal of citizens transforming civic virtue into the highest form of civic action, accepting either physical peril or social sacrifice” (p. 99).

Several codes were included in this category to reflect heroism as the acts for others. However, the next categories will present tough attributes and tactical

attributes. Meanwhile the tough aspect of the finding was compared to grit by Duckworth, Peterson, Matthews, and Kelly (2007) as perseverance and passion that was widely adopted by many scholars, this category as heroism and the latter category of tactical attributes can share some themes to combine crossing categories to be what Sudbrink (2016) initiated the soft grit as G.R.I.T. as she proposed that “the softer characteristics of GRIT—generosity, respect, integrity and truth—create a healthy toughness and perseverance in our leadership that involves the team rather than leaving them in the dust. GRIT provides the foundation that inspires people to step up, take ownership, create solutions, and make things happen—with sustainable results” (p. 58).

The derived information was analyzed to be 5 themes; Theme M1: Altruism, Theme M2: Kindness, Theme M3: Courage, Theme M4: Action-oriented personality and Theme M5: Integrity by 24, 23, 28, 29 and 30 participants respectively.

1) Theme M1: Altruism

This theme refers to voluntary behavior that benefits another individual at a cost to oneself. It is willingness of crisis leaders driving them to do things that bring advantages to others even if it is not their duty.

For 24 out of 33, participants indicated this characteristic in leading when the crisis emerged. There were three elements regarding this theme: belief that no one is going to take action, voluntary and sacrifice.

Crisis leaders believe that no one is going to take action. This comes from various reasons such as time constraints, unexpected issues, others' ability, or others' awareness that it is a gap to make crisis leaders have to rapidly fulfil in the situation. Crisis leaders have a characteristic that they are willing to do without someone or something force them to do. They intend to act by themselves. Furthermore, they help others or achieve the goal even they have to lose something such as time, energy, and own risk in handling a crisis. In this crisis context, the goal is to handle a crisis that causes impacts to many people. Therefore, crisis leaders sacrifice themselves for others that will get the direct and indirect consequences.

Franco et al. (2011) conducted the study for a conceptual analysis and differentiation between heroic action and altruism. They found there are

differences between heroism and altruism in the quantitative study. Nevertheless, their qualitative data presented some relationship between these two concepts. They provided some examples of information such as “altruism you are helping others out of morality and unselfishness. Heroism is the same except in more extreme situations such as saving a life,” “altruism seems to involve helping a group of people directly—there is a sacrifice, but it is more sharing what you have than sacrificing yourself,” and “while heroic acts are always in some sense altruistic, an act of altruism isn’t always heroic” (p. 108). Therefore, by their research data, it seems to be that altruism is a subset of heroism.

Altruism is related to organizational citizenship behavior (OCB) by Organ (1988), as defined as ‘the good soldier syndrome’, that means individual behaviors that are beneficial to the organization but not directly recognized by the formal reward system (Emami, Alizadeh, Nazari, & Darvishi, 2012). According to Organ (1988), OCB is defined as work-related behaviors that are discretionary, not related to the formal organizational reward system, and, in aggregate, promote the effective functioning of the organization. In addition, OCB extends beyond the performance indicators required by an organization in a formal job description. Organ (1988) identified five OCB dimensions namely altruism (helping specific others); civic virtue (keeping up with important matters within the organization); conscientiousness (compliance with norms); courtesy (consulting others before taking action); and sportsmanship (not complaining about trivial matters). However, Organ (1997) further classified the OCB dimensions into three parts: helping, courtesy, and conscientiousness.

Specifically, Halverson, Holladay, Kazama, and Quinones (2004) studied self-sacrificial behavior and situational crisis and found that Leaders were perceived particularly well when exhibiting self-sacrificial behavior in times of crisis. Self-sacrifice is also performed when leaders give up their own rewards, abstaining from using power for personal benefit (Choi & Mai-Dalton, 1998). Furthermore, numerous empirical tests of these theories and models helped to explain that these types of challenging situations including crises are causes affecting the leadership style (Lussier & Achua, 2015). Therefore, this might conclude that a crisis makes leadership emerges during those situations as Fener and Cevik (2015) stated

that “a leader is born when there comes the need for crisis management. Leadership emerges at this moment and lightens the path, creates sources, guides the way, takes decisions, initiates and operates actions” (p. 698). In crises and chaos, people need one who perform leadership with power, self-confidence, accessibility, and ability to motivate them to struggle with situations (Fener & Cevik, 2015).

2) Theme M2: Kindness

This theme refers to the quality of being friendly, considerate and generous. In other words, a kind person thinks about other people’s feelings and like to help others. Affection, gentleness, and care are some qualities that go hand in hand with kindness. There are various ways to practice kindness such as words, gestures, or helping someone (Hamrick, 2002). This finding is highly associated with prosocial behaviors (T. W. Buchanan & Preston, 2014; Kraft-Todd & Rand, 2019; Penner, Dovidio, Piliavin, & Schroeder, 2005). In a crisis, there is the state that crisis leaders and the others are connected and it drives crisis leaders to act in a crisis. This social connection included their loyalty to higher-ups and their citizenship to the team (Steilen & Stone-Johnson, 2023).

Crisis leaders might also have generosity that means the quality of being selfless and willing to give freely. It is about being understanding and not selfish. It is willingness to give more help without expecting anything return. It refers to a habit that crisis leaders always would like to help others. They are concern the others' needs and problems. They even help giving more than people needs (Iredale & van Vugt, 2012). When a crisis comes, it causes impacts to others that need helps from the crisis leaders who have goodwill which is helpful and cooperative feeling and attitude directed toward helping others. This also drives the crisis leaders’ action in helping people. Steilen and Stone-Johnson (2023) and Tomkins and Simpson (2015) studied this as caring leadership in a crisis that is associated with the social connection. The key difference between kindness and generosity is that kindness refers to being helpful to and considerate of other people whereas generosity basically refers to the action of giving something, either abstract or concrete (Exline, Lisan, & Lisan, 2012; Fryburg, Ureles, Myrick, Carpentier, & Oliver, 2021). For 23 out of 33, participants indicated these personalities that consisted in their crisis leadership. There were two elements regarding this theme: loyalty and caring the team and others.

Crisis leaders have the feeling that they would like to help their boss. This comes from the relationship in the workplace that builds loyalty and makes them desire to help by solving a crisis. They know that their higher-up is a person who gets the full impact of crisis. Also, they care the team members and others who are getting impacts. It comes from when crisis leaders want help the team or crisis victims to deal with a crisis. They also are aware of the impact that each individual team member will get.

Kindness or generosity is one of practices of the servant leadership that emerges in crises (Patterson, 2003; Wong, Davey, & Church, 2007). Piorun et al. (2021) conducted research on servant leadership under the crisis situation that “emphasizes increased service to others, a holistic approach to work, building a sense of community, and sharing the power in decision making” (Piorun et al., 2021; Spears & Lawrence, 2002). Furthermore, Zada, Zada, Khan, et al. (2022) presented that servant leaders can control their psychological distress under a crisis. For supporting this research finding, Aziz (2021) also found that individuals were empowered by their higher-ups increased their loyalty to work. By this perspective, it was consistent with Balkundi and Kilduff (2006) that they focused on social network approach to leadership, based on the Social Network Theory. Also, it is associated with the Self Determination Theory as intrinsic motivation comes competence, autonomy, and relatedness as they are three basic psychological needs (Ryan & Deci, 2000). Therefore, this relatedness drives crisis leaders.

3) Theme M3: Courage

This theme refers to the ability to control fear and to be willing to deal with something that is dangerous, difficult, or unpleasant. The difficulties include the situations in coordinating others and working in the team. For 28 out of 33, participants indicated this ability and action that presented this characteristic. There were two elements regarding this theme: bravery and assertiveness.

Crisis leaders perform mental or moral strength to face danger, fear, or difficulty. When a crisis emerges, they have a mindset to fight and not giving up. Some scholars supported this finding as they also studied that leadership in crisis contains tactical behaviors and heroism (Franco, 2016; Franco et al., 2011; Lateef et al., 2022). Furthermore, crisis leaders respect themselves in standing up for their

interest and express their thought which means solution in facing with crisis. Meanwhile, the others might do nothing or there are various opinions under complex situations. When crisis leaders are confident in their thought, they assert to action or provide suggestion to do something with the situation. Chong (2004) discussed on the previous literature and stated that “they have to response to the crisis decisively with courage, determination, commitment, dignity, and perseverance” (p. 43).

Assertiveness also was found in this aspect and consistent with D. R. Ames and Flynn (2007), and D. Ames (2009)’s studies focusing on the level of leadership assertiveness and effectiveness, Butt and Zahid (2015) defined it as “healthy and desirable behavior for all people who interact in a group situation insofar as it militates against personal powerlessness and can result in personal empowerment and ultimately benefit the group, or workplace as a whole” (p. 219).

4) Theme M4: Action-oriented personality

This theme refers to ones who are willing or likely to take practical action to deal with a problem or situation. Crisis leaders like to get things done and they tend to be hands-on person. While their output may not be perfect, they keep things moving along, and a lot gets done in a relatively short period of time. For 29 out of 33, participants indicated this personality. There were four elements regarding this theme: leading by example, self-reliance, agility and pragmatism.

Crisis leaders would like to take an action or take a lead in the situation because they want others or team take their action as an example. This might affect others' motivation. Crisis leaders rely on themselves rather than others. Therefore, they believe in themselves, they tend to take action by themselves in many situations (Emerson & Wulf, 1909). Secondly, crisis leaders have ability to move, think, and understand quickly and easily. This speed then causes them to react by themselves because it is the fastest responses in the situation after their quick thought. Laufer et al. (2018) also pointed that action-oriented behaviors are quickly action, highly responsive, and hands-on, and must have agility.

Crisis leaders are pragmatism (Peirce, 1905) that they are action-oriented and focus on reaching a goal. For the real-world problems such a crisis, a pragmatist has an approach as taking things as they come rather than focusing on theoretical approach. Therefore, they tend to act responsively and not spending

much time to think or let someone else do. Mumford, Antes, Caughron, and Friedrich (2008) analyzed that “pragmatic leaders relied on expertise in problem solving, whereas expertise was less important to charismatic leaders. Moreover, pragmatics tended to employ logical appeals in communication and rely on rational influence tactics. Charismatic and ideological leaders, in contrast, tended not to employ rational influence tactics and logical appeals. Instead, they relied on emotional appeals to followers. Ideological and charismatic leaders, as expected, differed with respect to leader–member relationships with ideological leaders, but not charismatic leaders, evidencing shared direction of the group” (p. 147). M. Thomas and Rowland (2014) emphasized that “pragmatism is based on the premise that actions and ideas are judged by practical implementation rather than theory this seemed a rational position.” (p. 103).

Bedell-Avers, Hunter, Angie, Eubanks, and Mumford (2009)’s literature related to leadership supports this study. They mentioned that a pragmatic leader does not rely on emotional appeals but focuses on rational arguments and persuasion tactics to motivate followers. Therefore, Peirce (1905) mentioned that when comparing pragmatic leaders to charismatic or ideological leaders, pragmatists are willing to delegate decision responsibility and ownership to followers providing both motivation and autonomy if they have highly skills and well connection including assisting them directly to achieve a goal rather than transform a large group. Von Schiller (2004) proposed that pragmatism is a maintained balance between actions that meet one’s own desires and the actions that meet the needs of others and society. The first is responsibilities that are socially valued such as grace, compassion, supporting the development of others, genuineness, kindness and the second is authenticity in one’s own behaviors towards others.

It is consistent with the Sousa and Van Dierendonck (2017) ‘s study through a three-way moderation model based on a sample of 232 people working in a diverse range of companies on the servant leadership. Sousa and Van Dierendonck (2017) found empirical support and a better understanding of the interplay between the action-oriented behaviors and the moral virtue of humility of servant leadership. Kabangut'se (2022) mentioned the case of crisis leadership who had transforming, inspiring and action-oriented leadership. Sense-making in crisis

entails developing not only a picture of what is happening, but also an action-oriented understanding of the implications of the situation (Brennan & Stern, 2017).

5) Theme M5: Integrity

This theme refers to the quality and the practice of being honest and showing a consistent and uncompromising adherence to strong moral and ethical principles and values. For 30 out of 33, participants indicated this quality for being a crisis leader. There were four elements regarding this theme: moral, responsibility, dignity and sincerity. Crisis leaders' own principles regarding right and wrong. Morals are what you believe to be right and wrong especially how they should act and treat other people. Moral individuals hold high principles for proper conduct. They are responsible. They recognize their relevance of emerging situation or tend to include themselves with the situation. Simola (2003) was interested in ethics in crisis management and integrity of leadership and mentioned that "Schwartz (2000) examined the relationship between leadership integrity and corporate crises, and argued that ethics should be at the center, rather than the periphery, of strategy" (p. 352). Recently, Yeo and Jeon (2022) also presented the conceptual framework proposing ethical-political leadership in managing a crisis.

Responsibility means that the state or fact of being responsible, answerable, or accountable for something within one's power, control, or management such as job functions at work. Furthermore, crisis leaders have dignity which is the quality of being worthy, honored, or esteemed. They have a sense of pride in themselves or self-respect. Additionally, they are sincerely open and truthful. Their actions to solve a crisis are free from pretense, deceit, or hypocrisy. They are seriously genuine in achieving a goal.

Therefore, there is the virtue of crisis leaders in actions and communications in accordance with the entirety of their feelings, beliefs, thoughts, and desires in a manner that is honest and genuine to help others in a crisis. It refers to the quality of being open and truthful. Crisis leaders are honest and genuine. They keep their word and express their gratefulness for what others do for them. Integrity was found relating to crisis leadership by various scholars (Firestone & Firestone, 2020b; Marshall, Roache, & Moody-Marshall, 2020; Prewitt & Weil, 2014; Urick, Carpenter, & Eckert, 2021). This was one of characteristics that Sudbrink (2016)

proposed the softer GRIT (generosity, respect, integrity and truth) to balance with toughness from Duckworth et al. (2007)'s grit. It also relates to political skills on social astute (Ferris, Perrewé, Anthony, & Gilmore, 2016) and apparent sincerity (Munyon, Summers, Thompson, & Ferris, 2015).

Schimschal and Lomas (2019)'s research results on grit and positive leadership showed that gritty leaders have a higher capacity for positive leadership as hypothesized on their positively correlation. Cameron (2012) defines positive leadership as “the ways in which leaders enable positively deviant performance, foster an affirmative orientation in organizations, and engender a focus on virtuousness and the best of the human condition” (p. 2) that links to positive psychology discipline such as a goal theory, positivity and meaningful work. Its strategies are to enable performance on positive climate, positive relationships, positive communication, and positive meaning (Cameron, Quinn, & Caldwell, 2017; Schimschal & Lomas, 2019).

5.2.2.8 Category N-Tough attributes (Grit)

This category refers to attributes which are elements of crisis leaders related to the toughness. It means the willpower and maintaining the motivation to achieve a goal whether crisis leaders face obstacles or disappointments. From the study finding, crisis leaders demonstrated their toughness or mental toughness in the situation. This is consistent with scholars mentioned this characteristic in crisis leadership (Edmondson & Chamorro-Premuzic, 2021; Losty & Bailey, 2021; Tarker, 2021). The researcher named this as a category and various themes as attributes reflect this phenomenal mechanism.

Good leadership have the ability to dispense with denial quickly and face into the problems with vigilance and pragmatism Garcia (2006). Garcia (2006) mentioned that “with particularly bad crises facing them, good leaders also define reality, set direction, and inspire people to move forward. Just think of Guiliani after 9/11 or Churchill during World War II. Denial does not exactly come to mind – a forthright, calm, fierce boldness does. Effective leaders demonstrate this forthright, calm, and fierce boldness early. They see crisis response not as an interruption in their stewardship of a company, but as the test of that stewardship” (p. 8).

Aligning with this study finding on tough attributes, Sudbrink (2016) stated that “In my experience working with thousands of leaders over numerous years, many of them have had the traditional characteristic of “grit”: the toughness, the tenacity, and the perseverance” (p. 57). Duckworth et al. (2007) defined “grit as perseverance and passion for long-term goals. Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress. The gritty individual approaches achievement as a marathon; his or her advantage is stamina. Whereas disappointment or boredom signals to others that it is time to change trajectory and cut losses, the gritty individual stays the course” (p. 1088). The derived information was analyzed to be 3 themes; Theme N1: Tenacity, Theme N2: Resilience and Theme N3: Growth mindset, by 27, 28 and 22 participants respectively.

1) Theme N1: Tenacity

This theme refers to the quality displayed by someone who will not quit and keeps trying until they reach their goal. Crisis leaders are very determined that they have the determination to continue what they are doing. There were scholars finding the tenacity in studies of crisis leadership in education and medicine domains (Baruch, Singh, Halliday, & Hammond, 2021; McLeod & Dulsky, 2021; Shah, Mostafa, & Malik, 2020; L. Smith & Riley, 2012). For 27 out of 33, participants explained this quality in putting tough efforts to move forward to the objective. There were four elements regarding this theme: patience, diligence, perseverance and commitment (Do the best).

Crisis are patient. They have ability to accept, wait for, or tolerate problems or impacts from situation even suffering without complaint. Crisis leaders keep doing things responding to emerging situations even they feel suffered from a crisis impact. Patience was found in various studies that support this study (Baruch et al., 2021; Gigliotti, 2020; Glotzbecker, 2022; S. Wilson & Newstead, 2022). Crisis leaders are also diligent which is to steady, earnest, and energetic effort of crisis leaders. They are careful and hardworking in solving a crisis. This research result supports various studies of crisis leadership that mentioned diligence and diligent actions (Connolly, 2020; Forster et al., 2020; Morrow, 2020; Rameshan, 2021).

Furthermore, perseverance of crisis leadership refers to continued effort to do or achieve something despite difficulties, failure, or opposition that crisis leaders perform in a crisis in achieving success. Scholars presented that perseverance was a factors in crisis responses and management (Firestone & Firestone, 2020a; Huggins, Lemiale, & Prasanna, 2022; Mo, Han, & Fu, 2011). Crisis leaders are dedicated to an activity aiming for the future. Also, it means when crisis leaders have the act of binding themselves intellectually or emotionally to a course of action until achieving a goal.

Commitment was mentioned as it was in crisis leadership (T. W. Christensen, 2009; Nesse & Stensaker, 2022; Riggio & Newstead, 2023). Maitlis and Sonenshein (2010) suggested necessity of commitment in moving forward as “tenacious commitment to even the wrong plan provides a foundation for acting that is vital to keep people moving forward, constructing new meanings, and ultimately averting a more dangerous crisis” (p. 562). Additionally, this study found that the finding is closely related to learning agility as it is relevant to mental toughness (Losty & Bailey, 2021). Williams and Nowack (2022) mentioned that individuals who have mental agility can “build mental toughness, tolerance for ambiguity, and coping with uncomfortable demands because of their ability to recognize their emotions and feelings as they experience them in new and different situations” (p. 293).

2) Theme N2: Resilience

This theme refers to is the ability to withstand adversity and bounce back from difficult. Resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands (J. S. Williams & Nowack, 2022).

Herrman et al. (2011) explained the meaning of resilience as “positive adaptation, or the ability to maintain or regain mental health, despite experiencing adversity. Definitions have evolved as scientific knowledge has increased. Resilience is studied by researchers from diverse disciplines, including psychology, psychiatry, sociology, and more recently, biological disciplines, including genetics, epigenetics, endocrinology, and neuroscience” (p. 259). There were many scholars mentioned resilience in crisis leadership studies (Dale Oen,

Svihus, Solberg, Harris, & Eid, 2022; DuBrin, 2013; McLeod & Dulskey, 2021; Riggio & Newstead, 2023; E. K. Stern & Saathoff, 2012; Urick et al., 2021). For 28 out of 33, participants indicated these resilient attributes. There were four elements regarding this theme: "never give up" attitude/ bouncing back, positive attitude, instinct, intuition, and improvisation, and development-oriented person.

Crisis leaders have "never give up" attitude and have ability to bound back. When they fall down, they never give up and they think that every problem can have a solution. Even they got the impact from unexpected situation, it can cause them surprised just a moment before they get back on track to continue solving a problem. Their positive attitude refers to a mindset that helps to see the bright side of life or recognize opportunities when crisis leaders try to maintain a positive thinking in controlling their feeling and emotions. Even a crisis provides a negative impact, crisis leaders have to take it as a challenge or things to do.

Even scholars mentioned that crisis leaders should adopt a pessimistic mindset, Monehin and Diers-Lawson (2022) argued and conducted the study that senior-leaders in multinational companies responsible for managing employees in an average of 70 countries each and with extensive crisis leadership experience reflect on their own experiences during crises. Their finding indicated that optimism is a critical trait in successful crisis leadership connecting to positive outcomes for the teams and organizations.

Furthermore, crisis leaders have a feeling or reaction based on an instinctive emotional response rather than considered thought that it might come from their past experience by informal learning. Some mentioned the instinct that they explained it relating to the intuition. Crisis leaders also have an intuition and gut feeling in responding to a situation or a signal that will escalate to be a crisis. It also means a way of behaving, thinking, or feeling that is not learned. It is a natural desire or tendency that makes crisis leaders want to act in a particular way rapidly. Therefore, crisis leaders might have both. Instinct is a feeling or reaction based on a person's past experiences. Intuition, on the other hand, is a feeling or reaction based on a person's gut feeling. Intuition involves with decision making of crisis leadership (Chekijian, Hertelendy, McNulty, & Ciottone, 2022; L. Smith & Riley, 2012).

Scholars also found gut instinct or gut feeling in crisis leaders' decision making (Chekijian et al., 2022; Dale Oen et al., 2022).

In emergence of leadership, a decision-making process is also a linkage from influences of unexpected and difficult situations initiating behavioral outcomes of individuals during crises. Sayegh et al. (2004) were interested in an intuitive decision process during crises that they focused on the role of emotion. Those emotions such as fear, anxiety, hope and regret, force individuals to shift decision-making paradigms from tradition or systematicity to alternative models of choice because time does not allow a careful thought through a rational approach. Therefore, the intuitive approach comes from when emotions activate an adaptive function in uncertainty by minimizing past fears but exaggerating future fear from present situations (Ubel & Loewenstein, 1997).

This also includes improvisation which is the ability to create and implement a new or an unplanned solution in the face of an unexpected problem or change. It is often seen as a spontaneous, intuitive, creative problem-solving behavior that mostly happens "on the fly." It is also consistent with Oscarsson and Danielsson (2018) finding the practice of improvisation from the research on social services. They found that "[participants] succeeded by identifying improvised ways to handle the situation, such as consulting staff from other housing sites and solving problems any way they could. (p. 231).

Boin et al. (2005) mentioned that "crises have the nasty habit of rendering plans and structures irrelevant. When uncertainty leads to bewilderment, both on the ground and in the crisis center, the crisis response does not resemble a neatly delineated process of operational and strategic decision making. Situational imperatives require intense cooperation and improvisation, especially in highly volatile conditions where there is non-negotiable time pressure" (p. 55).

Additionally, crisis leaders are development-oriented persons. They have a desire on developing their work and organization so-called development-oriented leadership (Haake et al., 2022). They have developmental learning that try to facilitate every day learning to be the development and improvement of themselves, team and organization. Muenjohn et al. (2018) and Heide and Simonsson (2019)

investigated crisis leadership through development-oriented perspective as this study found from the inquiry.

3) Theme N3: Growth mindset

This theme refers to persons who believe that their success depends on time and effort. People with a growth mindset feel their skills and intelligence can be improved with effort and persistence. Crisis leaders see opportunities instead of obstacles, choosing to challenge themselves to learn more rather than sticking in their comfort zone.

Alpi (2023) and Blount (2021) suggested that growth mindset relates to crisis leadership ability and development. C. S. Dweck (2006) mentioned that growth mindset is based on the belief that you can cultivate qualities based on your efforts, strategies, and help from others. Overall people with a growth mindset believe that everyone can change, grow, and develop their leadership through experience (C. Dweck, 2016; Yeager & Dweck, 2020).

For 22 out of 33, participants indicated this mindset. There were three elements regarding this theme: self-efficacy and can-do attitude, recognizing own leadership competence and seeking challenges/ adventurous.

Crisis leaders have self-efficacy and can-do attitude. It means they accept and trust themselves and have a sense of control in the situation. Crisis leaders know their competencies that can apply to deal with a crisis. They have the strong, positive belief that they have the capacity and the skills to achieve goals (Bandura, 1982). Specifically, they know their leadership that can lead people to actions in a crisis. Furthermore, crisis leaders love to be challenged or take on their own challenges. They know that they grow best by pushing themselves embracing challenges as self-directed learning. Challenges motivate, interest and engage them and fulfil pleasure of the overcoming. They are adventurous and willing to take risks and try new ideas including proving themselves in their performance. Crisis leaders perceive these challenges as learning as well to improve themselves. Regarding a crisis, Kuklan (1988) mentioned that people involved with crisis can perceive the situation as a challenge. Furthermore, effects on goal orientation were also mentioned as stated as “under great stress, the decision-maker becomes increasingly oriented to achieving short-term goals, often at the expense of long-range outcomes” (p. 184).

Bandura (2006) mentioned that self-efficacy is not only a predictor of behaviors, but also broader effects including positive emotion that this study found as “efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically. They also influence the courses of action people choose to pursue, the challenges and goals they set for themselves and their commitment to them, how much effort they put forth in given endeavors, the outcomes they expect their efforts to produce, how long they persevere in the face of obstacles, their resilience to adversity, the quality of their emotional life and how much stress and depression they experience in coping with taxing environmental demands, and the life choices they make and the accomplishments they realize” (p. 309). Perceived competence is one of internal factors for crisis leadership as literature showed (Madera & Smith, 2009; Mao & Macik-Frey). Furthermore, this is one of three basic psychological needs under the Self-Determination Theory that Ryan and Deci (2000) proposed autonomy, competence, and relatedness as psychological needs regarding intrinsic motivation under a macro theory as the Self-Determination Theory.

This finding about a challenge seeker also relates to learning agility. J. S. Williams and Nowack (2022) studied learning agility in leadership through the neuroscience lens. They overviewed learning agility as it is “a complex, multifaceted construct that encompasses behavioral preferences and skills most associated with rapidly learning from experience and applying that learning to adapt to new, different, and distinctive challenges” (p. 292). Lombardo and Eichinger (2000) initially defined, learning agility is “the willingness and ability to learn new competencies to perform under first-time, tough, or different conditions” (p. 323).

This is closely associated with the concept of learning agility that (Lombardo & Eichinger, 2000) originally defined it as “the willingness and ability to learn new competencies in order to perform under first-time, tough, or different conditions” (p. 323). This issue is also consisting with change agility that individuals respond to change, continuously explore new options and solutions, and focus on change efforts. Openness to change promotes unlearning and relearning that enhance performance over time. They have some control over change and the ability to deploy effective coping strategies (self-efficacy) that cause adaptability with

adversity and challenge. J. S. Williams and Nowack (2022) described as change agile as resilience which is the ability to bounce back emotionally and physically in the face of adversity and have a cognitive predisposition of hardiness that they perceive work and life change as a challenge instead of a threat, successfully enhancing their change agility (Nowack & Niemirowski, 2021).

Furthermore, De Meuse (2022) supported this as stated in leadership study referring various scholars that “it is proposed that leadership may have a g-factor [general intelligence factor]. The g-factor for leadership could be learning agility. Research has found leaders who are learning agile are much more likely to perform well than those supervisors, managers, and executives who are not. This is not to say that learning agility is the only factor important for successful leadership. As will be discussed a little later in this article, there are several personal attributes that influence leader success. However, it is suggested that learning agility might be the most important” (p. 216).

5.2.2.9 Category O-Tactical attributes (GRIT)

This category refers to attributes that play a tactical role in building healthy relationships, managing conflicts, and working collaboratively with others in achieving a strategic goal. Crisis leaders have this as a people skill to support situational awareness and enhances their ability to get a job done. Meanwhile the strategic aspect of crisis leaders focuses on output as the results they and the business want to achieve, then establishing a plan or series of plans, processes, and systems to reach the goals or results, the tactical aspect focuses on input which is the elements or work that go into that plan to make it happen.

Crisis leaders have this as people skills and political skills to support situational awareness and enhances their ability to get a job done. Franco (2016) emphasized that leadership, tactical behaviors, and heroism are needed and interrelated in crises. The derived information was analyzed to be 3 themes; Theme O1: Interpersonal intelligence and habits, Theme O2: Communication ability and Theme O3: Political intelligence and ability, by 28, 21, and 32 participants respectively.

1) Theme O1: Interpersonal intelligence and habits

This theme refers to attributes that play a crucial and tactical role in building healthy relationships, managing conflicts, and working collaboratively with others. Crisis leaders have this as a people skill to support situational awareness and enhances their ability to get a job done. Interpersonal intelligence is in the multiple intelligence, Gardner and Hatch (1989) proposed interpersonal intelligence as “capacities to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people” (p. 6). For 28 out of 33, participants indicated about attributes that were interpersonal that helped to reach a goal. There were five elements regarding this theme: empathy, social intelligence and skills, being communicative, humility and courtesy.

Various scholars emphasized the need of empathy in communication (Barton, 2008; Hardee, Platt, & Kasper, 2005; Schoofs, Claeys, De Waele, & Cauberghe, 2019; Schoofs, Fannes, & Claeys, 2022). Empathy in crisis leaders means practices of being attentive and responsive to others' input during conversation. Listening empathically entails making an emotional connection with the other person and finding similarities between their experience and your own so you can give a more heartfelt response (Karelaia & Van der Heyden, 2020; Liu, Iles, & Herovic, 2020). Coombs (2007a) mentioned that “expressions of concern help to lessen reputational damage and to reduce financial losses. Experimental studies by Coombs and Holladay (1996) and by Dean (2004) found that organizations did experience less reputational damage when an expression of concern is offered verses a response lacking an expression of concern” (p. 5-6).

Crisis leaders have social intelligence and skills which are ability to understand and manage interpersonal relationships. It is not technical knowledge but ability to understand, and act on, the feelings, thoughts, and behaviors of other people. Also, crisis leaders have a social skill which helps to facilitate interaction and communication with others. Mossa-Basha et al. (2021)'s study in the healthcare agreed with this research finding. In studying adaptive principle of leadership in crisis for quick decision-making, rapid reviews and process modifications, Mossa-Basha et al. (2021) found that behavioral competencies are necessary for effective leadership including social intelligence, team-building, and

collaborative skills as needed as technical competencies. Hackman and Johnson (2013) also emphasized the need of social intelligence in leadership.

Linking social intelligence to leaders' political skills, Ahmad, Ishaq, and Raza (2023) mentioned that social astuteness is closely related to social intelligence that enhances crisis management. Social astuteness is the skill to observe and accurately comprehend others and keenly attune to divers social situation (Shi & Chen, 2012). Political skills includes social astuteness, savvy and positioning (Mintzberg, 1983). Interpersonal influence also was found in political skills (Munyon et al., 2015). Kihlstrom and Cantor (2000) studied meanings and measurement of social intelligence. Thorndike and Stein (1937) stated that "by social intelligence is meant the ability to understand and manage men and women, boys and girls - to act wisely in human relations" (p. 228). Moss and Hunt (1927) defined social intelligence as the "ability to get along with others" (p. 108). Vernon (1933) provided the most detailed definition of social intelligence as the "ability to get along with people in general, social technique or ease in society, knowledge of social matters, susceptibility to stimuli from other members of a group, as well as insight into the temporary moods or underlying personality traits of strangers" (p. 44).

Furthermore, this study also found that crisis leaders are communicative as they like to share information to other. They have readiness to communicate both in their job and personal life. Daly and Moolenar (2011) stated that "leaders' perceptions and schemas of social networks are important as those cognitions affect leaders' behavior and ultimately organizational outcomes. A leader's cognitive schema of the importance of friendship and advice is often congruent with the ties they form within a network" (p.3).

Crisis leaders have humility that they are not too proud about themselves or not believing and being over-confident that they are important or better than other people. Humility and humbleness are quite similar but have some differences. Participants performed humility rather than humbleness. Meanwhile humbleness is a sense of low regard for oneself and modesty in avoiding arrogance and downplaying their abilities and success, humility means that individuals understanding their strengths and weaknesses in appreciating the contributions of others whether personal or professional aspect. Scholars also found the emphasis of

humility in the studies of crisis leadership (Karelaia & Van der Heyden, 2020; Liu et al., 2020).

Crisis leaders have courtesy in showing of politeness in crisis leaders' attitude and behavior toward others. In the case study research in Turkish healthcare ministry, Acar, Can, Akman, and Tuzcuoglu (2020) found courtesy was one of key characteristics of leadership under a crisis. Furthermore, the courtesy of leaders was explored in studies of transformational leadership and servant leadership including influenced through OCB that all of them was supported to be factors inside emergence of crisis leadership (Harwiki, 2013; Podsakoff, MacKenzie, & Bommer, 1996).

2) Theme O2: Communication ability

This theme refers to a set of skills and understanding of crisis leaders in communicating effectively in a crisis. These skills used for communication planning, design and techniques that have to continuously assess situations and stakeholders during a crisis. The techniques are also relevant to negotiation and creation of networks. For 21 out of 33, participants indicated various abilities that related to communication that were important to deal with different people. There were two elements regarding this theme: communication techniques and communication strategies.

Crisis leaders have skills and techniques in communication. Crisis leaders are aware of the perception of communication that needs detailed design and uses of means and messages. Also, they have strategic thinking in communication. Crisis leaders clearly identify and know the objective of communication which is not only communication itself but the objective of the planned task to handle of the crisis. This helps to plan the communication strategically in generating effective results (Coombs, 1999, 2004, 2007b, 2014a; Coombs & Holladay, 2011).

Most of literature on crisis leadership mention communication skills are needed in crisis leadership, management, and responses (Cufaude, 2002; Deitchman, 2013; Klann, 2003; Urick et al., 2021). Even crisis communication itself has become the other main area in the study of crisis (Coombs, 2010; Coombs, Holladay, & Wiley, 2010). Many scholars emphasized in communication techniques

(Pratami & Rusfian, 2017; C. M. Thomas, Bertram, & Johnson, 2009; Woodhall, Vertacnik, & McLaughlin, 2008) and strategic communication (Eriksson, 2018; Ray, 1999; Yan, Pang, & Cameron, 2006). Argenti et al. (2005) defined that “strategic communication as communication aligned with the company’s overall strategy, to enhance its strategic positioning” (p. 61). They analyzed business case studies to proposed strategic communication framework identifying components, planning, and design of communication to support achievement of strategies.

3) Theme O3: Political intelligence and ability

This theme refers to a deeper understanding of the complex political and social environments in which crisis leaders operate which makes their abilities and skills in tactical ways through awareness of people and power. It means the process of getting stakeholders to agree to their ideas and help to achieve goals. Crisis leaders who possess political intelligence are more adept at navigating complex power structures and building strategic partnerships that help drive their organizations forward. It involves understanding the motivations and perspectives of various stakeholders.

In addition, political intelligence enables crisis leaders’ skills to build strong relationships with key stakeholders and to influence their actions affecting a crisis solving. By leveraging them, crisis leaders can develop strategies that also help and reciprocate them achieve their goals as well and build long-term success. For 32 out of 33, participants described these attributes that were used in taking actions. There were three elements regarding this theme: power awareness, networking and compromising, reciprocating and negotiating skills.

This study named this theme according to the findings of intelligence and ability regarding power and authority in the systems or organizations. Barron, Hultén, and Vanyushyn (2016) mentioned this political intelligence by explaining that acquisition is also called intelligence generation. Then, their study focused on crisis leadership and information in environmental scanning that normally considers economics and markets. Thus, they proposed the other aspect should have been focused such power and political information became political intelligence.

Kitamura (2019) mentioned that political intelligence is an ever-present factor when working collaboratively with others. White et al. (2007)

suggested that leaders who are politically intelligent take intentional and unintentional actions to lead people to their point of view. Adams and Zanzi (2006) mentioned that decision-making of leadership might be related to power and politics including political skills in organizations as they mentioned that “the decision can become political, necessitating political intelligence to make a feasible decision. Acquiring political intelligence is closely related to what Ferris and his colleagues (Ferris et al., 2016) refer to as the tacit knowledge and practical intelligence necessary for building political skill” (p. 351).

Adams and Zanzi (2006) described a political intelligence that it is that individuals assess power dynamics and the political feasibility in decision-making and then they generate course of action. During this process, they acquire political intelligence to reduce potential difficulties and conflicts that could be threats of pursuing objective. Adams and Zanzi (2006) stated that “political intelligence to make politically feasible decisions and avoid unnecessary conflicts is gained through a comprehensive assessment of the political environment presently and over time. Developing the ability to gather and use political intelligence requires more effort for some than others, depending on their organizational circumstances and personal biases” (p. 362).

Skills are needed in associating to political intelligence. Ferris, Perrewé, Anthony, and Gilmore (2000) stated that “political skills is an interpersonal style, which combines social awareness with the ability to communicate well. People who practice this skill behave in a disarmingly charming and engaging manner that inspires confidence, trust, and sincerity” (p. 25). Ferris et al. (2007) proposed the examination that indicates four critical dimensions of political skill: social, astuteness, interpersonal influence, networking ability, and apparent sincerity.

Furthermore, crisis leaders have power awareness that they are aware of their own capability. They also know the need of authorization and power to control situations through different systems and resources. Anderson and Brion (2014) concluded the meaning of power from various literature that “power is broadly defined as asymmetric control over valued resources. Power, as most commonly defined, is therefore inherently relational, in that power exists only in relation to

others, whereby low-power parties depend on high-power parties to obtain rewards and avoid punishments” (p. 69).

Various literature mentioned and studied power in organization, management and leadership (Anderson & Brion, 2014; D. Buchanan & Badham, 2020; Cross & Parker, 2004; Hollander & Offermann, 1990; Pfeffer, 1992a, 1992b; Salancik & Pfeffer, 1977). Daly and Moolenar (2011), for example, suggested that “leaders with greater social acuity have been associated with a stronger base of power, awareness and access to unique information, the ability to create and maintain strategic relations, manage perceptions of others, the ability to link disconnected others, and the identification of important strategic collaborations. Therefore, leaders with greater degrees of social acuity may have access to resources as well as the ability to marshal these resources in executing a course of action” (p. 3). Chen et al. (2022) simplified the meaning of power awareness as knowing who hold the power in making a decision.

Additionally, crisis leaders perform networking that they interact with others to exchange information and develop professional or social contacts. It is to make the relationship and creating networks in a crisis. they are important in coordinating and finding support. Networking ability also was found in political skills (Munyon et al., 2015). As a crisis emerge unexpectedly, the supports mostly come from the ask for help. Only the easiest and fastest way to get support from other people and organization outside the team. Crisis leaders have to create relationships and networks with the others for achieving a goal (Kapucu & Ustun, 2018; Nohrstedt, 2018). Nohrstedt (2018) studied the influence of networking on performance in crisis management and presented the result that “the cases show that stable interpersonal relationships, clarification of the terms of collaboration, shared problem perceptions, and coordination of joint decision making constitute important assembly mechanisms for overcoming collective action problems” (p. 232).

On the other hand, if there are conflicts or disagreements, crisis leaders have a way of reaching agreement through negotiation or reciprocation in which each person or group gives up something in order to end an argument or dispute. Also, this includes a process of exchanging things with other people to gain a mutual benefit. it can be equivalent exchange or a paying back of what has received.

Also, scholars supported this study about reciprocating connection for leadership (Azer, Blasco-Arcas, & Harrigan, 2021; Steilen & Stone-Johnson, 2023). In specific area of crisis leadership, Boin and Hart (2003) and Oroszi (2018) emphasized that negotiation is important in crisis leadership performance.

As a result, this study found the political skills and behaviors are one of key success in crisis leadership phenomenon because it relates to various important factors in leadership under crisis that the research found as well. This study found the literature supported the findings as Munyon et al. (2015) stated that “political skill is positively related to self-efficacy, job satisfaction, organizational commitment, work productivity, organizational citizenship behavior (OCB), career success, and personal reputation, and negatively related to physiological strain” (p. 143).

5.2.3 Discussion for RSQ 3: External Mechanism of Crisis Leadership

This section discussed RSQ3 as follows.

What is the external mechanism of crisis leadership?

Grounded in this study, there were 3 categories of information that explained a meaning or phenomenon of crisis leadership: Category P: External Driving Forces, Category Q: External Enablers and Category R: External Influences. These categories present factors that did not come from inside crisis leaders but the outside that affected to crisis leaders through various conditions. After the analysis process, this study found all participants mentioned these categories by exploring themes and codes.

5.2.3.1 Category P-External Driving Forces

This category refers to external factors that are driving forces in motivating or forcing crisis leaders to take an action. These factors were explained by relevant themes and detailed codes derived. The derived information was analyzed to be 2 themes; Theme P1: Systems vulnerability and Theme P2: Pressure, by 26 and 33 participants respectively.

1) Theme P1: Systems vulnerability

This theme refers to a quality of an organization, a system, or a team that can be easily attacked, harmed, or affected by a crisis. Crisis leaders

perceive that their organization, system or team would get the impact of an emerging crisis. Then, this drives crisis leaders to do something to prevent an occurrence or contain a damage. For 26 out of 33, participants described this type of external factor. There were two elements regarding this theme: gaps of a system and team, and possible lack of action/possibility of inaction.

Gaps of a system and team become external factors of crisis leaders that they perceive gaps or weakness of a system, a team or an organization. Crisis leaders are aware of these lacks and this rationale drives them to take responsive actions (Oroszi, 2018). De Coninck, d'Haenens, and Matthijs (2020) reported that perceived vulnerability to disease plays a significant role for crisis responses. Therefore, vulnerability of systems drive individuals to take actions (Wrigley, Salmon, & Park, 2003). Also, when crisis leaders perceive possibility or have assumption that no one will take action. This might come from people are not aware of problems. Sometimes people acknowledge a crisis but slow to take actions. Gradually think and act might be not fast enough to solve or contain a problem before escalation (R. Li et al., 2020). Furthermore, it is vast interesting that the researcher found numerous literatures of crisis leadership mentioning 'no one' in manuscripts (Bell, 2019; Brumfield, 2012; DuBrin, 2013; Goodyear, 2020; Petriglieri, 2020) such no one did, no one had, on one came, or on one knew. This finding is also associated with risk perception of ones who respond to crises and disasters as mentioned by Pennings and Grossman (2008).

2) Theme P2: Pressure

This theme refers to difficult situations that force crisis leaders to actions. If they do not, it will provide significant negative results. For 33 out of 33, participants indicated this driving force. There were three elements regarding this theme: impacts affecting stakeholders, time pressure, and workload.

Impacts affecting stakeholders are pressures on crisis leaders. They have to help to fix problems or understand suffers of people who involved with the situation. The pressure also come from the limitation of time for crisis leaders to manage a crisis. The time constraint relates to the potential consequences of emerging situations. Also, crisis leaders get increased workloads from the unexpected scope of activities that crisis leaders have to do in handling a crisis. The workload is usually

high because a crisis is not a normal problem that cannot be solved by normal practices and efforts.

Literature of crisis leadership agreed on that crisis leadership emerges when extreme pressure of crisis forces them. This includes impacts, time limits, and coming workloads (Collins et al., 2022; DuBrin, 2013; Erika H James & Wooten, 2011; Prewitt & Weil, 2014; Prewitt et al., 2011; E. K. Stern, 2017; Urick et al., 2021).

5.2.3.2 Category Q-External Enablers

This category refers to external factors that enable the mission of crisis leaders. They need these enablers to achieve a goal effectively and timely. The derived information was analyzed to be 2 themes; Theme Q1: Power and Theme Q2: Supporting resources, by 31 and 30 participants respectively.

Theme Q1: Power

This theme refers to ability to direct the others or possession of authority and control that crisis leaders need to find from someone or be delegated to be able to direct and manage resources in facing a crisis. For 31 out of 33, participants indicated this need for external factors. There were two elements regarding this theme: higher-ups' supports and autonomy.

People at higher levels help crisis leaders to enable plans and actions. This could be executives, higher managers, or supervisors who have the authority to allow crisis leaders or facilitate resources to achieve a goal. Furthermore, higher levels allow crisis leaders have autonomy for ability to act on his or her own values and interests. They have a freedom that makes them think and act by self-determination.

Prewitt et al. (2011), Prewitt and Weil (2014), Urick et al. (2021), E. K. Stern (2017), Zhuravsky (2015), Häyry (2021), Collins et al. (2022), and Lango and Kortegast (2023) mentioned the autonomy affected the effectiveness of crisis leadership. This derived autonomy came from the higher levels providing opportunities and power or authority to ones who became crisis leaders. This study supports those literature as this is one of external enabling factors for crisis leadership. Also, this finding is consistent with the Self-Determination Theory, one of grand theories for human motivation that Ryan and Deci (2000) proposed autonomy,

competence, and relatedness as basic psychological needs regarding human intrinsic motivation. Perceived autonomy of individuals that they get from higher-ups as an external enabler can intrinsically motivate them to perform crisis leadership in the situation.

2) Theme Q2: Supporting resources

This theme refers to the relevant resources that in the context that crisis leaders participate including people, workplace, and systems. They help crisis leaders in succeed the mission in aspects of their familiarity and also suitability or effectiveness of them. For 30 out of 33, participants described this enabler to succeed the mission. There were two elements regarding this theme: good resources and familiar resources.

Crisis leaders have effective resources such as team, colleagues and systems are the effective or suitable part of the success through participation, coordination and application. Literature supported that team supports, teamwork, and followers are effective component of crisis leadership phenomenon through mutual trust and willing to follow crisis leaders (Fener & Cevik, 2015; Riggio & Newstead, 2023; Rohrich, Hamilton, & Chung, 2020; Santra & Alat, 2022).

Furthermore, crisis leaders feel familiar to these resources that help to engage for the success through participation, coordination and application. In encouraging working in unfamiliar location for leadership creativity, Springborg (2010) mentioned that familiar environment supports performance of leadership as stated as “it works because the familiar workplace is full of objects that embody and feedback yesterday’s sense-making” (p. 252).

5.2.3.3 Category R-External Influences

This refers to factors that are external and have influences to crisis leaders. However, these factors are neither driving forces nor enablers to crisis leaders directly. It is a part of rationales that generate some of their attributes. These influences were explained by relevant themes and detailed codes derived. The derived information was analyzed to be 2 themes; Theme R1: Factors fulfilling human safety needs and Theme R2: Models, by 12 and 11 participants respectively.

1) Theme R1: Factors fulfilling human safety needs

This theme refers to one's personal advantage or benefit. Self-interested behavior of crisis leaders means when they concern their life security, future opportunity, or rewards. For 12 out of 33, participants also described this thing that influenced the success of the mission. There were two elements regarding this theme: life and family security, and potential returns and rewards.

Crisis leaders are aware of life and family security showing that they also focus about themselves while handling a crisis. They also think that the success is relates to their financial or job security. Crisis leaders also think of this as they are further concerned of their family security. Crisis leaders recognize and expect what they get when they succeed as potential returns and rewards. This also helps to motivate them at work and guarantee their career success or job security.

Information that the researcher found during the interview was the mention of personal and family life security. They were the other influencers of crisis leaders that can refer to the safety need according Maslow's hierarchy of needs at the second level (AH Maslow, 1943; A Maslow, 1970; A. H. Maslow, 1998). These factors also motivate crisis leaders that showed the implication that they still had to think partly about themselves. Furthermore, the other agreement of this issue that Dückers et al. (2017) studied crisis management and leadership through the lens of psychosocial principle found that crisis leaders served for others' interest and also response to their needs. Dückers et al. (2017) mentioned "'safety valve,' that is, the self-interest of the leader stimulates to take good care of the interest of disadvantaged citizens" (p. 106).

2) Theme R2: Models

This theme refers to demonstrative knowledge or persons that crisis leaders have learned and apply for taking action in a crisis. For 11 out of 33, participants indicated this type of external factors. There were two elements regarding this theme: role models and books. Crisis leaders adopted role model's characters, traits, qualities, actions or other relevance to be an example and guiding action in performing for a crisis.

Scholars mentioned the effects of role model on leadership (M. E. Brown & Treviño, 2014; Chunoo, 2020; Sims & Brinkman, 2002). Critically,

Hoyt, Burnette, and Innella (2012) applied the relevant theories which are the incremental theory and the entity theory to test that leaders are made or leaders are born. Critically, Hoyt et al. (2012) reported the result as “In Study 1, measuring people’s naturally occurring implicit theories of leadership, the authors showed that after being primed with a role model, incremental theorists reported greater leadership confidence and less anxious-depressed affect than entity theorists following the leadership task. In Study 2, the authors demonstrated the causal role of implicit theories by manipulating participants’ theory of leadership ability” (p. 257). Therefore, they found the influence of role models on leadership performance. In the crisis leadership study, Lacerda (2019) also pointed that the role modeling and mentoring influence and support effectiveness of leadership in crisis.

Furthermore, crisis leaders adopted the contents, knowledges, or practices from books to be an example and guiding action in performing for a crisis. Scholars mentioned reading a book as the self-learning of leadership (Vuhuong & Edwards, 2022; M. Wilson & Xue, 2013).

5.2.4 Discussion for RSQ 4: Elements and Process of Crisis Leadership

From the RSQ4 - What are elements and process of crisis leadership? (Construction), the answer for this question was not explored from the interviews. Rather, this part was a theory construction by the researcher as usual in the grounded theory method (Creswell & Creswell, 2017). It is the last part of analysis in the selective coding process that describes the interrelationships among categories and themes as a story line. Grounded theory methodology allows the researcher to move qualitative data from the inquiry to construct a theory. Therefore, the results from RSQ1 to 3 were combined as a storyline or proposed model of elements and process.

5.2.4.1 Crisis Leadership Model

This model describes a phenomenon of crisis leadership according to the definition of theory (Torraco, 1997) in explaining the meaning of crisis leadership phenomenon and its mechanism. This ultimate finding included activities of crisis leaders in crisis and the outcomes they received, and mechanisms since the crisis emergence until it was terminated. Figure 4.2 in Chapter 4 presents the details for theoretical model of crisis leadership as the storyline of crisis leadership phenomenon.

Also, each interrelation of categories as crisis leadership elements was discovered and constructed by the researcher and presented again in Table 4.13 in Chapter 4, for explaining the external and internal mechanisms including actions and outcomes. Here, this study improved the summary of elements closely similar to Table 4.14 in Chapter 4, but adding with the referenced concepts and theories emerging from the researcher's theoretical sensitivity during data collection and analysis process as reported as discussion in previous sections as shown in Table 5.1.

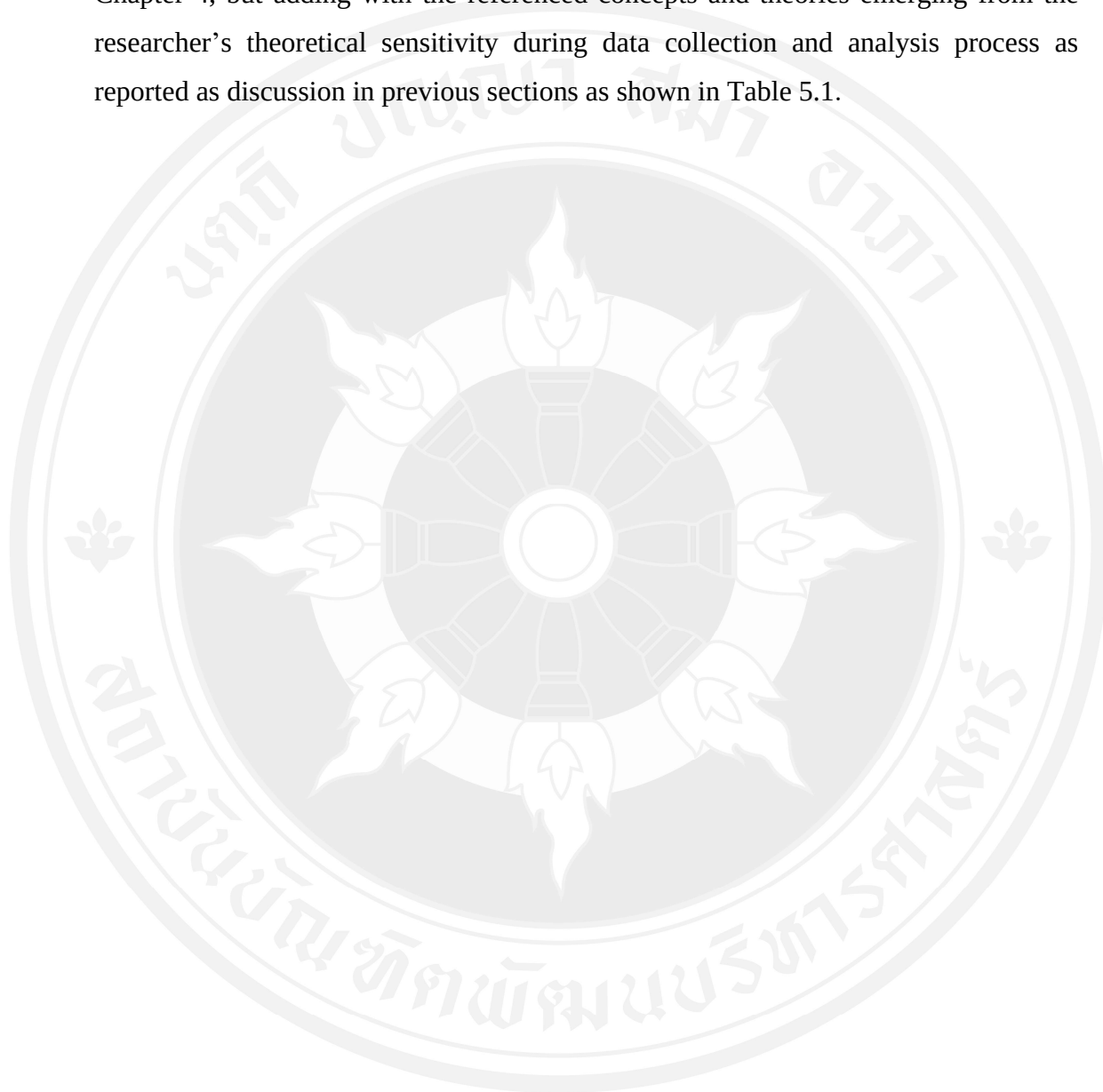


Table 5.1 Summary of Derived Elements and the Discussed Literature through the Theoretical Sensitivity

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
RSQ1	Deliberate and immediate Decision-making Processing and Planning	Emergent	Deliberately assessing situations	Strategic thinking	(Boin & Hart, 2003; Bonn, 2005; Brown, Freeman, 2010, 2020; Taylor, 1997)	(Abraham, 2005; Freeman, 2010, 2020; Taylor, 1997)
		Design-led	Designing solutions and preparing for the worst	(Mintzberg, 1994)	2003; Bonn, 2005; Brown, Freeman, 2010, 2020; Taylor, 1997)	2005; Freeman, 2010, 2020; Taylor, 1997)
		Strategic	Design thinking	Design thinking	2005; Brown, Freeman, 2010, 2020; Taylor, 1997)	2005; Freeman, 2010, 2020; Taylor, 1997)
		Thinking	Considering stakeholders	and design-led strategy (Brown, 2008; Dorst, 2011; Stigliani, 2018; Knight et al., Harrison & Thompson, 2014; Heracleous, 1998; Knight et al., 2020; Liedtka, 1998; Steptoe-Warren et al., 2011; Ucko & Marks, 2018)	2008; Dorst, 2011; Stigliani, 2018; Knight et al., Harrison & Thompson, 2014; Heracleous, 1998; Knight et al., 2020; Liedtka, 1998; Steptoe-Warren et al., 2011; Ucko & Marks, 2018)	2010, 2020; Taylor, 1997)
				Operational art, intelligence, and Strategic mapping (Taylor, 1997; Ucko & Marks, 2018)	Operational art, intelligence, and Strategic mapping al., 2020; Liedtka, 1998; Steptoe-Warren et al., 2011; Ucko & Marks, 2018)	
				Learning agility (Lombardo & Eichinger, 2000)	Learning agility & Marks, 2018)	

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Decisive	Rapidly and strategically considering solutions	Decision making (Endsley, 1995)	(Boin & Hart, 2003; Oscarsson & Danielsson, 2018; Patlas & Lexa, 2020;	
		Critical	Deciding to do or not (Being hesitant)	Task prioritization (Boin & Hart, 2003)	Endsley, 1995;	
		Decision-Making and Planning	Prioritizing and sequencing actions	Intuitive decision process during crises (Sayegh et al., 2004)	Sayegh et al., 2004)	
				Learning agility (Lombardo & Eichinger, 2000)		
		Responsive	Taking immediate actions	Execution in crisis (Boin & Hart, 2003;	(Flin & O'Connor, 2017;	
		actions and ambidexterity	Containing the impacts	(Boin & Hart, 2003)	Dasborough & Scandura, 2022;	
			Doing multi-tasks at the same time	Agile management (Petermann &	Gaba, 2010;	
			Managing resources		Gogalniceanu et 2012)	
	Agile Execution, Management and Communication					

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				Zacher, 2021)	al., 2021;	
				Multi-task in crisis (Wu et al., 2021)	Papachroni & Heracleous, 2020; Petermann & Zacher, 2021;	
				Ambidexterity (Papachroni & Turner & Lee-Heracleous, 2020;	Turner & Lee-Kelley, 2013;	
				Turner & Lee-Kelley, 2013)	Vaajala et al., 2013; Wu et al., 2021)	
				Crisis resource management (Gaba, 2010)		
				Assertive behavior (Brindley & Reynolds, 2011)	(Boin & Hart, 2003; Brindley & Reynolds, 2011;	(Barton, 2008; Boin et al., 2005;
				Meaning-making (Boin & Hart, 2003)	Jong, 2017)	Burstein et al., 2008;
						Stern, 2013)
	Assertive actions and communication	Responsively notifying for understanding				
		Reporting to higher-ups				
		Suggesting solutions				
		Making argument assertively				
		Supporting knowledge and				

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
			experiences	Top management reporting (Burstein et al., 2008) Application of knowledge in communication (Barton, 2008) Effective emergency management (Boin & 't Hart, 2010) Strategic communication (Hallahan et al., 2007) Crisis	(Barton, 2008; Curtin, 2004) (Boin & 't Hart, 2010) (Argenti et al., 2005; Coomb, 2004; Hallahan et al., 2007)	
	Applying Operational Art and Tactics	Strategic communication	Monitoring and Feedback Monitoring Debriefing Communication Planning Communication Design			

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Vertical-Horizontal orchestration	Brainstorming with the team Opening for ideas Vertically-horizontally coordination, cooperation and collaboration Finding special supports	communication (Coombs, 2004) Operational arts (Piatt, 1999; Schnaubelt, 2009; Slavković et al., 2013) Art of Strategic Management (Chu & Tse, 1992; Esmaeili, 2015; Maranville, 2011; O'Dowd & Waldron, 1991; Zafar et al., 2013) The end-way-mean concept (Lykke, 1989)	(Argenti et al., 2005; Boin & Hart, 2003; Brown, 2008; Castañer & Oliveira, 2020; Christensen et al., 2016; Chu & Tse, 1992; Dorst, 2011; Elsbach & Stigliani, 2018; Ghasemi et al., 2023; Griesemer & Shavit, 2023; Hallahan et al., 2007; Knight et	(Al-Adwani et al., 2010; Blythe, 2018; Boin et al., 2013; David, 2011; Dixon, 2006; Esmaeili, 2015; Fleming, 2011; Halloran, 2007; Hassan, 2021; Jackson,

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				Orchestrating vertical & horizontal coordination in crisis (Boin & Hart, 2003; Boin et al., 2013)	al., 2020; O'Dowd & Waldron, 1991; Lagadec, 1997; Maranville, 2011; Sandhu, 2009; Schnaubelt, 2009; Thomas et al., 2009; Ucko & Marks, 2018; Wankmüller & Reiner, 2020; Weaver, 2012; Zhong et al., 2022)	2015; Lykke, 1989; Marks, 2005; Miller, 1993; Piatt, 1999; Kelly & Brennan, 2009; Slavković et al., 2013; Taylor, 1997; Van der Heijden, 2005; Zafar et al., 2013)
				Knowledge sharing in crisis (Al-Adwani et al., 2010)		
				Design thinking and design-led strategy (Brown, 2008; Dorst, 2011; Elsbach & Stigliani, 2018; Knight et al.,		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
Task, People and Change-Oriented Leading		Political tactics	Reciprocation and Negotiation Utilizing relationships, networking, and power	Politics & power in organization (Mintzberg, 1994) Political skills (Ferris et al., 2007; Hart, 2020; Marr, 2021; Young et al., 2020) 2020)	(Bhaduri, 2019; Collins et al., 2022; Ferris et al., 1997; Mintzberg, 1994; Pidgeon, 1997; Pidgeon & O'Leary, 2000; Wu, et al., 2021)	(Fischer, 2004; Kalkman, 2020; Marr, 2021; Young et al., 2020)
Task, People and Change-Oriented Leading		Influencing others to follow rapidly	Persuading Building trustworthiness	Leadership (Vroom & Jago, 2007) Transformational leadership (Bass & Riggio, 2006) Centralization (Weick, 1988)	(Bass & Riggio, 2006; Joiner & Josephs, 2007; Vroom & Jago, 2007)	(Pillai, 2013)
Task, People and Change-Oriented Leading		Centralized-Decentralized	Commanding Delegating	Centralization (Weick, 1988)	(Aftab et al., 2022; Boin & Boin et al., 2005;	(Boin et al., 2005;

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Controls		Decentralization (Roberts, 1990) Directive leadership (Bowers et al., 2017) Agile leadership (Joiner & Josephs, 2007)	Hart, 2003; Bowers et al., 2017; Pidgeon, 1991; Post et al., 2022; Rico et al., 2022; Roberts, 1990; Weick, 1988)	Çobanoğlu & Demir, 2022; Perrow, 1984; Reason, 2016; Roberts et al., 1994; Trainor & Velotti, 2013)
	Being supportive	Participating with the team Comforting and complimenting the team Teaching Being open-minded for listening		Participative leadership (Post et al., 2022) Servant leadership (Greenleaf, 2002; Spears & Lawrence, 2002;	(Avolio et al., 2004; Eva et al., 2019; Haddon, Loughlin & McNally, 2015; Kustyadi & Wijayanti, 2021;	(Celik et al., 2016; 2016; Firestone & Firestone, 2020; Piorun et al., 2021) (Greenleaf,

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				Zada et al., 2022)	Zada et al., 2022)	2002; Spears & Lawrence, 2002)
				Transformational leadership (Kouzes & Posner, 2002; Haddon, Loughlin & McNally, 2015)		Kouzes & Posner, 2002)
				Authentic leadership (Avolio et al., 2004)		
				Ambidexterity and Leadership Agility (Kustyadi & Wijayanti, 2021)		
				Sadness & anger (Madera & Smith, 2009)	(Fein & Isaacson, 2009; James et al., 2011;	(Gabriel, 1999; Mitroff & Anagnos, 2001;
				Emotions of	Meisler, Drory &	
	Emerging Feelings during Actions	Negative feelings in actions	Anxiety Communication concern Frustration Tiredness			

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				leaders in crisis (Meisler et al., 2013; Shaver, 2004; Schwartz, Kirson & O'connor, 1987)	Vigoda-Gadot, 2020; Mitroff, 2004; Shaver, 2004; Schwartz, Kirson & O'connor, 1987)	Meisler et al., 2013)
				Hostility and counterproductive work behavior (Meisler, Drory & Vigoda-Gadot, 2020)		
	Positive feelings with success	Satisfied with the success		Self-esteem (Orth & Robins, 2014)	(Greenberg & Kosloff, 2008;	(Donnellan et al., 2011;
		Relieved from stress		Terror	Orth & Robins, 2014;	MacDonald, 2012)
		Happy and proud about the success		Management		
		Work engagement		Theory	Pyszczynski et al., 2004)	
		More confident from the right decision making		(Greenberg &		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
Crisis Handling Learning & Development			Valuable for organization & team	Kosloff, 2008)		
			Successful in keeping self-image			
			Successful in keeping an organizational image			
		Positive feeling with returns	Happy and proud about rewards	Employee engagement in crisis management	(Enander et al., 2015; Xu & Thomas, 2011)	(salim Saji, 2014)
			Relieved, happy and proud with being accepted and followed	(salim Saji, 2014) (Xu & Thomas, 2011)		
		Crisis awareness	Learning the hardness	Learning in crisis	(Antonacopoulou & Sheaffer, 2014; Moynihan, 2008; Lagadec, 1997; Tanifuji, 2000; Veil, 2011; Wang, 2008)	
			Learning the solvability	(Tanifuji, 2000)		
			Learning the possibility of the future crisis			
		People-oriented	Learning importance of teamwork	Learning		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
RSQ2	Brain-Body Instant Reactions (Physical/Neurological)	learning	Learning importance of networking	importance of people (Kaylor, 2015)		
		Post-crisis development	Being adopted as a role model Development of thoughts and problem-solving Networking development	Development in crisis (Kaylor, 2015; Scott & Webber, 2007)	(Kaylor, 2015) Scott & Webber, 2007	(Lalonde, 2007)
		Responsive reaction	Involuntary responses (Automaticity) Startle reflex (Unresponsive) Reactive response Attentive response	Reflex actions & involuntary actions (Ajzen, 1991, 2011; Barnett et al., 2012; Berger & Rae, 2012; Bhangu et al., 2013; Ekman et al., 1985; Horstmann, 2006; Landman et al., 1985; Rivera et al., 2014)	(Ajzen, 1991, 2011; Barnett et al., 2012; Berger & Rae, 2012; Bhangu et al., 2013; Ekman et al., 1985; Horstmann, 2006; Landman et al., 1985; Rivera et al., 2014)	(Martin et al., 2012; Kuhl & Beckmann, 2012; Rivera et al., 2014; Rumman, 2022)
				Surprise (Meyer et al., 1991; Moors	al., 1991; Moors	

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Effects of stress	Symptoms of stress	Stress in crisis	(Dhabhar, 2014;	(Kowalski-
			Limited capability	(Janka et al., 2015)	Janka et al., 2015; Weisæth et al., 2002)	Trakofler et al., 2003)
Mental Instant Reactions		Thought reactions	(Thinking that) Time is limited	Altruism in crisis	(Endsley, 1995;	(Boyd, 1995;
			(Thinking that) No one is going to take an action	(Kuknor & Bhattacharya, 2021)	Kuknor & Bhattacharya, 2021; Marcus et al., 2020; Van de Walle et al., 2016; Von Lubitz, Beakley & Patricelli, 2008)	Sapateiro & Antunes, 2009)
			(Thinking that) I must take an action	Situation awareness	al., 2020; Van de Walle et al., 2016; Von Lubitz, Beakley & Patricelli, 2008)	
			Being curious why it happened	(Endsley, 1995)		
			Thinking repeatedly (Fixation)	OODA loop		
				(Boyd, 1995)		
				(Von Lubitz, Beakley & Patricelli, 2008)		

POC-DOC

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Positive emotional reactions	Being challenged Having a can-do attitude	(Marcus et al., 2020) Self-efficacy (Bandura,1982)	(Bandura,1982; Kuklan, 1988)	(Jin et al., 2007)
		Negative emotional reactions	Being surprised Being fearful and worried Being discouraged Need for a pre-action pause Being frustrated and angry	Six negative emotions (Kim & Cameron, 2011; Lazarus, 199; Lazarus, 1991). Mauss & Robinson, 2009)	(Kim & Cameron, 2011; Lazarus, 199; Mauss & Robinson, 2009)	
		Situational engagement	Keeping going and concentration Focusing solutions and planning Writing down their thoughts	Conscious engagement (Ruderman et al., 2014) *** Fight or flight (Iserson et al., 2008) Freeze, flight,	(Bracha, 2004; Bracha et al., 2022; Bratslavsky et al., 1998; Iserson et al., 2008; Johnson & Leventhal, 1974; Lombardo &	(De Meuse, 2022; Kahneman, 1973; McGlashan et al., 1975; Ruderman et al., 2014;
	Focus to Control					

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				fight, or fright (Bracha, 2004; Bracha et al., 2004). Approach-avoidance model of coping stress (Roth & Cohen, 1986). Self-regulation (Schmeichel, 2007) Mental agility of learning agility (Lombardo & Eichinger, 2000) Executive control (Bratslavsky et al.,	Eichinger, 2000; Miller & Mangan, 1983; Miyake et al., 2000; Mullen & Suls, 1982; Roth & Cohen, 1986; Schmeichel, 2007)	Shimamura, 2000; Shontz, 1975; Williams & Nowack, 2022)

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Deliberate consciousness	Being consequence-conscious Being time-conscious Being aware of the responsibility	1998; Shimamura, 2000) Situation awareness (Endsley, 1995) Self-responsibility (Maier, 2019; Roth & Cohen, 1986)	(Endsley, 1995; Maier, 2019; Roth & Cohen, 1986)	
	Reference to Control	Building up confidence	Seeking advice Being self-confident "Doing the right things"	Self-responsibility (Roth & Cohen, 1986) Emotional intelligence and confidence to regulate behavior (Sayegh et al. (2004)	(Bruner & Postman, 1947; Roth & Cohen, 1986; Schmeichel, 2007)	

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
Pause to Control	Adhering to learning and experiences	Recalling knowledge and experiences	Active seeking/ seeking	(Cohen & Lazarus, 1973;		
		Following on procedures and training	knowledge (Roth & Cohen, 1986)	Roth & Cohen, 1986;		
	Mindfulness generation	Being mindful	Avoidance	Schmeichel, 2007)		
				(Averill & Rosen, 1972;		(Kahneman, 1973)
		Taking a breather	concept of stress coping (Roth & Cohen, 1986)	Roth & Cohen, 1986; Zada et al., 2022)		
				Servant Leadership Control		
	Stress relief	Talking Escaping	Psychological Distress in Crisis (Zada et al., 2022)			
			Conversation for physical & mental			
				(Janka et al., 2015; Miller &		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
Strategic Crisis-related Intelligence	Vigilance	Vigilance	Ability to detect signals Readiness	health (Janka et al., 2015)	Mangan, 1983;	
				Rejection (Mullen & Suls, 1982)	Mullen & Suls, 1982)	
				Vigilance (Garcia, 2006) ***	(Al-Asfour et al., 2022; Farazmand, 2009; Halawi et al., 2020;	(Garcia, 2006; Marisa & Kalemis, 2020;
				Strategic Vigilance (Obeidat, 2022)	Obeidat, 2022)	Rumman, 2022)
				Readiness, response, and recovery (Farazmand, 2009)		
				Leadership, resilience, & vigilance (Halawi et al., 2020)		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Sense-making capability	Ability to foresee Ability to assess, analyze, and generate options	Sensemaking and mindfulness (Weick, 1995) Crisis sensemaking (Boin & Hart, 2003) Learning agility of leadership (De Meuse et al., 2010, 2012; Williams & Nowack, 2022)	(Boin & Hart, 2003; De Meuse et al., 2010, 2012; Endsley, 1995; Wilson & Wilson, 2004; Weick, 1995)	(Boin et al., 2005; Boin et al., 2013; Stern, 2013; Williams & Nowack, 2022)
		Situation awareness	Time awareness Impact awareness Punishment awareness Need-help awareness Stakeholder awareness	Situation awareness (Endsley, 1995) Leadership agility on context-setting	(Eid et al., 2023; Endsley, 1995) (Joiner & Josephs, 2007) (Ferris et al.,	(Garcia, 2006)

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Adaptability and applicability of learning	Knowledge Work experience and skills Past experiences and skills Creativity and innovative ideas for problem-solving	agility (Joiner & Josephs, 2007) Social astute in political skills (Ferris et al., 2007) Creativity (Simonton, 2000) Transfer of learning (Perkins & Salomon, 1992; Royer, 1979) *** Leadership agility on creativity agility (Joiner & Josephs, 2007) Learning agility (Lombardo &	(Boet et al., 2014; Joiner & Josephs, 2007; Royer, 1979; Simonton, 1979; Simonton, 2000)	(Perkins & Salomon, 1992)

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
Heroism	Altruism	Belief that no one is going to take action Voluntary Sacrifice		Eichinger, 2000) Heroism & sacrifice (Franco et al., 2011) Altruism in Organizational Citizenship Behavior (Organ, 1997) Self-sacrifice (Halverson et al., 2004)	(Choi & Mai-Dalton, 1998; Franco et al., 2011; Halverson et al., 2004; Organ, 1997)	(Emami et al., 2012)
	Kindness	Loyalty Caring the team and others		Organizational Citizenship Behavior (Organ, 1997) Kindness (Hamrick, 2002)	(Balkundi & Kilduff, 2006; Buchanan & Preston, 2014; Exline et al., 2012; Fryburg et	(Aziz, 2021; Hamrick, 2002; Patterson, 2003; Piorun et al., 2021;

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				Prosocial behaviors (Buchanan & Preston, 2014; Kraft-Todd & Rand, 2019) Social connection (Steilen & Stone-Johnson, 2023; Tomkins & Simpson, 2015; approach to leadership (Balkundi & Kilduff, 2006) Caring leadership (Steilen & Stone-Johnson, 2023; Tomkins &	al., 2021; Iredale & van Vugt, 2012; Kraft-Todd & Rand, 2019; Organ, 1997; Penner et al., 2005; Steilen & Stone-Johnson, 2023; Tomkins & Simpson, 2015; Zada et al., 2022)	Spears & Lawrence, 2002; Wong et al., 2007)

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				Simpson, 2015)		
				Relatedness in Self		
				Determination Theory (Ryan & Deci, 2000)		
				Servant leadership (Piorun et al., 2021; Zada et al., 2022) ***		
				Leadership, tactical behaviors, & heroism (Franco, 2016; Lateef et al., 2022)	(Ames, 2009; Ames & Flynn, 2007; Chong, 2004; Franco et al., 2011; Lateef et al., 2022)	(Franco, 2016)
		Courage	Bravery			
			Assertiveness			
				Courage (Chong, 2004)		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature

				Assertiveness (Ames, 2009; Ames & Flynn, 2007)		
		Action-oriented personality	Leading by example	Action-oriented behavior in	(Bedell-Avers et al., 2009;	(Brennan & Stern, 2017;
			Self-reliance	Agility (Laufer et al., 2018)	Mumford et al., 2008; Sousa & Van	Emerson & Wulf, 1909;
			Agility	Action-oriented servant/caring leadership (Sousa & Van	Dierendonck, 2017; Thomas & Rowland, 2014)	Garcia, 2006; Kabangut'se, 2022; Peirce, 1905; Von Schiller, 2004)
			Pragmatism	Dierendonck, 2017)		
				Pragmatism (Garcia, 2006; Peirce, 1905) ***		
				Pragmatic		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature

				leadership		
				(Mumford et al., 2008; Thomas & Rowland, 2014)		
				The softer characteristics of GRIT: generosity, respect, integrity & truth (Sudbrink, 2016)	(Cameron, 2012; Cameron, Quinn & Caldwell, 2020; Marshall et al., 2020; Prewitt & Weil, 2014; Sudbrink, 2016; Urlick et al., 2021)	(Firestone & Firestone, 2020; Marshall et al., 2020; Prewitt & Weil, 2014; Sudbrink, 2016; Urlick et al., 2021)
				Positive leadership (Cameron, 2012; Cameron, Quinn & Caldwell, 2017; 2022)	Schimschal & Lomas, 2019; Schwartz, 2000; Simola, 2003; Yeo & Jeon, 2022)	
				Schimschal & Lomas, 2019).		
				Social astute and		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				apparent sincerity in political skills (Ferris et al., 2007) Ethical leadership and integrity (Schwartz, 2000; Simola, 2003; Yeo & Jeon, 2022)		
	Tough attributes	Tenacity Patience Diligence Perseverance Commitment (Do the best)		Toughness, tenacity, & perseverance (Sudbrink, 2016) *** Grit (Duckworth et al., 2007) Patience (Gigliotti, 2020)	(Baruch et al., 2021; Duckworth et al., 2007; Glotzbecker, 2022; Maitlis & Sonenshein, 2010; Losty & Bailey, 2021; Rameshan, 2021; (Connolly, 2020; Forster et al., 2020; Gigliotti, 2020; McLeod & Dulsky, 2021; Morrow,	

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				***	Smith & Riley, 2012; Wilson & Newstead, 2022)	2020; Shah et al., 2020; Sudbrink, 2016; Williams & Nowack, 2022)
				Diligence (Connolly, 2020)		

				Tenacious commitment (Maitlis & Sonenshein, 2010)		
				Mental toughness (Losty & Bailey, 2021; Williams & Nowack, 2022)		

	Resilience	"Never give up" attitude/ Bouncing back		Resilience (Herrman et al., 2011; Williams & Nowack, 2022)	(Chekijian et al., 2022; Dale Oen et al., 2022; Monehin & Diers-Lawson, &	(Boin et al., 2005; DuBrin, 2013; Heide
		Positive attitude				
		Instinct, intuition, and improvisation				
		Development-oriented person		Pessimistic		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				mindset (Monehin & Diers-Lawson, 2022)	2022; Haake et al., 2023;	Simonsson, 2019;
				Intuition in decision making in crisis (Chekijian et al., 2022; Smith & Riley, 2012)	Herrman et al., 2011; Oscarsson & Danielsson, 2018; Riggio & Newstead, 2023; Sayegh et al., 2004; Smith & Riley, 2012;	McLeod & Dulsky, 2021;
				Intuitive decision process (Sayegh et al., 2004; Ubel & Loewenstein, 1997)	Stern & Saathoff, 2012; Ubel & Loewenstein, 1997)	Muenjohn et al., 2018; Urick et al., 2021;
				Gut instinct/feeling in crisis (Chekijian et al., 2022; Dale	Williams & Nowack, 2022)	

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				Oen et al., 2022) Improvisation (Oscarsson & Danielsson, 2018) Development-oriented perspective (Haake et al., 2023; Heide & Simonsson, 2019; Muenjohn et al., 2018) *** Growth mindset Self-confidence and can-do-attitude Recognizing own leadership and competence Seeking challenges as adventurous learning	(Bandura, 1982; Dweck, 2016; Dweck, 2020; Kuklan, 1988; Lombardo & Eichinger, 2000;	(Alpi, 2023; Blount, 2021; De Meuse, 2022; Dweck, 2006;

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				(Bandura, 1982) *** Perceived challenge (Kuklan, 1988) Perceived competence in Self-Determination Theory (Ryan & Deci, 2000) Change agility in Learning agility (Lombardo & Eichinger, 2000) G-factor (general intelligence factor) in	Madera & Smith, 2009; Nowack & Niemiowski, 2021; Ryan & Deci, 2000; Yeagerm & Dweck, 2020)	Williams & Nowack, 2022)

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				leadership (De Meuse, 2022) ***		
	Tactical attributes	Interpersonal intelligence & habit	Empathy Social skills & intelligence Being communicative Humility Courtesy	Social astute in political skills (Ferris et al., 2007) Interpersonal influence in political skills (Munyon et al., 2015) Courtesy in Organizational Citizenship Behavior (Organ, 1997) Empathic communication	(Ahmad et al., 2023; Coombs, 2007; Coombs & Liu et al., 2020; Dean, 2004; Ferris et al., 2007; Hardee et al., 2005; Holladay, 1996; Moss & Hunt, 1927; Munyon et al., 2015; Organ, 1997; Schoofs et al., 2019; Schoofs et al., 2022; Thorndike &	(Barton, 2008; Karelaia & Van der Heyden, 2020; Kihlstrom & Cantor, 2000; Shi & Chen, 2012; Vernon, 1933)

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
				(Barton, 2008; Hardee et al., 2005; Schoofs et al., 2019; Schoofs et al., 2022) Social intelligence (Kihlstrom & Cantor, 2000; Moss & Hunt, 1927; Vernon, 1933; Thorndike & Stein, 1937;) Crisis communication (Coombs, 1999, 2004, 2007) *** Strategic communication	(Argenti et al., 2005; Coombs, 1999, 2004, 2007; Deitchman, 2013; Eriksson, 2018; Thomas et	(Cufau, 2002; Klann, 2003; Pratami & Rusfian, 2017; Ray,
		Communication ability	Communication techniques Communication strategies			

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		Political intelligence and ability	Power awareness Networking Reciprocating & negotiation skills	(Argenti et al., 2005)	al., 2009; Woodhall et al., 2008)	1999; Urlick et al., 2021; Yan et al., 2006)
				Political intelligence (Barron et al., 2016)	(Adams & Zanzi, 2006; Anderson & Brion, 2014; Barron et al., 2016; Ferris, et al., 2007; Munyon et al., 2015; White et al., 2007)	(Kitamura, 2019)
				Power & politics in decision-making (Adams & Zanzi, 2006)		
				Power (Anderson & Brion, 2014)		
				Networking ability in political skills (Munyon et al., 2015)		

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
RSQ3	External driving forces	Systems vulnerability Pressure	Gaps of a system & team inaction Possible lack of action/possibility of inaction Impacts affecting stakeholders Time pressure Workload	Perceived vulnerability (De Coninck et al., 2020; Li et al., 2020) Risk perception in crisis (Pennings & Grossman, 2008) Leadership under crisis (Collins et al., 2022; DuBrin, 2013; James & Wooten, 2011; Oroszi, 2018; Prewitt et al., 2011; Prewitt & Weil, 2014; Stern, 2017; Urlick et al., 2021)	(Collins et al., 2022; Goodyear, 2020; Li et al., 2020; Pennings & Grossman, 2008; Petriglieri, 2020; Wrigley et al., 2003)	(Bell, 2019; Brumfield, 2012; De Coninck et al., 2020; Grossman, 2008; al., 2020; DuBrin, 2013; James & Wooten, 2011; Oroszi, 2018; Prewitt et al., 2011; Prewitt & Weil, 2014; Stern, 2017; Urlick et al., 2021)

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
External Enablers	Power	Higher-ups' supports		Autonomy of crisis leadership	(Collins et al., 2022; Lango & Kortegast, 2023; Riggio & Newstead, 2023; Santra & Alat, 2022; Springborg, 2010; Zhuravsky, 2015)	(Fener & Cevik, 2015; Häyry, 2021; Prewitt & Weil, 2014; Rohrich et al., 2020; Stern, 2017; Urick et al., 2021)
		Autonomy				
		Good resources				
	Supporting resources	Familiar resources		Familiar environment supporting leadership performance (Springborg, 2010)		
	Self-Determination Theory (Ryan & Deci, 2000)					
External Influences	Factors fulfilling human	Life and family security		Maslow's hierarchy of needs	(Brown & Treviño, 2014; Chunoo, 2020;	
		Potential returns and rewards				

RQ	Categories	Themes	Codes	Theoretical sensitivity	Support journal articles in Q1-2	Other levels and types of literature
		safety needs		(Maslow, 1943, 1970) ***	Hoyt et al., 2012; Lacerda, 2019;	Dückers et al., 2017;
		Models	Role models	Role model on leadership (Brown & Treviño, 2014; Chunoo, 2020; Hoyt et al., 2012; Kempster, 2006; Sims & Brinkman, 2013)	Maslow, 1943; Sims & Brinkman, 2002; Vuhuong & Edwards, 2022;	Kempster, 2006; Maslow, 1970)
		Books		self-learning of leadership (Vuhuong & Edwards, 2022; Wilson & Xue, 2013)		

Specifically, the researcher divided the table columns to be two parts of the references according to Scimago, Scopus and Web of Science's journal rankings. Firstly, there are literature from the journals in quartier 1 and 2 meanwhile the second shows literature from the rest of journals, including all of literature from books. This grouping of literature presents the quality and less quality of references for each component and its relevance to crisis, leadership, crisis management, crisis response, or crisis leadership that are consistent or associated with the emerging theory.

As a result, the researcher found that all findings can be referenced to high quality literature. Therefore, these references support and confirm the validity, reliability, and trustworthiness of this research finding in both elements and processes including elements' interrelations. Furthermore, scholars can get benefits and conveniences for the future studies on each aspect of the emerging theory. Additionally, this study presents Figure 5.1 by remodeling the detailed model which is the storyline from Figure 4.2 and the general overview from Figure 4.3 to be the Theoretical Model of Crisis Leadership explaining elements and processes and cutting themes to simplify a model in Figure 5.1 meanwhile Figure 5.2 shows the themes under each category which was presented as a key construct of crisis leadership phenomenon.

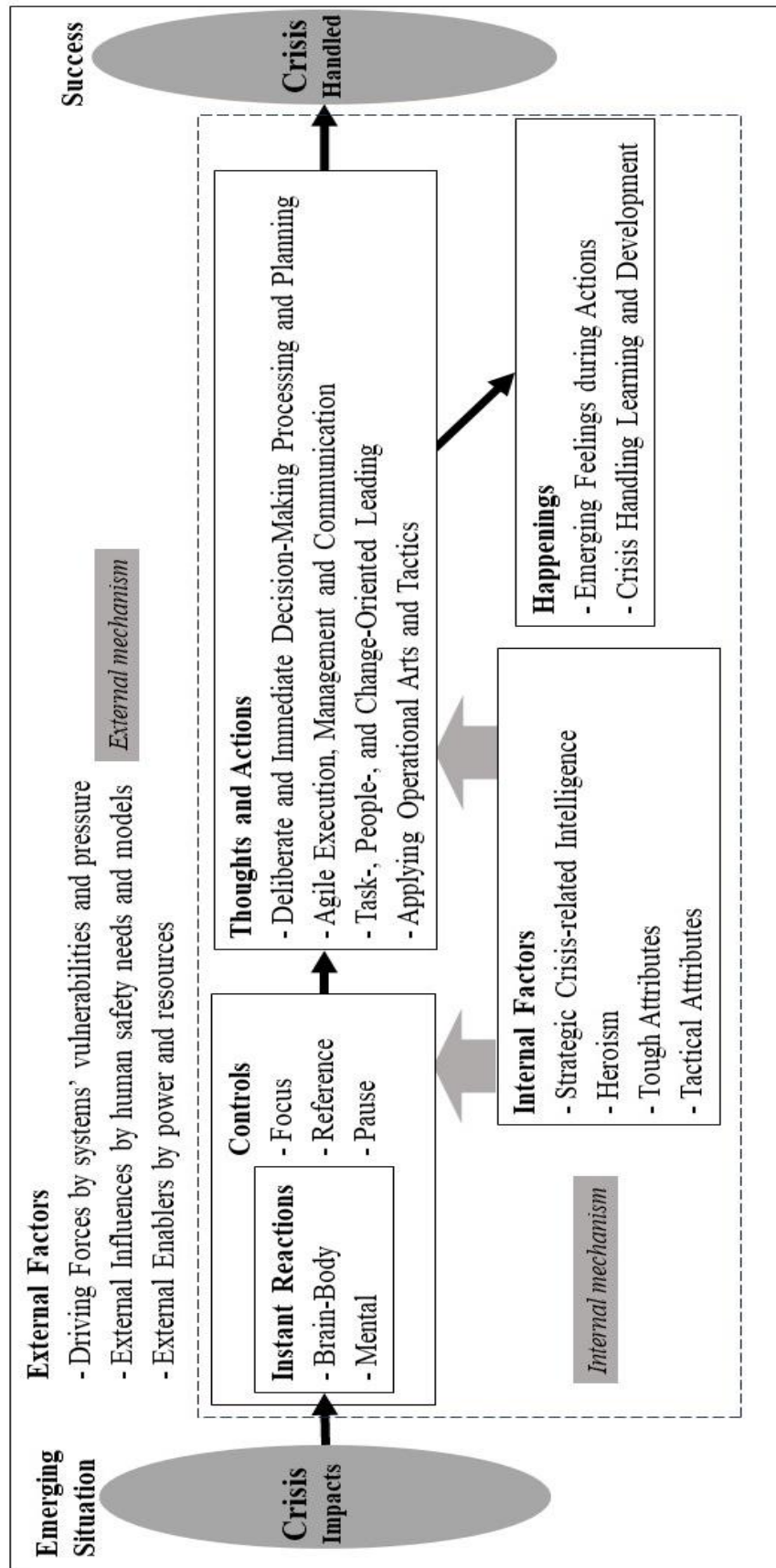


Figure 5.1 Crisis Leadership Theoretical Model (Without Details of Themes)

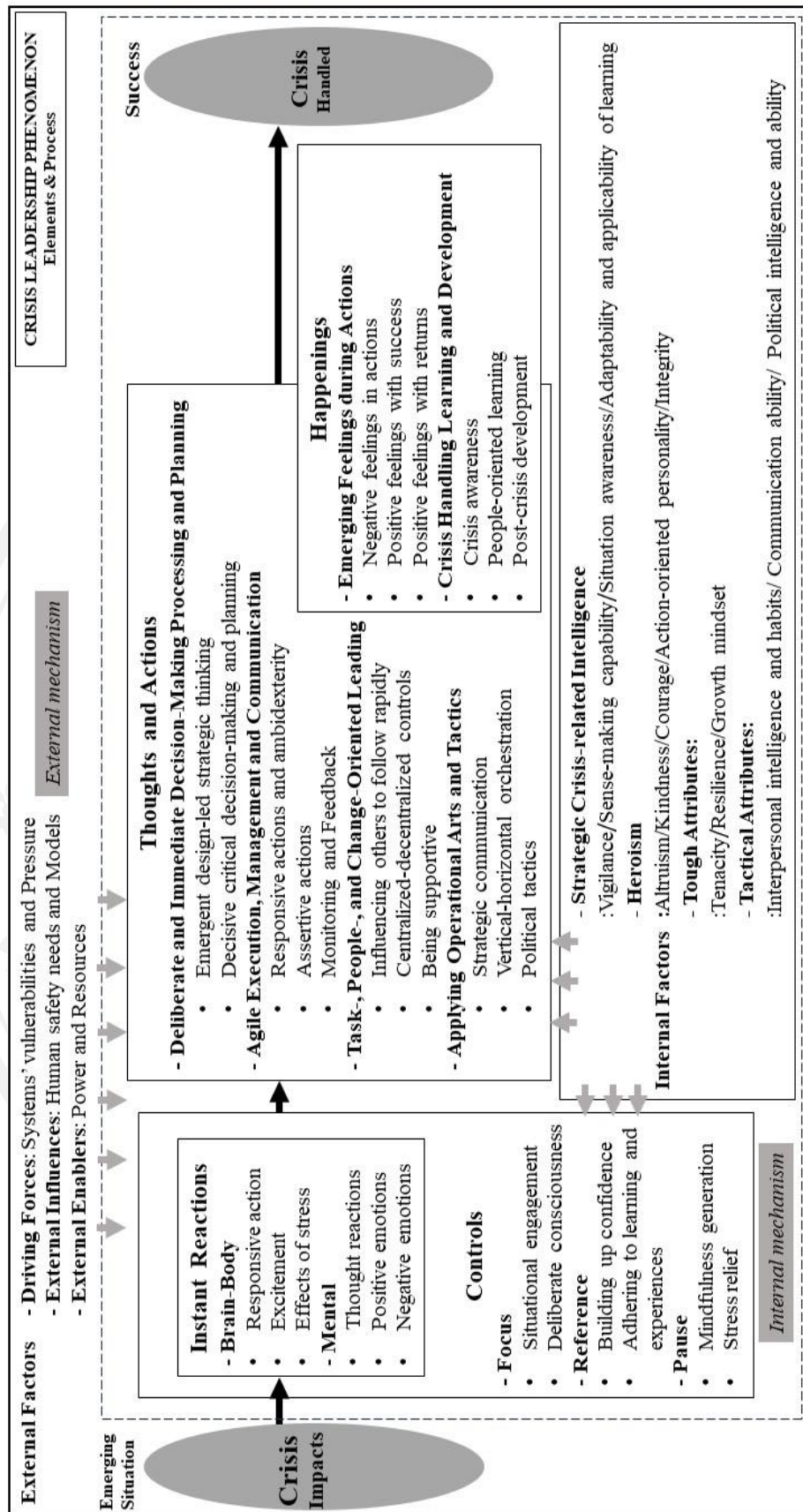


Figure 5.2 Crisis Leadership Theoretical Model

5.2.4.2 Crisis Leadership Theory and Leadership Theory Framework

Furthermore, in discussion of element and process for RSQ4 in the aspect of a leadership theory, this study brought the Leadership Integrative Elements Model that the researcher proposed in Chapter 2 adopting the propositions of Zaccaro et al. (2004) and Ruderman et al. (2014) to be a framework in explaining the findings of crisis leadership phenomenon. Figure 5.3 supports this discussion of element and process by illustrating all findings of crisis leadership phenomenon with the leadership integrative structure as mentioned in Chapter 2. Ruderman et al. (2014) suggested researchers to study beyond competencies, leadership would emerge by a function of circuitry, inner content, conscious engagement, and external behaviors. This holistic perspective is also critical for explanation of leadership phenomenon as Ruksana and Ahmed (2019) recommended that the leadership characteristic is “oriented toward the interplay between internal elements (physiological, psychological, emotional, thoughts, memory) and external behavior and activity” (p.5) that comes from “influences of state of mind and body, reflecting automatic processing emotions, thought patterns, past experiences, and level of self-awareness” (p. 5). Thus, this study adopted this proposed structure of deep elements as the proposed integrative model from models of Zaccaro et al. (2004) and Ruderman et al. (2014) for illustrating structure of elements and process of emerging crisis leadership theory.

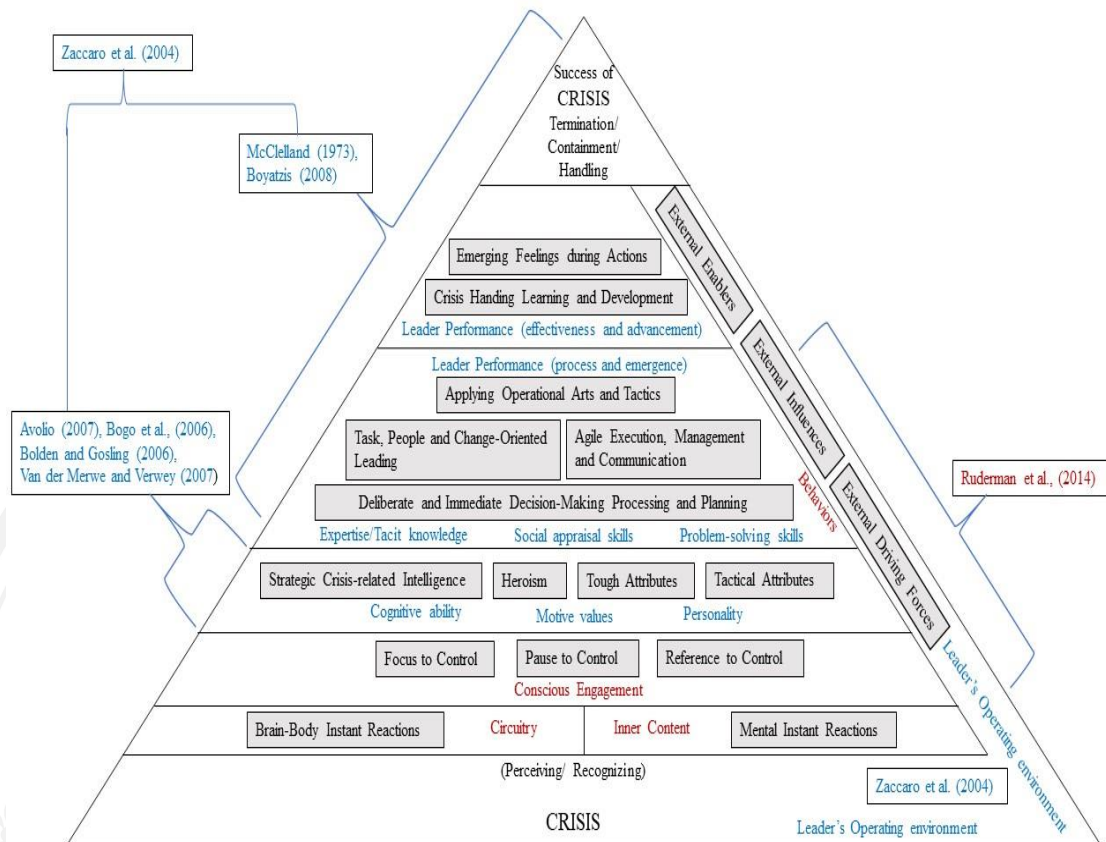


Figure 5.3 Crisis Leadership Theory, Presented in the Framework of Leadership Integrative Elements and Structure

Not only focusing on the individual phenomenon of persons who can have leadership, but this study also was interested the scope of leadership elements. As Western Governors University (2020) and Naushad (2021) stated that “leadership theories are the explanations of how and why certain people become leaders.” (p. 226), the theories for leadership have to be developed by the aim to explain how and why the leadership emerge. Thus, not only leadership competencies which are knowledge, skills, or abilities that facilitate individuals’ ability to perform a task, leadership is viewed as a dynamic process of individuals who lead that the roles evolve over time and influences can extend beyond the organization’s boundaries that requires perception and sense-making skills to determine appropriate courses of action (R. E. Boyatzis, 1982; Ulrich et al., 1999). Therefore, as mentioned that leadership in crisis management or leadership practices in crisis only presented practices and

competencies for practical contributions (Muffet-Willett & Kruse, 2009; Prewitt et al., 2011; E. Stern, 2013), this study proposed the meanings of ‘crisis leadership’ by developing a theory that would present underlying rationales and processes of individuals such as motivational and environmental factors including intuition, deliberation and interaction with a crisis (Bargh & Chartrand, 1999; Dijksterhuis & Nordgren, 2006; H. Li et al., 2016; Sloman, 1996).

The reason why competency is not enough can be seen from the and Zaccaro et al. (2004) developed the Model of Leader Attributes and Leader Performance presented the overlapping between scopes of trait and competency considered by the explanations of McClelland (1973) and R. Boyatzis (2008). Even competencies as knowledge, skills and ability are observable behaviors including some relevance of traits such as personalities and attributes (R. Boyatzis, 2008; McClelland, 1973), some details of leadership traits and attributes leadership are constructed from personality, temperament, motives, cognitive abilities, skills, and expertise which are deeper than practical level and unobservable (Avolio, 2007; Zaccaro et al., 2004). Zaccaro et al. (2004) presented that leadership performance are influenced by underlying proximal attributes which are social appraisal skills and problem-solving skills, and tacit knowledge, based on the deeper level by distal attributes which are cognitive abilities, personality, and motives values. Thus, leadership theory-building fundamental has to understand that leadership theory consists of cognitive elements, individuals and group behavior, historical context, proximal context and distal context which are broader and deeper than managers and leaders’ practices (Avolio, 2007). Also, all of these elements cannot separately influence the leadership performance. They are constructed jointly as a system influencing leadership phenomenon (Zaccaro et al., 2004).

Also, Van der Merwe and Verwey (2007) viewed the leadership is an inside-out approach. Bogo et al. (2006) mentioned that it relates to motivation and cognitive abilities, so-called meta-competencies meanwhile Bolden and Gosling (2006) mentioned that it should capture the sense-making nature and how meaning emerge and change over time rather than competencies in practices. They illustrated the example of musician that not only reading notes and playing instruments’ skills but also abilities of interpretation, improvisation and performance including emotion,

intuition, moral judgement, experience and etc. Furthermore, Ruderman et al. (2014) recommended the Beyond Competencies Model to extend from the focuses solely on tangible and observable behavior, to the internal and automatic process underlying the surface such as experiences, emotions, or mindsets, including “structures, relationships, and dynamics necessary to enact leadership” (p. 4). Ruderman et al. (2014) presented “less visible forces such as leaders’ physiological, emotional, and mental processes” (p.4) as three elements of the inner world, consisting of circuitry, inner content, and conscious engagement.

According to these two conceptual layers, they become foundation of leadership beyond, or deeper than, competencies. This study combined them as deep elements into the proposed integrative model from models of Zaccaro et al. (2004) and Ruderman et al. (2014) as Figure 1.2. Also, in attempt to define the meaning and theory of crisis leadership, the data needed from individuals to reflect their phenomena on crisis leadership should include these underlying factors and these constructs’ relationship. This helps to form the theory of crisis leadership rather than only practices and competencies (Bacharach, 1989; DuBrin, 2013; Wooten & James, 2008) as discussed in Figure 5.3 above.

5.2.5 Discussion for the Main Research Question: Crisis Leadership Theory

In this discussion part of the main research question, the researcher brought the derived crisis leadership elements and process as presented as the crisis leadership theoretical model and its statement as mentioned in Chapter 4 to check with the congruence of this study’s ultimate finding and the meaning of theory that was expected. The researcher had explored the deep understandings of meaning and mechanisms that the model of elements and processes was organized to present the interrelations, rationales, influences, and attributes of crisis leadership phenomenon. Then, this study proposed the statement of the Crisis Leadership Theory, aligning with the illustration of the model presented in Figure 4.2, Chapter 4. The statement was presented as followings.

“Under the crisis that causes brain-body and mental instant reactions, crisis leadership is a phenomenon that individuals can take a focus, reference, or pause to

control stressful impacts. Then, individuals think and take actions through deliberate and immediate decision-making processing, agile executing, managing resources, and communication, leading a team by task-, people- and change-orientation, and applying operational arts and tactics to succeed in responding to a crisis meanwhile having emerging positive and negative feelings during actions including getting learning and development in crisis handling. These thoughts and actions to lead people and manage resources in the crisis come from their strategic crisis-related intelligence, heroism, tough attributes, and tactical attributes internally and external driving forces, enablers and influences from other negative and positive surroundings including each individual's background".

As mentioned as a background and an objective in Chapter 1 and 2, there is no formal theory of crisis leadership that can explain a phenomenon of crisis leadership in terms of what, why, and how it is. This was needed for practices and scholars as it became the knowledge gap (Miles, 2017) as one type of seven research gaps. Nevertheless, by this study, all of these findings that were derived through this research methodology finally help to provide knowledge to be a theory of crisis leadership. Therefore, this phase of this dissertation attempts to assure this research result if it is a theory or not. The researcher discussed these three sections to provide rationales for clearly reporting this emerging crisis leadership elements, processes, and model from the qualitative research as a theory.

5.2.5.1 Discussion by meanings of a theory

As the goal of this study is to start building a theory of crisis leadership by the theory development research. Thus, the meanings of theory had been reviewed before set the research objectives and methodology. Here, after this study already discovered, constructed, and reported the findings of Crisis Leadership Theory as the above statement, these key definitions and meaning of theory are important to bring for supporting and confirm this research discussion.

Kerlinger (1977) defined a theory is "a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena" (p. 5).

Bacharach (1989) defined a theory is “a statement of relations among concepts with a set of boundary assumptions and constraints. It is no more than a linguistic device used to organize a complex empirical world” (p. 496).

Torraco (1997) stated that “a theory simply explains what a phenomenon is and how it works” (p. 352) and “system for explaining a set of phenomena that specifies the key concepts that are operative in the phenomena and the laws that relate the concepts to each other” (p. 114).

Abend (2008) elaborated that “this explanation should identify a number of ‘factors’ or ‘conditions,’ which individually should pass some sort of counterfactual test for causal relevance, and whose interaction effects should be somehow taken into account” (p. 178).

Senge (2014) defined a theory is “a fundamental set of propositions about how the world works, which has been subject to repeated tests and in which we have gained some confidence” (p. 29).

Besides these scholars’ definitions, this study also early proposed the research operational definition of ‘theory’ that it is ‘the explanation of phenomenon as a conceptual proposition within a set of boundary assumptions and limitation provides understandings of what and how phenomenon is, but, by what and how, it has to state its underlying constructs and their systematic interrelations and influences which come through methodology in generating and repeatedly testing’.

Therefore, according to these meanings, the theory as a result of this study in theory-building above had already answered the main research question of this study. However, by this aspect of discussion, some might argue with the point that a theory needs repetitive tests. As presenting in Chapter 1, this study was considered by the researcher to be the initiation of theory development according to Lynham (2000)’s General Method of Theory-Building Research in applied disciplines that the theory development is a long journey with one proposed theory as start point and then the other studies would help to test and refine it until becoming as a strong theory. By the view of theory development research method, this study is the first to step in building crisis leadership phenomenon as a theory and can be called as a theory that is waiting to be further developed (tested) by the future scholars (Richard J Torraco (2005).

5.2.5.2 Discussion by the Repetitive Test in this Research Method

As mentioned above, even this emerging theory can be argued by the researcher to rationalize it as a theory and just waits to be test in the future study. In this conducted method, the actual research operations itself can be explained and viewed as it already presented the repetition of test and confirmation. At the beginning of the research project, the research planned to interview more than 30 participants because of anticipation of an issue on publication and the scope of study that is the cross-industry research. Therefore, this qualitative study met the saturation point at participant 4 for theme saturation, and participant 23 for meaning saturation (Hennink et al., 2017). Also, the discriminant sampling which is a strategy and a technique in the grounded theory method to move toward saturation (Creswell & Poth, 2016). As a result, the interview result after this saturation can be considered as the derived theory was repetitively tested additionally beyond the saturation point itself that actually also came from consideration of repetitive results in qualitative method researchers' paradigm (Wilig, 2014). This summary of saturation was simply concluded in Table 5.2 to show that there were numerous repetitive results after the saturation.

Table 5.2 Summary of Saturation

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

RQ1's Findings – Data Saturation: 2 - Meaning Saturation: 23

- A) Deliberate and immediate Decision-Making Processing and Planning (2/8)
- B) Agile Execution, Management and Communication (2/13)
- C) Applying Operational Arts and Tactics (2/7)
- D) Task, People and Change-Oriented Leading (2/10)
- E) Emerging Feelings during Actions (2/15)
- F) Crisis Handling Learning and Development (2/23)

RQ2's Findings – Data Saturation: 3 - Meaning Saturation: 20

- G) Brain-Body Instant Reactions (Physical/Neurological) (2/17)

Main Research Findings – Data Saturation 4 – Meaning Saturation 23

H) Mental Instant Reactions	(2/17)
I) Focus to Control	(2/13)
J) Reference to Control	(2/18)
K) Pause to Control	(2/20)
L) Strategic Crisis-related Intelligence	(2/7)
M) Heroism (Heart)	(2/17)
N) Tough attributes	(3/13)
O) Tactical attributes	(2/8)

RQ3's Findings – Data Saturation: 4 - Meaning Saturation: 23

P) External driving forces	(2/4)
Q) External Enablers	(2/13)
R) External Influences	(4/23)

5.2.5.3 Discussion by the paradigm of the grounded theory development method

As mentioned in Chapter 2, there are various theory building methods, concepts and paradigms. Richard J Torraco (2005) reviewed all quantitative, qualitative, and mixed method approaches of theory development research method, proposed as Dubin (1976)'s theory-building research method, Yang (2002)'s meta-analytic research, Moustakas (1994)'s phenomenological research, Gergen and Thatchenkery (2004)'s social constructionist research, Eisenhardt (1989)'s case study research, and Lynham (2000)'s General Method of Theory-Building Research which is multiparadigm method of theory development. For this study, the researcher adopted Strauss and Corbin (1998)'s grounded theory research and Egan (2002)'s grounded theory-building research method to the research project because of a goal to explore the meaning and building a theory as moving the data from informants to a theory.

The result of this method can be called as a theory. Egan (2002) and Torraco (2005) included the grounded theory method as one of theory development research method in theory building. Additionally, Wu and Beaunae (2014) and Glaser

(2002) recommended this method for the doctoral research. By selecting this methodology, there are many critical characteristics to comply with its methodological process (Charmaz, 1996, 2008; Corbin & Strauss, 1990) as mentioned before in Chapter 3: 1) minimization of preconceived hypotheses, 2) data collection and analysis are interrelated, 3) concepts are the basic units of analysis, 4) categories must be developed by analytic codes from understanding of data, 5) theoretical sampling is sampling for theory construction to check and refine the analyst's emerging conceptual categories for theoretical saturation, not for representativeness of a given population, 6) analysis makes use of constant comparisons, 7) patterns and variations must be accounted for, 8) the development of middle-range theories to explain behavior and processes, 9) broader structural conditions must be brought into the analysis, however microscopic in focus is the research and 10) delay of the literature review.

As a result, according to Charmaz (1996, 2008), Corbin and Strauss (1990), Egan (2002) and Torraco (2005) mentioned this method's outcome as the mid-range theory, the crisis leadership theory that researcher found this study can be viewed as a theory. This is also supported by Boudon (1991) in sociology reviewed literature and stated that "in other words, the middle-range theory describes effectively what the other sciences simply call 'theory'" (p. 520).

5.2.5.4 Model of Crisis Leadership Theory

From the research findings and reiterating above in 5.2.5, the researcher detailly defined crisis leadership as a long statement to cover all categories found in this study. It was presented that "under the crisis that causes brain-body and mental instant reactions, crisis leadership is a phenomenon that individuals can take a focus, reference, or pause to control stressful impacts. Then, individuals think and take actions through deliberate and immediate decision-making processing, agile execution and communication in managing resources, leading a team by task-, people- and change-orientation, and applying operational arts and tactics to succeed in responding to a crisis meanwhile having emerging positive and negative feelings during actions including getting learning and development in crisis handling. These thoughts and actions to lead people and manage resources in the crisis come from their strategic crisis-related intelligence, heroism, tough attributes, and tactical attributes internally

and external driving forces, enablers and influences from other negative and positive surroundings including each individual's background". Nevertheless, this study finally simply proposes the definition and the Model of Crisis Leadership Theory (C-Model) in Figure 5.4 as the followings.

Crisis Leadership Theory:

Crisis leadership is "a phenomenon that an individual can take a control of emerging instant reactions from stressful impacts under a crisis and then has to think strategically rapidly in making decisions critically, agilely taking actions, managing resources and communication artfully, and influencing others by intelligence, heroism, toughness and tactics internally incorporating with external driving forces, enablers and influences to handle the situation effectively that feelings, learning, and development also happen to the individual during this phenomenon".

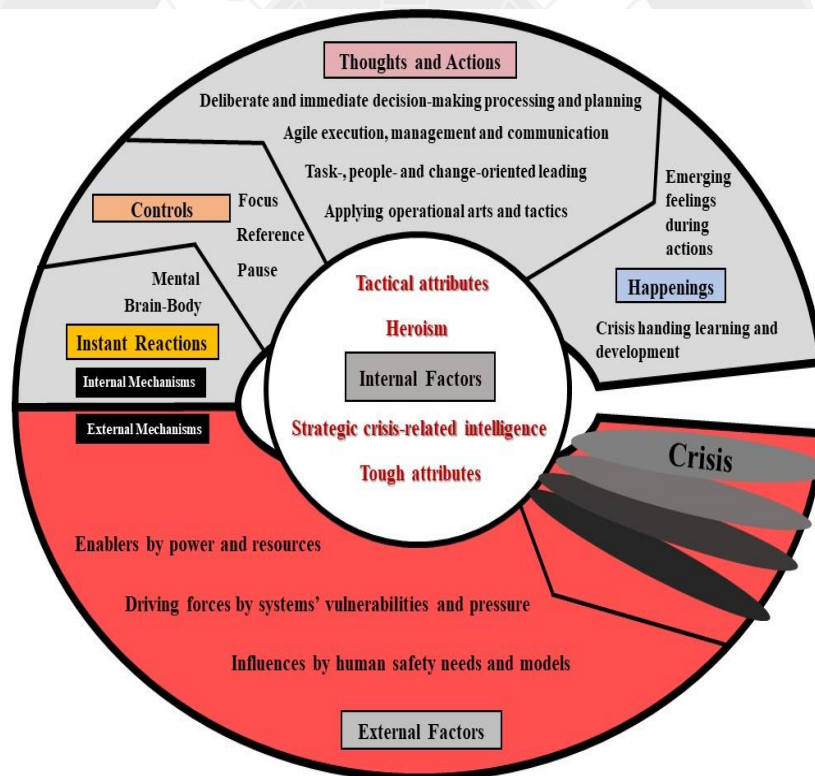


Figure 5.4 Model of Crisis Leadership Theory (C Model)

5.3 Leadership Theory Paradigm Discussion for Crisis Leadership Theory

By using qualitative approach, some literature review can be fulfilled after the research data collection and analysis as previous discussion on the findings (Creswell & Creswell, 2017). This section will additionally discuss the leadership theory paradigm that the Crisis Leadership Theory are in. Academically, leadership theories can be classified to various theories or so-called paradigms which are important for literature review of leadership research (Lussier & Achua, 2015).

5.3.1 Four Leadership Theory Paradigms

By thousands of leadership meanings (Azad et al., 2017), some scholars pointed the view on leadership theories through various approaches such as Northouse (2021) defined trait, skills, behavioral, and situational approaches, mainly based on trait, behavior, and contingency theories (Dambe & Moorad, 2008; Nawaz & Khan, 2016). Besides the view on this as approaches or main theories for leadership, Lussier and Achua (2015)'s work cited by almost two thousand papers, proposed this as the four paradigms of leadership theories, this classification includes trait, behavioral, contingency, and integrative theory paradigms of leadership (Lussier & Achua, 2015).

The Trait Leadership Theory Paradigm reflects studies and theories that were early based on the assumption that leaders are born, not made. Those researchers sought for a characteristics or traits of ones who are effective leaders. The Behavioral Leadership Theory Paradigm further focuses on what leaders do or behave on the job. Behavioral scientists aimed to explain why people do what they do at work hence research has focused on behavior of leaders affects follower performance, and the need to promote, develop, and maintain team performance. This includes leaders' consideration of task, people, or both which are task behaviors and relationship behaviors.

According to the trait and behavioral leadership theories, scholars attempted to find the best leadership style in all situations that later in the 1960s, they found that no one best leadership style in every situation, rather it often depends on the situation. Therefore, the paradigm shifted to the Contingency Leadership Theory Paradigm that theories were developed to explain the appropriate leadership style based on the

leader, followers and given situational variables. This Contingency Leadership Paradigm or the Contingency Theory is associated with situational factors in considering leadership phenomenon consists of (Fiedler, 1958)'s Contingency Leadership Theory, Tannenbaum and Schmidt (1973)'s Leadership Continuum Theory, House (1971)'s Path-goal Leadership Theory, and Vroom and Yetton (1973)'s Normative Leadership Theory.

Besides leaders and followers, these theories brought consideration of situation in understanding of leadership. Fiedler (1958), who had been the key scholar in applying the Contingency Theory, concerned with internal situations as leader-member relations, power, and task structure. This concern of task structure is matched with this paper focus on crisis leadership that this theory mentioned about a task that can be less or more structured relating to existing standard procedures or challenging deadlines. Tannenbaum and Schmidt (1973) elaborated that situation means time that should be important consideration that causes styles of leadership between autocratic to participative ones on the continuum. This effort to study relations between leadership styles and situation such as tasks and time also was emphasized in theories by House (1971) and Vroom and Yetton (1973). Even these theories were beneficially presented as the models to identified leadership styles for appropriate tasks. They do not deeply explain about a specific leadership phenomenon in a single type of situation such a crisis.

Finally, the fourth paradigm that the researcher adopted the classification of Lussier and Achua (2015) is the Integrative Leadership Theory Paradigm, they separately explained the movement of leadership research in the mid-to-late 1970s that shifted to the integration of theories on leadership. Lussier and Achua (2015) therefore defined the paradigm of integrative leadership theories as the attempt in developing a theory "to combine the trait, behavioral, and contingency theories to explain successful, influencing leader-follower relationships" (p. 476).

5.3.2 Contingency and Integrative Leadership Theory Paradigms

By this classification, this research finding of Crisis Leadership Theory can be classified as under the Contingency Leadership Theory Paradigm as the emerging theory explains the crisis leadership phenomenon that is based on the situation of

crisis, triggering the leadership performance. Even the researcher found the internal factors in RQ2, they are not traits that are born attributes. Rather, crisis-related intelligence, heroism, toughness and tactical attributes, found in crisis leaders came from their surrounding factors and triggering perception based on others and situations. The first two can be seen like they are the behavioral paradigm which focuses on leaders in relation with tasks and people but in overall of four internal factors still should be classified as the contingency paradigm that covers the leader, followers and given situational variables (Lussier & Achua, 2015). Nevertheless, the Integrative Leadership Theory Paradigm that was additionally proposed also fit with this research result because the findings of this study found not only actions and given situations as the facing crises, but also traits, behaviors, feelings, and other phenomena beyond observable actions such as neurological, physical, and psychological aspects. Therefore, the Crisis Leadership Theory is also fit in the Integrative Leadership Theory Paradigm. The Figure 4.2 in Chapter 4 illustrating the storyline of crisis leadership phenomenon focusing the dynamic elements and processes, and also Table 4.13 presenting the interrelation among the external and internal mechanisms including thoughts, actions and happenings, help to support this discussion that the finding of crisis leadership theory can be classified as these two leadership theory paradigms as it includes all explanation on trait, behavioral, and contingency aspects. The key supports were pointed in the next section.

5.3.3 Findings of Crisis causing Leadership Phenomenon

In supporting the discussion on contingency and integrative paradigms, numerous empirical tests of these theories and models helped to explain that these types of challenging situations including crises are causes affecting the leadership style (Lussier & Achua, 2015). Also, this research finding show the crisis leaders are triggered by crisis impacts and the need of person to lead others in stressful situations or in vulnerable systems. Therefore, this might conclude that a crisis makes leadership emerges during those situations as Fener and Cevik (2015) stated that “a leader is born when there comes the need for crisis management. Leadership emerges at this moment and lightens the path, creates sources, guides the way, takes decisions, initiates and operates actions” (p. 698). In crises and chaos, people need one who

perform leadership with power, self-confidence, accessibility, and ability to motivate them to struggle with situations (Fener & Cevik, 2015).

According to the definitions of crisis such as “a situation in which there is a perceived threat against the core values or life-sustaining functions of a social system that requires urgent remedial action in uncertain circumstances” (Rosenthal et al., 1989, p. 10) or “a situation faced by an individual, group or organization which they are unable to cope with by the use of normal routine procedure and in which stress is created by sudden change” (Booth, 1993, p. 402), the crisis is a situation that differentiates a leader and followers in those facing events. Crisis leaders are built or activate by their perception of threats and impacts. From those academic definitions and the result of this study, there are some unique effects from a crisis as to be mentioned next in driving the leadership that reflect other factors which are not only emerging situation as claimed by contingency approach, but also their specific traits and behaviors in only some individuals who can be crisis leaders. Therefore, this rationale supports the Crisis Leadership Theory from this study to be classified under the Integrative Leadership Theory Paradigm (Lussier & Achua, 2015).

5.3.3.1 Surprise, Startle, and Stress: Crisis contexts

From definitions of crisis and this research finding, individuals might tend to be in a state of shock and escape from reality with fear, stress, anxiety, and maladaptive reactions (Makwana, 2019). Surprise, startle and startle responses as psychophysical reactions will emerge when individuals experience these unexpected and unfamiliar events. They would freeze for a moment, and not know what to do next as the human mind is considering triggering the fight or flight response (Horstmann, 2006; Kalat & Shiota, 2011; Simons, 1996). Bracha (2004) categorized these responsive functions as freeze, flight, fight, fright, and faint. For example, there have been increasing studies of surprise and startle in the aviation domain which faces crises and accidents (Landman et al., 2017; Martin et al., 2015). Whereas freezing is a form of behavioral inhibition accompanied by parasympathetically dominated heart rate deceleration, fight-or-flight reactions are associated with sympathetically driven heart rate acceleration (Roelofs, 2017).

Secondly, stress is one of the phenomena that happen to individuals during a crisis event. Individuals who lead other people have to face ambiguity, high-

level decision making, insufficient resources, conflicts, and politics in groups, teams, or organizations. Janka et al. (2015b) studied 30 crisis managers compared to non-crisis managers on self-reported stress, health status, and psychophysiological reactivity to crisis-related and non-specific visual and acoustic aversive stimuli and cognitive challenges. They found crisis managers have lower stress levels, a more positive strain-recuperation-balance, greater social resources, reduced physical symptoms, more physical exercise, and less alcohol consumption. The results show increased behavioral and psychophysiological adjustment to the extreme demands in situations of persons who lead and manage a crisis.

5.3.3.2 Emotions and Reactions in Crises

Crises trigger reactions that tend to cause stress as an emotional state (S. P. Brown, Westbrook, & Challagalla, 2005; Lazarus, 1991b). Elfenbein (2007) stated that emotion “begins with a focal individual who is exposed to an eliciting stimulus, registers the stimulus for its meaning, and experiences a feeling state and physiological changes, with downstream consequences for attitudes, behaviors, and cognitions, as well as facial expressions and other emotionally expressive cues” (p. 315). Also, emotions might trigger or disrupt expected behaviors. Nevertheless, arousal is an automatized physiological and psychological reaction that triggers flight (hyper-arousal), freeze (hypo-arousal) and fight activations by different positive and negative intense and ambivalent stress emotions that affect crisis leadership (Mitroff, 2007; James et al., 2011) which has to manage them as a key to survival of individuals and groups (Lazarus, 1991).

Further than the stress, leadership often emerged in crisis. Harris (2007) mentioned that leadership as an emotional process that is necessary for implementing change. Halverson, Murphy, and Riggio (2004) mentioned that “a great deal of research and theory has linked charisma to crisis” (p. 498). Their study found that leaders in the stress condition were perceived as significantly more charismatic than leaders in the no-stress condition. Besides creativity, harmony and agility, Tutar (2004) mentioned that people need one who has self-improvement, independent thinking and initiative taking and can unite, motivate, and activate people to fight against a threat with an unexpected option when an ordinary person have accepted the lack of solution. when common solutions are invalid in a crisis.

In emergence of leadership, a decision-making process is also a linkage from influences of unexpected and difficult situations initiating behavioral outcomes of individuals during crises. Sayegh et al. (2004) were interested in an intuitive decision process during crises that they focused on the role of emotion. Those emotions such as fear, anxiety, hope and regret, force individuals to shift decision-making paradigms from tradition or systematicity to alternative models of choice because time does not allow a careful thought through a rational approach. Therefore, the intuitive approach comes from when emotions activate an adaptive function in uncertainty by minimizing past fears but exaggerating future fear from present situations (Ubel & Loewenstein, 1997).

Sayegh et al. (2004) proposed the model explaining that intuitive decision process mainly comes from perception and interpretation of event, explicit and tacit knowledge, and emotional response. Meanwhile tacit knowledge is generated by cognitive schema, emotional response comes from emotional memory and efficacy. All of these factors causing intuitive decision process are developed by experiences, education and training. For leadership in crisis, a factor of efficacy underlying emotional response is a key. Sayegh et al. (2004) mentioned emotional intelligence which is the ability to recognize emotional states of oneself and others causes the sense of belief and confidence in individuals to solve a problem and regulate behaviors. Therefore, this supports that various conditions in a context of crisis are factors in emergence of leadership in a crisis.

5.3.3.3 Leadership driven by Task, People, and Change

From the research findings, crisis leaders concern various dimension including achieving the task, caring people, and adapting for change. There are findings as the themes of influencing others to follow rapidly, centralized-decentralized controls, and being supportive. This means crisis situations affecting tasks, people and unexpected change that drive individuals become a leader. Karelaia and Van der Heyden (2020) strongly supported this study finding that crisis leaders have different behaviors or leadership styles in one person. Karelaia and Van der Heyden (2020) stated that, for crises,

“Effective leadership in the face of wicked problems calls for a very different set of virtues than those traditionally associated with leadership. These

virtues include both confidence and humility, decisiveness and fairness, empathy and courage. We discuss the specific leadership behaviors through which leaders can enact these virtues. Importantly, we suggest that in the face of wicked problems, different behaviors are required at each of the five stages of making decisions: framing the problem, exploring alternatives, “taking” decision, execution, and learning” (p. 1).

Crisis leaders have to be ready and fast in changing environments, decisive in taking reaction, influential in leading and transforming others mindset, and caring, interacting, and trusting others, respectively. This is consistent with various concepts of leadership and ambidexterity (Papachroni & Heracleous, 2020; N. Turner & Lee-Kelley, 2013) as mentioned in crisis leaders’ agile execution, management and communication as one of this research findings. Furthermore, by theoretical sensitivity and sampling, this study found the involvement with the authentic leadership concepts as Avolio, Luthans, et al. (2004) defined as well.

Furthermore, It is also closely associated with the leadership agility (B. Joiner, 2019; B. Joiner & Josephs, 2007). Crisis leaders perform leadership by combining, balancing, and sequencing some key features of Agile (Aftab et al., 2022; Çobanoğlu & Demir, 2022; B. Joiner & Josephs, 2007), Directive (Bowers et al., 2017; Post et al., 2022; Rico et al., 2022), Transformational (Bass & Riggio, 2006), and Servant (Greenleaf, 2002; Spears & Lawrence, 2002; Zada, Zada, Ali, et al., 2022) Leadership styles.

On the other hand, situational leadership was included to the discussion as the finding shows crisis leaders present various styles in one person. It supports the part of being the contingency paradigm. However, it depends on dynamic situations and timeframe of events. As Hersey et al. (1979) proposed the situation leadership theory, it was clear at first that they did not provide a specific style of leadership, rather they analyzed and discussed relevant factors, which mainly are power and situation to illustrate the prescriptive curve presenting four styles of leaders: telling, selling, participating, and delegating that came from two dimension generating four quadrants of relationship behavior (low-high) and task behavior (low-high).

In the area of crisis research, Islam et al. (2021) studies effectiveness of situational leadership style in managing workplace crisis through relevant literature.

They stated that “the situational leader seamlessly switches between different leadership styles to suit the organizational needs and develop trust and confidence among the followers. It encourages the employees to reach the leader and seek guidance regarding the resolution of difficult situations like risk and reduce it considerably. It helps the team to make the rightful decision and mitigate the risk or crisis” (p. 362). They also mentioned that crisis leaders that differently performed leadership styles such as flexibility, coaching, delegating, participating, humility, and others to ensure that decision-makings were made for dissimilarity of threats or crisis situations faced by teams or organizations (Islam et al., 2021). Thus, this research result is consistent with their finding.

5.4 Limitation of the Study

Even though this study provides beneficial findings to the academic and practical fields of crisis leadership, there are some limitations in the research project that must be informed. Firstly, the qualitative methodology was considered for this research as the initiation of the theory development research general method (Lynham, 2002). Therefore, the result of this research is still in the conceptualization phase as the on-going process for the next operationalization, confirmation or disconfirmation, and refinement phases by the future research

Secondly, as this study aimed for exploring the whole crisis leadership phenomenon, the researcher studied and discussed the derived elements and processes in a broader scope through the leadership framework and structure as scholars in an area of leadership theory construction mentioned (Bacharach, 1989; Bogo et al., 2006; Bolden & Gosling, 2006; R. Boyatzis, 2008; McClelland, 1973; Ruderman et al., 2014; Zaccaro et al., 2004) as presented above. Therefore, this research did not include the deductive study to test specific correlations and causalities of detail factors and variables in this phenomenon. The researcher of this study focused on exploring the crisis leadership phenomenon as a whole with understanding actions, rationales, elements and relational mechanisms from the interviews as qualitative inquiry from participants and derived understanding of the researcher through the grounded theory protocols (Charmaz, 2006; Egan, 2002). The future studies can research and test based

on various theories and concepts the researcher referred to in each category and themes in the discussion of elements that might be mainly conducted by quantitative methodologies.

Thirdly, the researcher found that basic office software such as Microsoft Word, Excel and Power Point were enough for the grounded theory researcher as it relied on the discovery from information with the research understanding beyond only words in the interview and the grounded theory researchers also have construct the result from the data by themselves (Egan, 2002). However, this is different from the others qualitative methods that a qualitative research software might help to analyze data and access to raw data such as the content analysis qualitative research that researchers rely on the word count and specific spoken words by informants for the analysis (Mayring, 2004) or the phenomenological research that is discovery-oriented and does not attempt to thematize the data but they have to be sensitive for phenomenon and subject's everyday language used rather than disciplines (Giorgi (1997).

5.5 Implications and Recommendations for HRD Scholars

HRD scholars will directly get benefits and implications from this study as this discipline concerns necessity of a theory (Torracco, 2005). A theory was positioned at the central among research, practices, and development. Theories are important to support developmental interventions and concepts to enhance individuals' performance (Swanson, 1995, 1997).

5.5.1 Confirmation and Refinement of the Emerging Crisis Leadership Theory

The main contribution of this study was to initiate the theory development of crisis leadership. Scholars can further study in some specific aspects from emerging theory of crisis leadership or continue the next step of the theory development research method (Lynham, 2002) as the phases of operationalization, confirmation, application, and refinement. The researcher provided numerous literatures discussing and referencing concepts and theories in the findings that can be further studies

correlations and causalities among these variables and factors. Also, scholars focusing on each domain are recommended to apply this emerging theory to test this theory's generalization and help to robust this theory including exploration of details in specific domains and industries or each level in an organization. Alternatively, ones can adopt this framework to design the leadership development training for enhancing crisis leadership to test it through action research methodology (McNiff, 2013).

5.5.2 Various Constructs for Scholars' Different Interests

Secondly, the finding of crisis leadership theory project reflects practical explanation providing clear understanding of the purpose of this theory that can be linked to real-world understanding of ones who have crisis leadership because it is a simple word as a 'crisis' and a 'leadership'. However, the researcher found the findings related to various concepts under this theory umbrella such as sensemaking (Weick, 1995a), grit (Duckworth et al., 2007), learning agility (Lombardo & Eichinger, 2000), resilience (Herrman et al., 2011), OCB (Organ, 1988), political skills (Ferris et al., 2016), communication (Coombs, 2014a), different kinds of psychological concepts and different types of leadership that scholars in those specific interest areas might be interested to investigate them as they are both traditional and modern theories and concepts in the future.

5.5.3 Support for the Cross-industry Study in Qualitative Research

The third implication of this study supports and recommends the research on the cross-industry study in qualitative research. This study found that the different domains under the same specific context such as a crisis leadership in this case provided the consistent information as informants experienced the indifferent phenomenon. This is supported by various examples of scholars conducting the cross-industry qualitative research by Dodourova (2009), Cortimiglia, Ghezzi, and Frank (2016), Sujana et al. (2017), and Saeed and Kersten (2020), in areas of strategic decision-making, business innovation, sustainable performance and risk reduction, respectively. In leadership studies, scholars also designed cross-industry research projects as well (Stärk, 2022; Stephenson, Dzubinski, & Diehl, 2022; Strang, 2005).

Also, this research project supports the effectiveness on both process and outcomes in using Patton (2015)'s sensitizing concept exemplars sampling in seeking for illuminative cases that this study's achievement came from selecting the right crisis leadership exemplars as appropriate area of inquiry for this research methodology (Egan, 2002). Patton (2015) explained this strategy that researchers "select cases for study that are exemplars of the concept or construct that is the focus of inquiry to illuminate the theoretical ideas of interest" (p. 407). This strategy is appropriate for sensitizing concepts that Patton (2015) suggested examples such as "empowerment, leadership, inclusivity, sustainable development, complexity, and innovation" (p. 407). Therefore, the future research on the cross-industry study should consider this research practices. Nevertheless, in this study, the main definition on a topic as a crisis leadership was non-specific for any domain but specific for a situational context hence it was still applicable for the theoretical sampling. Therefore, it depended on the selection process that it had to be assured and qualified to process participants to the interviews to inquire the trustworthy data for the cross-domain topic. This study demonstrated Patton (2015)'s sensitizing concept exemplars sampling strategy that scholars can adopt from this research.

5.5.4 Crisis Leadership Phenomenon beyond Actions for Executives' Case Studies

One of future research directions is recommended to increase transability of Crisis Leadership Theory by studying the executive level in some famous cases through direct interviews or document researching on their previous interview transcripts or biography. The method used can apply this study's inquiry structure to derive information beyond their practices and actions in the crisis. Rather, it can find rationales, motives, impacts, controls and emerging feeling in those situations to confirm the Crisis Leadership Theory that the research found.

For example, the researcher found the famous story of Google Inc. and Microsoft Corp., experiencing disruption and challenges after the launch of the Apple's iPhone in 2007 which became a crisis and how the Google was able to survive and the Microsoft was not. It can be compared to this research finding in a part of crisis leadership meaning (actions) and associated with other crisis leadership

concepts that this study argued that they are only practices of crisis leaders in Table 1.2 in Chapter 2 (Heifetz & Linsky, 2002, 2017; James & Wooten, 2004; Prewitt et al., 2011; Stern, 2013; Jaques, 2012; Boin et al., 2013; Williams et al., 2017). Google had been developing the project for two years in developing a non-touch screen smartphone when they suddenly stopped the project because of the arrival of iPhone in 2007 with the touchscreen and they rapidly changed to develop the touchscreen smartphone and touchscreen's operating system. Google recognized this potential disruption and business opportunity whereas Microsoft did not believe in this technological change. Then, Google continued announcing the founding of the Open Handset Alliance, a consortium of dozens of technologies and mobile telephone companies, in order to develop and promote Android as a free open-source operating system with support for third-party applications but Google has a condition that the default settings must be all Google services, such as Google search engine, Google Chrome and Gmail.

According to this research result on the Crisis Leadership Theory, this case study fits to some categories and theme such as strategic crisis-related strategies in foreseeing change and making a critical decision, agile execution in rapidly terminating the old project and starting a new important one, applying operational arts and tactics in trying to get alliance and to compete with Apple by offering a free open source and negotiation to take benefits for Google's products itself in every partner's smartphone model using the Android. Therefore, the mentioned example reflects the implication that these findings on actions in crisis are also transferable or generalizable that also supports another point of trustworthiness in confirmability (Shenton, 2004) that Google's CEO, Eric Schmidt, have crisis leadership actions whereas in this case, Microsoft's CEO, Steve Ballmer could not manage it effectively (Gans, 2016). However, for the Crisis Leadership Theory by this research result, these observable facts are only in the aspect of crisis leadership actions that need to be more understood the facing experiences, impacts, controls, motives, rationales, and happenings during the crisis situations from the disruption. By this, scholars and professionals can get be beneficial knowledge for future human resource and leadership development.

5.6 Implications and Recommendations for HRD Professionals

This study provides contributions to practices that can be pointed as four implications. The understanding of crisis leadership phenomenon through the proposed Crisis Leadership Theory highly relates to practices as various domains and organizations are experiencing the impact of the VUCA world situation.

5.6.1 Crisis Handling Development

Apart from the formal training about emergency management training and procedures that highly links to crisis management and crisis leadership, this study presented that emergency and crisis are different (Al-Dahash et al., 2016) that HRD practitioners needs to understand the characteristics of crisis (Shrivastava, 1993; Simon, 1993). The findings showed that there are numerous actions and tactics which can be applied to be HRD intervention such as formal and informal training programs. Being consistent with Jaques (2009), Wooten and James (2008), Prewitt et al. (2011), and Boin et al. (2013), the findings helps HRD practitioners to design the training to enhance individuals to manage and lead in a crisis. Furthermore, this study also presented the derived information that crisis leaders have various tactics that HRD can generate more developmental interventions about political skills (Ferris et al., 2007), strategic communication (Hallahan et al., 2007), interpersonal intelligence (Gardner & Hatch, 1989) and vertical and horizontal structures for coordination, cooperation and collaboration (Boin et al., 2013).

Specific phenomena when individuals get the crisis impact interfering with neurological, physiological, psychological, behavioral aspects of human have to be considered to adopt some training programs from high reliability domains such as aviation and health care to develop individuals to deal and cope with these reactions such as how to manage themselves with surprise and startle effects under stress. This might be at least the attempt to provide knowledge of this human nature to individuals such as human factors, crew resource management, non-technical skills training in aviation and healthcare that aim for creating the awareness of themselves in the situations. Also, this kind of training helps to prevent errors and improve effectiveness of teams and organizations. Gaba (2010) provided example in applying crew resource

management (CRM) training in aviation to be crisis resource management in medicine for improving patient safety. Even in the healthcare domain itself already has a non-technical skills training which also trains practitioners about human factors to prevent errors in routine operations (Flin & O'Connor, 2017), Gaba (2010) mentioned that crisis resource management training aims specifically for a crisis.

5.6.2 Crisis Leadership Development

In training for crisis leadership that HRD and leadership development (LD) practitioners have to consider, it is not about training crisis leadership practices only but also the findings showed that other leadership concepts such as servant leadership (Greenleaf, 2002; Spears & Lawrence, 2002), transformational leadership (Bass & Riggio, 2006), agile leadership (B. Joiner, 2019), directive leadership (Post et al., 2022) and authentic leadership (Celik et al., 2016) are involved with people who perform crisis leadership phenomenon. Therefore, various leadership development practices have to be considered and applied to build a crisis leader through leadership development. Especially, the research found various elements related to the Joiner and Josephs's Leadership Agility Compass (B. Joiner, 2019; B. Joiner & Josephs, 2007) that was fit to lead in a crisis. Four competencies are 1) context-setting agility, consisting of situational awareness and sense of purpose, 2) stakeholder agility, consisting of stakeholder understanding and power style, 3) creative agility, consisting of reflective judgement and connective awareness, and 4) self-leadership agility, consisting of developmental motivation and self-awareness. There are three levels from the research to identify leadership agility starting from the expert to achiever, catalyst, co-creator, and finally synergist (W. B. Joiner & Josephs, 2006). B. Joiner (2019) proposed the developmental practice as stated as "with the help of a specially trained Leadership Agility consultant, they designed a nine-month action-learning program that included workshops, 360 feedback, plus seven months of coaching and group projects, all primarily designed to help Achiever leaders develop Catalyst leadership capabilities. The results of the program were carefully assessed using qualitative interviews and post-360s" (p. 147). Joiner (2019) further encourages organizations to build the leadership culture inside the organization culture as the norms for desired leadership behavior.

Nevertheless, as under this research paradigm and the lens of Ruderman et al. (2014), leadership is beyond just competencies. Therefore, various findings in this study which are deep elements and rationales for crisis leadership phenomenon have to adopt for creating HRD and LD interventions. For examples, this study found the heroism underlying crisis leadership phenomenon. It came from the findings of altruism, kindness, courage, action-orientation, and integrity including codes or sub-themes in the details that HRD and LD professionals have to further operationalize and design appropriate interventions for build or incubate these things. Likewise, the findings of toughness that are inside elements including tenacity, resilience, and growth mindset including codes or sub-themes in the details which these attributes are latent and not explicit as such competencies and managerial practices as mentioned earlier. The tough attributes are closely related to the concept of grit (Duckworth et al., 2007) which comes from passion and perseverance. Not only crisis leaders need the toughness, they also need the softer characteristics of G.R.I.T.: generosity, respect, integrity and truth as Sudbrink (2016) proposed to balance in leadership. Therefore, it is the next challenge for HRD and LD to find interventions in building crisis leadership for individuals to be equipped with strategic intelligence for a crisis, toughness, tactical performance, and heroism.

5.6.3 Organization Development for Crisis Leadership

The findings demonstrated things that cannot develop individuals through HRD and LD interventions. Some factors underlying values, motives, and social awareness that need OD intervention to enhance individuals to be crisis leaders through changes or transform an organization as a whole strategy. This might increase citizenship behaviors (Organ, 2014), perceived organization and team values for self-esteem (Orth & Robins, 2014), or other motivations through organization culture or professional culture that individuals involve with (Bhaduri, 2019). Furthermore, from the findings, autonomy is also an enabler for crisis leadership that an organization can provide it through delegation of power or authority to encourage leadership in a crisis (Prewitt et al., 2011).

5.6.4 Human Resource Management for Crisis Leadership

The findings presented that there are various psychological factors related to crisis handling and relevant personalities as mentioned in themes and codes under Categories L, M, N, and O as strategic crisis-related intelligence, heroism, tough attributes, and tactical attributes. Therefore, HRM practitioners in a part of recruitment and selection can apply competencies of individuals related to crisis leadership to use in staffing. Also, there are various factors behind that ones can become crisis leaders in some specific situations that HRM practitioners have to consider. The process of selection can be designed the crisis context test for candidates and the group session or similar simulation can be the important way to drive individuals to perform leadership. For example, there is the concept and approach of Leadership Assessment Center (LAC) (Herd, Alagaraja, & Cumberland, 2016). LAC has been used for measuring all components of competencies, including attributes, skills, and behaviors (Thornton, Rupp, Jackson, Hoffman, & Lance, 2012). Its advantages were adapted for both selection and development talent management objectives. In addition, LAC have its reliance from the multiple raters, methods and exercises that assess multiple leadership dimensions and competencies (Thornton III & Rupp, 2006). Therefore, this can be applied to be assessment center approach for crisis leadership.

5.6.5 Crisis Leadership in Different Levels

The result of this study showed that crisis leadership can emerge by individuals in any levels as the researcher had proposed before conducting the study. This can be implication for practices that crisis leadership as this study proposed as a theory is a phenomenon that emerges by someone among the group of people showing up to handle a crisis under stressful situations. Thus, it is an essential key player in an organization because a crisis can happen at different levels and perspectives. Not only people at the management level, but also the operational level such as employees, officers, or any kind of workforces on the ground have to be equipped or developed this crisis leadership for an organizational success in responses to crises. This includes that an organization has to allow them to have a managerial space (Hood, 2000) in performing this crisis leadership if they have it.

5.7 Chapter Summary

This study provides academic and professional contributions in developing the Crisis Leadership Theory by conducting qualitative methods on the area of inquiry which were 33 crisis leadership exemplars, the researcher found 152 codes which became 50 themes under 18 categories for the whole research project. These findings came from each research sub-questions and were reported separately in this chapter with the discussion based on existing concepts and supported by high-quality literature. Also, the main research question seeking for the Crisis Leadership Theory was answered by the discovery of information from the interviews and the construction of knowledge by the researcher that this emerging theory was discussed by various aspects including meanings, repetitive tests, and theory development research paradigms, in order to make sure that it is a theory as expected. Furthermore, the implications and recommendations for both scholars and practitioners were described. The researcher encouraged them to advance the emerging theory of crisis leadership aligning with the theory development research method and to improve the practices of HRD, LD, OD, and HRM by more understandings of crisis leadership phenomenon. Finally, the researcher expects that this study will be benefit to scholars and practitioners in the field of HRD and crisis-related areas and help them to understand this phenomenon. This will improve capabilities in managing and leading in a crisis, preventing and containing its vast damages to people, teams, organizations, and communities, by developing factors inside individuals that drive crisis leadership performance in handling themselves, surrounding people, and situations successfully.

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Appendix A

Example of Semi-structured Interview Protocol

Example of Semi-structured Interview Protocol

Part I Introduction - Opening Session

Researcher:

My name is Pakawat Piriyaol. Thank you for participation and contribution. I am conducting the interview to question on the meaning of crisis leadership, its constructs and constructs' relation, and the phenomenon emerged.

The objectives of this study are to explore the meaning, mechanism and process of crisis leadership phenomenon which are not limited to individuals with a leader position, and then to initiate the theory development process or theory building for Crisis Leadership Theory.

For significance, this research result will help to frame the Crisis Leadership Theory that can be further applied by the HRD and OD professionals in your organization to form a leadership development intervention for individuals in organizations to assist you to deal with crises. Also, scholars will understand the crisis leadership phenomenon in details of phenomenon, process, and rationales, rather than propose the practices without knowing the underlying constructs and mechanisms.

Furthermore, I would like to assure you that any data collected in this interview will be kept confidentially. Only my advisor, committee members, and I will have access to the interview data. These data will be summarized, interpreted and included in research reports. Some information will be in the form of direct quotations. No interviewees will be identified by name. You can decline to answer any question I ask. Then, for the purpose of data transcription and analysis, I would like to request your permission to audio/video-record this interview. The recording files will be erased as soon as the dissertation project is completed. The interview should require no more than an hour of your time.

Is there any question for the interview?

Before we start, please take a few minutes to read and sign this preamble/ consent form and I then will start recording when I receive your signed consent form.

Part II Interview Session

Please answer the following question by using specific examples and describe the situations in as much detail as you can.

(Note. The interviewer will use phrases such as “tell me more”, “could you give me an example?”, “could you explain that?”, “what does it come from?”, “what is the reason behind those things?” as prompts to probe and solicit more detailed information when needed. Especially, in eliciting the deep data from past experience, the interviewer will support their times to recall, visualize, and associate with the past incidents)

From the central research question: RQ - What is the Crisis Leadership Theory? and five sub-questions:

SQ1 - What is the meaning of crisis leadership?

SQ2 - What is the human mechanism of crisis leadership?

SQ3 - What is the environmental mechanism of crisis leadership?

SQ4 - What are constructs of crisis leadership?

SQ5 - What are interactions among constructs of crisis leadership?,

the researcher planed the interview protocol to be six sections.

Section 1 Meaning and understanding of crisis phenomenon

- Your HR/POC told me about the crisis in your organization which is the situation that.....(crisis).....

Therefore, think of a time when that crisis happened, please describe that incident (crisis).

- How did you experience that crisis?

-

Section 2 Meaning of crisis leadership

- Please describe behaviors and characteristics that you perform at those situations.

- Why and how you do that?

- What is meaningfulness in those actions and yourself in those situations?

Section 3 Internal rationales, processes and mechanisms of individuals who perform crisis leadership

- Could you share your internal rationales of the things you did, thought, and felt?
- Please describe your internal elements, processes and mechanisms.

Section 4 External environment and mechanisms influencing individuals who perform crisis leadership

- Could you tell me about external surroundings that influence your actions, thoughts and feelings?
- Please describe your external elements, process, and mechanism from surroundings.

Section 5 Deep elements relating to crisis leadership

- From those happenings, could you explain or add more (if you have or could) about the relevant circuitry; for examples, physical, chemical, and neurological functions (about your body).
- From those happenings, could you explain or add more (if you have or could) about the relevant conscious engagement; for examples, abilities to observe, modify, and regulate mental process (about your mindfulness).
- From those happenings, could you explain or add more (if you have or could) about the relevant inner content; for examples, raw emotions, gut reactions, and inner dialogue (about your feeling).

Section 6 Interaction and causal relationship among internal and external elements relating to crisis leadership

- Could you explain more about relationships and interactions among those elements of your outside and inside phenomena during those crises?

Part III Ending Session

Is there anything that you would like to add up all of these interview questions and conversation or suggestion for promoting crisis leadership in individuals?

(Could I have your permission to gather more information and inquiry?)

We have completed the interview session and I would like to say thank you and appreciate for your valuable time. Lastly, I have to ask if you are convenient and can give permission to follow up in case of this study needs to get more information during data analysis process.

Thank you.



Appendix B

**Translated Examples of Interview Transcripts for
Findings 4.3.1-4.3.3**

Translated Examples of Interview Transcripts for Findings 4.3.1-4.3.3

Research Questions

RQ - What is the Crisis Leadership Theory?

RSQ1 - What is the meaning of crisis leadership? (Discovery)

RSQ2 - What is the internal mechanism of crisis leadership? (Discovery)

RSQ3 - What is the external mechanism of crisis leadership? (Discovery)

RSQ4 - What are the elements and process of crisis leadership? (Construction)

RSQ 1: Meaning of crisis leadership

Examples for Category A – Deliberate-Immediate Decision-Making Processing and Planning

1) Theme A1: Emergent Design-led Strategic Thinking

Code A1.1 Deliberately assessing situations

P1: Line 54-59 (personal communication, February 4, 2022) ---He mentioned the assessment of human resources the team had and identified the needs during the air traffic management crisis.

“The first thing that led me to do. It is that only one of the persons working in the shift is a qualified person, the others are not qualified. The crisis will happen if I do not go in and do something to help, it may cause unexpected events to occur. When I thought like this, I thought about the next process. What are the ways to go in and help resolve that situation?”

Code A1.2 Designing solutions and preparing for the worst

P18: Line 12-23 (personal communication, August 17, 2022) ---She was thinking and designing solutions to anticipate the worst-case scenario if the crisis escalated to cause more problems in the services of the branch bank crisis.

“As it is a bank when the power goes out, it would also be risky that it might have something to do with the robbery. We also are concerned about all data. Sometimes it is a crisis that seems like nothing, but for services, it is a bank branch that we must hurry to solve the initial problem as soon as possible by thinking about

customers in the branch. First, the information, if it is something like we might have a little backup power so we have to hurry to clear and rapidly do the transaction. For something that may take a long time for customers in the branch such as taking time to open an account, we may have to clear the customer that if customers cannot wait, there may be a reserve plan for customers that they may not receive the convenient enough services to be suggested for the other branches that we have for standby.”

Code A1.3 Considering stakeholders

P30: Line 325-336 (personal communication, November 5, 2022) ---He mentioned his consideration of the parties involved with the situation.

“We know who we are contacting, meaning that sometimes there will be a contact person. For example, if we are an operation of a touring company, we would do booking through the “Land” coordinator, right? In Europe. The land will make a hotel reservation for us. Then, we will know who should talk to. Should we talk directly to the hotel? or do we need to talk to Land first? The hotel may not speak English very well which may cause discrepancies or misunderstandings.” (In managing a crisis during a tourist trip in Europe)

2) Theme A2: Decisive Critical Decision-Making and Planning

Code A2.1 Rapidly and strategically considering options

P24: Line 238-244 (personal communication, September 29, 2022) ---He explained the decision that had to achieve a goal based on assessed factors and tactics he created strategically.

“The idea was then that it had to be done and how to make it neat. That was we had to inform the crew that it was okay. Go back to your seat and follow the safety procedure. We would not lock them up and let them take his seat because I plan to pretend that we going to do nothing with them.”

P6: Line 85-89 (personal communication, June 20, 2022) ---He also informed the rapid selection of choices.

“I had to find another solution by asking the shipping agency why the item had not arrived yet. They would check with the Chinese supplier. In the end, I got an answer that the truck had arrived at the port but the goods were not boarded up. I fixed problems in any way that could get the items as quickly as possible to get them

by transporting the goods by truck instead of ship. The shipping agency said that the cost was higher. We agreed and ended up like this. It was enough time.”

P25: Line 29-46 (personal communication, October 4, 2022) --- Before shutting down the online broadcasting system for restarting again due to interrupted media signals, he also considered many options and effects rapidly and strategically.

“I had to ask the people who were most involved in the case that they are social media people who know and release streams in the matter of various online social systems, whether it is Facebook or YouTube. I was suggested to stop, have to stop livestreaming then start over. This is a must. It was my first suggestion that we had to bring this advice to inform all parties that it has to stop and start over. The first thing that comes to mind is that our business had to decide this, right? It was not a good story and everyone asked if we could wait, could we wait, could we not stop. Can't you stop? But it was like the car was already broken. Therefore, we must turn off the engine and try to start again. The car is already twitching, so what we have to do very first, we have to make a decision, that is, we have to make a decision. It was a right decision but it was a decision that should be made in the moment. Within one minute, all of these was in my head that I had made the right decision.”

Code A2.2 Deciding to do or not

P8: Line 22-28 (personal communication, June 21, 2022) ---He recalled his hesitation in deciding whether to do it or not.

“At first I thought it was too difficult or not. Will we refuse this job? Afraid of problems? It means denying that we ask for not doing, or just doing partially. This one seems to be thinking to myself as well. Finally, it was ok to continue. After all, we are a company that has to take care of this and have to take care of our customers. We tried to do it first because many things we should be able to do and if it was stuck and customers felt not be okay. There is when we come to make a new decision.” (a customer further asked him to install the furniture besides only delivery and the size seems to be not fit and it takes a risk”.

P3: Line 31-32 (personal communication, March 24, 2022) ---In the airport terminal crisis, she mentioned how fast making a decision was even if it was about to be done or not.

“I turned to speak to my colleague who was also with me about what to do or whether it was good or not to do this. After we knew what to do, we did it suddenly.”

P10: Line 48 (personal communication, June 26, 2022) --- He kept repeating to inform that if he was not able to do it, he would not do it.

“It happened to my heart. My mind had good intentions. I intended to make good thought. If I was not good enough or not able to succeed, I would not do it. I will select the best solution, the best way. If I was not ok, I would not do it. I will see. If I cannot do finally, we will talk. I will call clients and discuss the acceptable options. If they were ok, I would do it. Sometimes, a case is tough.”

Code A2.3 Prioritizing and sequencing actions

P19: Line 46-50 (personal communication, September 3, 2022) ---She mentioned the selection of the priority.

“How did it happen in the first place? Why is it like this? At first, when it happened, I might be thinking in my head that I had to solve it to catch the device. In my head, I would only think that the device would be released in a few minutes, about ten more. Five minutes, can we fix it in time? So which part will we fix first or what?”

P10: Line 4-5 (personal communication, June 26, 2022) ---As same as P19 and others, he had prioritization and sequence in his thought.

“We had to try to think about which part we can do first. We had to try to figure out how to get it done. Make it fast like which store was open, I went to buy it first then collected the bill and we later informed my boss again.” (The construction site needs some equipment that by prioritization, it cannot wait for the project manager)

Examples for Category B – Agile Execution, Management and Communication

1) Theme B1: Responsive actions and ambidexterity

Code B1.1 Taking immediate actions

P6: Line 81-85 (personal communication, June 20, 2022) ---He told the researcher about when he reacted to the situation immediately to prevent other extensive damages such as from undelivered manufacturing spare parts to the labor cost.

“When receiving a phone call from the purchasing department that the spare part was not delivered. I first canceled the next day's appointment for the team to help

in manufacturing. Our problem was wondering why the product had not arrived yet. Initially, we had to solve the problem by stopping workers from coming so that our costs would not increase any higher. Also, it was like we tricked him too so we hurriedly called to stop it.”

P20: Line 2-6 (personal communication, September 22, 2022) ---She mentioned the actions that she took suddenly.

“At that time, I was in front of the event, in front of the store, and felt that I held all the documents and I called the staff. The store officer, store manager, and area manager were called to inform us that we encountered this problem, how bad it is, and how to fix it and divided the duties of three people.”

Code B1.2 Containing the impacts

P12: Line 100-104 (personal communication, July 5, 2022) --- He reduced the risk and contained the impact of the crisis of chemical spreading in the emergency room.

“For nurses, I told them to perform the evacuation plan that we have. I ordered them to proceed accordingly. There are two groups of nurses. One group went out to invite relatives who were waiting to evacuate to the back of the hospital and another group to move patients all the rest getting out of the emergency room.”

P32: Line 188-193 (personal communication, November 10, 2022) ---He mentioned the act to prevent the emergence of a new crisis

“Because we have a service mind, if we do not rush to approach the customer, the customer will complain and complain. It might make that employee even more shocked, and helpless if that's the case, isn't it?”

Code B1.3 Doing multi-tasks at the same time

P20: Line 139-157 (personal communication, September 22, 2022) --- She mentioned many things to do at that crisis time when shop products were stolen.

“At that time, I was in front of the event, in front of the store, and felt that I held all the documents and I called the staff. The store officer, store manager, and area manager were called to inform us that we encountered this problem, how bad it was, and how to fix it, and divided the duties of three people. The store officer had to check whether there was a mistake in counting numbers or not, or where to put it, or if it was a borrowing between branches or not because each branch is an individual

store, there are some products that were sold as well. I asked the store to go back and check if other stores had borrowed raw materials or not and asked the manager to go back and look at the amount of waste, sales, and then, well, for the area, I said that if it was the worst case, what kind of solution can we had?”

Code B1.4 Managing resources.

P13: Line 126-150 (personal communication, July 6, 2022) --- He clarified the management in his action.

“First of all, it is to find the person responsible for each point. It is selling cars. It will be complete only when we hand over the ownership. Therefore, the main problem is that we have to follow in terms of the registration book and the transfer set, so who has to clear this? If we took the car out to sell, the buyer from us would have to follow the title of these books already. Therefore, we must prepare this matter first as a starting point to be able to hand over the ownership to him immediately. Therefore, with more than two hundred thousand cars I have to manage the list first of which car has the registration book. Then we will make a list that will be sold, which is a list of thousands and two hundred cars. We will have to follow two parts. The story of the registration book is the first and the second one is in the matter of cars..... According to the list received, we agreed with the team who would be responsible for which part, for example, I was going to be responsible for the ranking of which book was ready to be sold. One person was assigned to find the car at the parking site, we have to be at the center to collect how many registration books are there. And how many cars have they met? To make a list, I went to check the condition of the car to see how much the selling price should be set. And what kind of process to deal with that car?” (The company had a project to buy and sell a flooded car in a short period)

2) Theme B2: Assertive actions and communication

Code B2.1 Responsively notifying for understanding

P4: Line 137-142 (personal communication, April 4, 2022) – He responsively and bravely informs stakeholders of the problem for the further benefit of everyone.

“We will split into two loops. The first is me and foreign customers which are our company and customers, and the second loop is to report this problem to

colleagues and people in the organization that this crisis has happened like this to check their customers that might have the same problems, tell me. For my customers, I had to take care of myself.”

Code B2.2 Reporting to higher-ups

P7: Line 132-139 (personal communication, June 21, 2022) ---He had to report to, and consult with his boss.

“In every dimension, I always consult with the owner of the company. I have contacted him. We always talked to each other, every update, I updated him all the time. He gave me the direction roughly because even this was a serious issue but not yet a severe case.”

P33: Line 209-217 (personal communication, November 16, 2022) ---She also mentioned the need to tell the truth to her executive with the support reasons.

“In the end, it must be reported to the executives that the oil price will adjust to this and the company will lose like this in how many days. We must forecast when will the new capital come to support us profitably?”

Code B2.3 Suggesting solutions

P22: Line 147-150 (personal communication, September 28, 2022) ---He mentioned that no one dared to inform the Executive Officer (XO) but he did because the crisis could not wait.

“At first, we came to the stern. Eventually, there were only corporals and sailors left no one dared to wake XO up. No one dared to do. Then, I thought it could not help it anymore, so I decided to go down and knock on his room, telling him that ‘this could not work anymore, we have to get permission and must ask permission from the higher management level on shore. It could not stand anymore; this is too severe’.”

Code B2.4 Making argument assertively

P26: Line 117-138 (personal communication, October 4, 2022) ---He pointed out the example that he needed to assertively make an argument for the reason that the project was too hard to succeed due to the complexity of systems.

“Well, once we got the answer, the probability was quite low with a two-month time scope because there were many points that the project could not adapt to the original system we already had in the company. Here it became an issue that I had

to list all the information that I had to defend to my boss. On the business side, it was not acceptable to complete it for two months. Then, when we raised this issue, they did not allow it and wondered why we spent so much time. Why does it take so much time? We tried to raise this issue with the management to know the progress. What is happening now? Where are we stuck? Why didn't it catch up? This is my solution. It may not be a solution that tells them how to get things done on time. In reality, it is already impossible. So I had to find another way to make the boss realize the truth and the reason behind it making the project”.

Code B2.5 Supporting knowledge and experiences

From interviewing participants, this code refers to the way to make an understanding of situations and planned actions to the team and stakeholders by referencing knowledge and sharing experiences.

P178-182 --- She mentioned that she referred to principles for supporting her suggestions to the boss.

“Going back to its theory of what we offer and what consultants help us do. It is theoretically as it should be. It's the theory and principle of doing performance management systems correctly. It already has the right principle. But we were far from it. Anyway, if we made it close to the standard, the CEO however bought it.”

3) Theme B3: Monitoring and feedback

Code B3.1 Monitoring

P28: Line 362-364 (personal communication, October 19, 2022) --- He informed that he and his team kept monitoring the safety risk during the crisis.

“We will keep an eye on it and support it if there is more safety information. We can provide various aspects of information.”

Code B3.2 Debriefing

P25: Line 241-250 (personal communication, October 4, 2022) --- He raised an example that he and the involved parties came to the meeting and he provided feedback to them after the crisis had been terminated.

“We were lucky that we did not talk at that time. We were lucky that we even arranged to talk about three to five days after work. Because we had to find information first, it turned out that everyone was cool down. It will not be like that day that was like I could not even look at their face. My eyes were stiff. Therefore, it

was working in taking time to think and then seeking information to find the reason and then talk about the real causes and effects. We forgot what we were angry with them and they already have forgotten as well. Therefore, we came back and talked for a reason. We ended up about the company issues and then we went to talk about cause and effect from another aspect, the department store, and issues of various customers”

Examples for Category C – Applying Operational Arts and Tactics

1) Theme C1: Strategic communication

Code C1.1 Communication Planning

P124-131 – He mentioned his plan in communication considering the response time for each question. This is an example of his information.

“I continued to call customers such as - Hello, now there is a problem like this. What information do I need now? How much stock do you have? Consumption per day? When do you think the stock will run out? Will the part in stock expire? Check with the customer about this first. I may not receive information right away. We provided questions by sending an email and waiting to be followed up later to spread information to stakeholders. People on our team will know too. Foreigners in the loop will also know about that. For some colleagues, I added them to the loop as well.”

Code C1.2 Communication Design

P15: Line 290-320 (personal communication, July 19, 2022) – She informed that he designed her questions to be used effectively in the interaction with people.

“Very stressful. I had been stressed since was in the car. If I plan to organize our categories of words first, I will sit and screen theme how do I go? What kind of questions we should ask? What kind of questions should we ask that are not affecting their mind and not commitment between them and the company because we have not talked to the relevant people”.

2) Theme C2: Vertical-horizontal orchestration

Code C2.1 Brainstorming with the team

P8: Line 80-82 (personal communication, June 21, 2022) ---He said that he asked for the opinions of team members.

“I came to consult with the team to see if we can fix just this point and it will cause less damage. Sometimes I ask if we can apply any equipment to help or not, in which we will move the customer packing.”

P20: Line 311-317 (personal communication, September 22, 2022) ---Also, she mentioned the brainstorming directly.

“We talked at the same level. In my company, there is a head for each section that I was able to brainstorm and have a conversation, like, well, - What happened? What do you think? Even if it is not in someone’s work, people in this organization can talk about it. I have a problem like this. It is ok to tell you. If you were me, what do you think? It does not reach to the boss because it is an operational level even affecting sales but it is still able to fix it.”

Code C2.2 Opening for ideas

P20: Line 493-498 (personal communication, September 22, 2022) ---She provided opportunities for her staff to share ideas for solving problems.

“I allowed him to express his opinion and I accepted it willingly and told him ‘OK, thank you, and then we would go and do it’. If I do it, I will tell them that ‘I have done it already and it was a good idea.’ These things made us feel that it made them important. The importance of people in each position is really important.”

P29: Line 152-156 (personal communication, October 26, 2022) ---He informed in detail that he listened to others’ opinions as if it was worth it.

“Yes, I considered everyone's opinions that they are worth a try or not. Was it OK? Everyone was okay too and we should have tried, I'll ask them first. I did not like, acted like, overly bossy. I asked if should we do this. Try like this? Worth a try? They said yes. Finally, we tried it out.”

Code C2.3 Vertically-horizontally coordination, cooperation and collaboration

P8: Line 84-91 (personal communication, June 21, 2022) ---He mentioned an example that he coordinated with the other team for help.

“I might ask for help from another team or maybe other companies coming to help if sometimes we came across some jobs that you thought that we could not handle such as we could not lift it. We must ask for a car with a lifter or supporting equipment to help. This case was the same. Many times was OK. We already do our best. If using an additional vehicle that there were other expenses and the customer is okay, we brought the equipment to help or may take a team that specializes in dismantling”.

P27: Line 71-85 (personal communication, October 17, 2022) --- She mentioned the way to collaborate with people at many levels in creating a new solution.

“I called the relevant stakeholders to talk. There was the project engineer. We talked about what the problem was caused by I had to talk openly with him that he should tell me the truth about what happened. This would help to fix a problem. We were ready to help fix it, not blame or let you do it alone. We would help each other. I said something like this and he told me a problem. Then, I proposed methods and plan how to do it.”

P4: Line 208-233 (personal communication, April 4, 2022) ---He supported the point that he also needed to connect and cooperate with higher levels for success.

“I tried to include the management level in the loop too. Another technique is to put the MD in. Both sides have leaders for creating cooperation. When we have management people in the loop, there is a quick response in communication.”

Code C2.4 Finding special supports

P19: Line 222-231 (personal communication, September 3, 2022) ---She informed me about the need for special help and that she had to find more such specialists.

“At that time, I contacted the mechanic. They are two chief mechanics. I contacted my boss and IT people but those technicians had to contact the dispatcher again. As I recommended they look at the past flight information. If the mechanics are okay to do it like sitting and watching, it might delay the flight because it cannot be released on time as scheduled. We had to contact the dispatcher that there may be a delay of about 15 minutes to let us see the information first. Then, the dispatcher will contact the ramp to make it okay for customers to not sit and wait. They do not have to board the plane first. The head of my department himself will contact the base manager so that he can further contact client companies who are passengers. For the passengers, I think there may be a slight delay or something like that the delay from technical problems.”

3) Theme C3: Political Tactics

Code C3.1 Reciprocation and Negotiation

P4: Line 166-175 (personal communication, April 4, 2022) ---He raised a case that he had to deal with other companies by reciprocating with them.

“If we could not rely on them, we went to find our way by recalling experiences dealing with this company for a long time. I knew that the supply chain has the same type of parts from, for example, the Philippines, and Singapore. I went to ask the company in Singapore and Philippine branches when there was a connection that we used to talk about business. I asked them if anyone had this part in stock. who can send DHL to me? Finally, I found it in Singapore. They said that they could do it, but had to return it within whatever he said, so solve this problem first.”

P4: Line 196-206 (personal communication, April 4, 2022) ---He also added that he dealt with this way and learned from the other as well.

“This comes from experiences because other companies have come to do it with us. There is a company that likes to call. ‘Is this one in stock now? Can I borrow this much? I’ll bring it back someday.’ So I came across this kind of event often. It might be some other brand. Maybe something else, but or whether it will be the same part as our own. We sold the same parts to many customers. When customers demanded suddenly, we went to borrow from colleagues first. Can I borrow it first? I got stuff and brought it back. Nobody borrows across the country like me.”

P33: Line 209-217 (personal communication, November 16, 2022) ---She explained more about the details of the negotiation.

“Yes, like in one step. We talked to the supplier about setting the price. We can bring the price down like this. We will know how much we will lose. We call to negotiate with the supplier whether we can afford this amount of loss. Some suppliers say they can. Some suppliers say no. If the supplier said yes, we had to see how much he compensated us and take it to deduct the part that we thought we would lose at first.”

Code C3.2 Utilizing relationships, networking, and power

P4: Line 208-233 (personal communication, April 4, 2022) ---He mentioned the networking and relationship he had that later he could take it for helping him in necessary cases.

“In using the networking that we have talked about in the past. If they had a business trip to Thailand and as the boss knew that I could speak English, I was assigned to welcome them. Then, we have a close relationship and connection”.

P4: Line 208-233 (personal communication, April 4, 2022) ---He informed that he was aware of power or authority that he tried to use it to be a benefit.

“I tried to include the management level in the loop too. Another technique is to put the MD in. Both sides have leaders for creating cooperation. When we have management people in the loop, there is a quick response in communication.”

Examples for Category D – Task, People and Change-Oriented Leading

1) Theme D1: Influencing others

Code D1.1 Persuading

P24: Line 19-38 (personal communication, September 29, 2022) ---He told a story when he tried to persuade and motivate people to help him and sacrifice themselves to go to the police station instead of going back home and let the problem still happen again.

“After landing, there was a discussion because in going to the police station, we need witnesses. At that time, it was late at night and the crew was tired from the duty. Here, the captain said that it was okay. ‘Let it be, let it go. Get your money back, just let it end.’ Then, I said I thought it was not. It was not that I was a role model but I thought that it was not right. If I was thinking that if our country is weak or our airline is weak to enforce the law at all, this issue will continue to happen..... We must not compromise. They must fear us. So I went to tell the victims that I begged that I was going to the police station and ask them to go to confirm this Chinese robber who speaks Chinese. Probably, he is Chinese because he speaks Chinese. The robber asked for evidence. It is like he did it before and no one prosecuted. So I said again that I begged a victim and relevant people to go. This will make them afraid to do it again. At least, when they came to Thailand, they had to be afraid of us and no longer do it.”

Code D1.2 Building trustworthiness

P31: Line 211-222 (personal communication, November 5, 2022) ---He supported information in working on crisis that he had to show or build trustworthiness, reliability, validity, or credibility.

“I will raise the part that I think about, telling him to see the picture and possibility. When I talk to the management, we have to prepare numbers to a certain extent that what the company will receive. Let's say that there are 10,000 old machines in the market and if this new machine is built. Ten thousand of them must disappear. He had to replace it with the one that we rethink. Then, my boss will sit and calculate in his head how much possibility it is That is, the executive, in addition to managing people, is that he will come to think about income and expenses. When talking to people like executives who look like this, we have to talk about income discussing what the company will receive and get profits. Then, it will be easy when talking about the possibility and the income that will be received if this one is invented.”

P2_Line: 197-202 ---She mentioned the aspect that people respected and followed her because of her creditability that came with trustworthiness.

“When I present something, I look confident, eloquent, and clear.....Seriously, colleagues respect me because of what I have learned directly in this field. At that time, I also started studying for a Ph.D. being a doctoral student. It made me look more knowledgeable than anyone else. People thought like this.”

P13: Line 557-566 (personal communication, July 6, 2022) --- He identified that he just does his best and then it became the opportunity to generate trust from others.

“My senior tried to talk to the boss directly to send the matter directly to the boss. He also supported me. It made me know that OK, sometimes we do things first. We don't have to ask for anything. I did it first. I did it for what? I did it so that I knew that I was able to do it. When I finished it, he saw that I could do then he felt that he wanted me to do the other things. This is an opportunity. I think an opportunity and a crisis come together closely. Some people might see only a crisis but if we feel that we are ready to learn from it, it might be an opportunity.”

2) Theme D2: Centralized-Decentralized Controls

Code D2.1 Command

P10: Line 60-63 (personal communication, June 26, 2022) ---He informed that he ordered his colleague to do things even though they had a close relationship but he took command.

“I had to tell him. We are close friends. We can do it together. I can order him. We have been working together for over 10 years, we will know the way. Working together every day, we understand each other.”

P21: Line 88-94 (personal communication, September 27, 2022) --- He mentioned the actions that he urgently assigned and directed the team to do each job.

“At that time, I just told him there was a fire behind them. Everyone had to find water, find fireproof clothes already helping each other. I told them to be careful. Mainly, two people were watching the fire and one person was watching the faucet keep turning the water on and off because the hose was connected preparing for the firing situation all the time. They have to keep watching the fire carefully.”

P12: Line 135-139 (personal communication, July 5, 2022) --- He also provided an example of commanding the team at the hospital that needed a quick response for the situation.

“So I ordered the ambulance department to take the anticoagulants out of the hospital, then went by the ambulance to assess the patient at the other hospital and then administer medication.”

Code D2.2 Delegation

From interviewing participants, this code refers to that crisis leaders cannot do everything by themselves. They delegate power to someone else with trust to help and make a decision.

P20: Line 138-141 (personal communication, September 22, 2022) --- She informed the action that she assigned her staff by setting objectives and letting her team management by themselves that have to report to her.

“I asked the store manager to buy less stuff and make the disbursement system more systematic by specifying the date and I told them to report directly to me.”

3) Theme D3: Being supportive

Code D3.1 Participating with the team

P32: Line 188-193 (personal communication, November 10, 2022) --- He said that he also took action to help his junior employee and talk with her and the customer to comfort them from fear.

“Because I had a service mind, If I did not rush to approach the customer, the customer would complain and complain. It might make that employee even more

shocked. They will work unhappily. Then, they will be worried or afraid about whether you will fill it wrong in the future or not. I had to go in and talk to the customers and talk to the younger employees as well.”

Code D3.2 Comforting and complimenting the team

P32: Line 356-358 (personal communication, November 10, 2022) --- He mentioned the action that supported the feeling of her staff from the panic.

“I talked to subordinates including the boss. They will be called into the room or sometimes come out in front of the shop. Sometimes I firstly talked to them to not panic.”

P21: Line 109-113 (personal communication, September 27, 2022) --- When people were shocked, he mentioned that he went to talk to comfort the team.

“The moment that the machine guard was opened it was very large. A person was standing there so it almost hit the person there. Fortunately, he was safe. Then, all the people were completely blown away by it. I told them to calm down first. It is still not that serious.”

Besides comforting the team, crisis leaders compliment the team after dealing with a crisis.

P28: Line 529-533 (personal communication, October 19, 2022) --- He said that he complimented the team after actions.

“It was OK. Everything went well. If possible, I would like to walk and thank everyone but it will seem to be overacting. Then, I told everyone that it was OK and to meet at the station. That's great. The team was good. We managed the situation well.”

Code D3.3 Teaching

P28: Line 575-577 (personal communication, October 19, 2022) --- He mentioned that teaching is necessary and improves the action for better outputs.

“But some people may need encouragement a bit or we can help teach him a little bit for the flow of work or to complete it. It is called accomplishing the mission well.”

P21: Line 134-137 (personal communication, September 27, 2022) --- He informed that he taught the team to be more careful in working at the risky machine.

“I was trying to tell everyone to calm down and help each other to monitor if there was anything else. Will the fire burn anywhere else or not? I told everyone to return to their duties as before and be more careful than before.”

Code D3.4 Being open-minded for listening

From interviewing participants, this code refers to that crisis leaders are open-minded to listen to problems, mistakes, and difficulties of the team.

P10: Line 64-66 (personal communication, June 26, 2022) --- He showed this thing during his interview.

“I had to ask him if he was okay or not. If he is not okay, I will not let him do it. If he starts doing it, it will be difficult for him and he has to take responsibility. It might cost money or hurt himself.”

Examples for Category E – Emerging Feelings During Actions

1) Theme E1: Negative feelings in actions

Code E1.1 Anxiety

P14: Line 75-77 (personal communication, July 12, 2022) --- She mentioned this feeling happened during actions.

“A little nervous when talking to customers. If the customer is upset with me. I don't want to talk to customers in putting the problem on him again, and that's it.”

Code E1.2 Communication concerns

P33: Line 457-470 (personal communication, November 16, 2022) --- She mentioned the concern in communication to coordinate issues in solving a problem. It also caused excitement.

“It was exciting like our hearts were dancing. I was excited to call and talk to the supplier. It is like he is a businessman and suddenly gets a phone call from me and knows what happening. I was excited about how to get an answerback. Also, I expected that the result would be like that or not. There may be a slight disappointment that some were not okay but I was not disappointed because at some point it had already been anticipated.”

Code E1.3 Frustration

P12: Line 270-272 (personal communication, July 5, 2022) --- He informed about his hot-tempered habit in a crisis. He needed things to be done quickly.

“It may be a matter of personal habits as I don't like to wait and want what I want and I must get it. At that time, I thought that it would be better to deal with it as soon as possible.”

Code E1.4 Tiredness

P15: Line 257-260 (personal communication, July 19, 2022) --- She mentioned that he felt that was why she had to do this. Also, she mentioned bad luck and he blamed himself in his presence at that time. This was just a short time before he continued to fix a problem.

“Our bad luck was that I went to work early. Well, it was like, why does it have to be me? But in my mind, I was thinking the same thing, hey, why, why is it me? and feel that it has to be me because responsible ones still haven't arrived.”

P4: Line 58-60 --- His interview also presented the tiredness.

“This kind of problem must be solved again and made me bored with work. I was tired of being a problem solver as well.”

P4: Line 73-75 (personal communication, April 4, 2022) --- He informed me that he was drained of energy for a while and then he had to move on.

“At that time, I have been discouraged and bored. It's my job again. Do I need to talk to customers again?”

2) Theme E2: Positive feelings with success

Code E2.1 Satisfied with the success

P33: Line 473-474 (personal communication, November 16, 2022) --- She mentions this positive perception.

“I felt relieved and a little proud. I was proud that we can get rid of the problem.”

Code E2.2 Relieved from stress

P5: Line 192-193 (personal communication, April 7, 2022) --- She informed the stress relief after crisis termination.

“I felt more comfortable that the problem is almost solved, or it can be solved. It reduced the pressure on myself.”

Code E2.3 Happy and proud of the success

P10: Line 38 (personal communication, June 26, 2022) --- He mentioned happiness from his successful planning.

“If I had thought and planned and it was work, I was satisfied with what we did and happy with it.”

Code E2.4 Work engagement

P27: Line 259-261 (personal communication, October 17, 2022) --- She informed that success in handling a crisis made her more motivated to do her job.

“When it was successful, I was glad. Then, I became addicted that I wanted to achieve that kind of success again and again which made it even better as well.”

Code E2.5 More confident from the right decision making

P8: Line 156-161 (personal communication, June 21, 2022) --- He also informed that success in handling a crisis made him have more confidence in his decision-making.

“In many cases, when I have succeeded, I feel that I can do it. I still have a way to manage the situation. I can still control.”

P20: Line 425-427 (personal communication, September 22, 2022) --- She added that this decision-making meant to take action and what would have happened if she did not.

“I felt that the first one is being more confident. The second is believing that I will be able to get through it, do anything, and solve problems. I felt that if I did nothing that day, it would be further disadvantages. Then I felt that, well, it was the right thing.”

Code E2.6 Valuable for organization and team

P16: Line 237-238 (personal communication, July 20, 2022) --- She informed the positive feeling aspect of her values.

“She asked me and I can fix a problem. I felt that I was important. At least, I solved a problem from the emerging event.”

P7: Line 146-152 (personal communication, June 21, 2022) --- He explained the things inside himself that when he became successful, he felt he was valuable to others.

“I understand other employees who are with me. I have to say this. In this storage business, our colleagues, subordinates, or whatever. These employees are at the other levels. They work day by day. I understand them because when I work, I do not command like pointing fingers or speaking only. If they had to lift anything, I

went to help them lift every task. Since I had these things inside, it made me feel that I had to do this. It was the answer for me in this kind of crisis.”

Code E2.7 Successful in keeping self-image

P3: Line 93-96 (personal communication, March 24, 2022) --- In perceiving the success, she also mentioned her image and team.

“It is meaningful if passengers can travel. I am happy with our passengers. It is considered that my work has been accomplished. There is meaning to my image and teamwork image. If the passenger cannot go, then there will be feedback to our team and our work.”

Code E2.8 Successful in keeping an organizational image

P12: Line 36-39 (personal communication, July 5, 2022) --- He mentioned keeping an organizational image and added the story behind that.

“Let me talk about the reason that I wanted to develop first. It was an insult. It was an image in the past as a bad organization. This insult was a driving force pushing me to feel that I wanted to develop myself to take my potential to deal with various problems which organization had never been able to manage.”

3) Theme E3: Positive feelings with returns

Code E3.1 Happy and proud with rewards and compliments

P4: Line 324-328 (personal communication, April 4, 2022) --- He mentioned positive feelings of self-worth and some returns from the success.

“I felt okay that I was useful for the organization. It made me feel worthy. The wage is likely to increase. For every problem that happens, if we can solve it and go through it, it will make us more valuable in the eyes of people around us in the organization.”

P27: Line 231-240 (personal communication, October 17, 2022) --- In the interview, she talked about the reward she got and being happy and proud

“I am a person who sets goals clearly and wants to have meaning. I would like to be memorable for everyone. In the past, I have succeeded and it was good for me. For example, every year I receive the Outstanding Employee award. I just feel proud and want to be like that again every year, again and again, I would be happy like that over and over again.”

Code E3.2 Relieved, happy, and proud of being accepted and followed

P16: Line 230-232 (personal communication, July 20, 2022) --- She provided information that positive feelings happened from the acceptance by people around.

“If asking me about feelings, when I had said something and he was listening to me, I felt like I had leadership. In my feelings, it is like I was glad that when I was speaking, he did not argue or disagree with me, he accepted and followed on what I said. I felt that we had leadership. I felt confident in myself.”

Examples for Category F – Crisis Handling Learning and Development

1) Theme F1: Crisis awareness

Code F1.1 Learning the hardness

P33: Line 32-36 (personal communication, November 16, 2022) --- She described the hardness of the situation and her responsibility to do it.

“At first, it was like frustration and like getting workload. I felt a little frustrated and stressed but not much until could not tolerate it anymore. There was a feeling of pressure on myself a little. It was like I had to take responsibility for this. It was like I had to carry it, like suddenly there was a burden coming in for us to hold. It felt a little heavy.”

Code F1.2 Learning the Solvability

P13: Line 589-599 (personal communication, July 6, 2022) --- He informed that he learned the possibility of getting through a crisis and it taught him the way to do it.

“In this condition, it made me feel hey! if I thought that it was an instructive thing. If we do not think first that it is difficult or impossible, we just list all the stories out there. Then, we gradually prioritize it. It shows that in every problem, it can be solved, which we can practice.”

Code F1.3 Learning the possibility of the future crisis

From interviewing participants, this code refers to when crisis leaders are aware that it is possible to face a crisis in their context. They feel that they are learning everything for the next crisis if it happens.

P25: Line 365-376 (personal communication, October 4, 2022) --- He mentioned the learning for the future event.

“I think this case creates value for people working in the team to be stronger providing logic including those who work together in the media group. Everyone came back and said, ‘Oh! it was the event that everyone had never done.’ Everyone knows for this scale of work, what precautions we should take and what plans should we prepare. After that, this was true when we got a similar job at a department store as well even with different people and different places, we have prepared a lot of backup plans.”

2) Theme F2: People-oriented learning

Code F2.1 Learning the importance of team

P25: Line 321-336 (personal communication, October 4, 2022) --- He added the learning aspect of teamwork.

“Everyone was a good teammate. Everyone helped. Everyone did not want bad things to happen. Everyone and I did not want to see what we call live dropping, live shutting down. It was the same reason that we did not want our work to be wasted which caused the loss of reputation, image, and quality. I have a team that is focused on the job. If there were no social media behind me or my team to monitor who kept encouraging me over and over again, it would make what I was thinking in my head causing the delay. Everyone was a stimulant whether unrelated persons in the Line group of marketing or people in the event who came and called to me including the relevant ones who gave me the water and snacks. They were all stimulators. They continuously stimulated me to be conscious and then everything is decided by me and our team.”

Code F2.2 Learning the importance of networking

P7: Line 106-112 (personal communication, June 21, 2022) --- He informed that he recognized the importance of networking when he needed it in the situation.

“I have some customers that I have recorded. I started calling back to these customers whether they were still interested in the area or not. Also, I called the same professional colleagues. They would have customers in their hands they always ask questions about whether we have any remaining storage. They would keep asking but at that time they were full. But at that time, when I contacted them back, I had to pay a small commission to them as an incentive. That was the fastest way to find a solution.”

3) Theme F3: Development

Code F3.1 Being adopted as a role model

P23: Line 180-190 (personal communication, September 29, 2022) --- He pointed out that he understood the value of being trusted and relied on including transferability to the next generation leaders as a role model.

“That is, if asked about the value, I think leadership is really important in building faith, confidence, and trust from others. Whether you are the owner of a company or business, you might be the leader by the position but you have to make people follow you. They will trust and rely on you for the future. Being a leader has to create more leaders. This is the one thing that a top leader should be passed on to the leader at the middle level so that, similar to seniors, it must be passed down to the next generation. Then the next generation passes on to the further next generation.”

Code F3.2 Development of thoughts and problem-solving

P4: Line 313-317 (personal communication, April 4, 2022) --- He mentioned what he got from the crisis.

“In terms of enhancing the experience, there were many things. It gave me experiences in solving problems, thinking, and finding ways on my own. Then I applied what I learned from my experience for the company benefits.”

Code F3.3 Networking development

P4: Line 317-320 (personal communication, April 4, 2022) --- He mentioned that networking came from that others recognized him after crisis-solving.

“It included networking, which also created recognition with other people. As I have coordinated with other people abroad, something like this has become more recognized which is good.”

P13: Line 546-548 (personal communication, July 6, 2022) --- He also informed me that he got this development.

“My senior has seen me as a hard-working person so he helped to set the direct channel to the boss. In the middle of this project, I had a chance to report or present work directly to the boss. Then, after the project had been closed, I got promoted to take charge of all branches in the southern region.”

RSQ 2: Internal mechanism of crisis leadership

Examples for Category G – Brain-Body Instant Reactions

1) Theme G1: Responsive action

Code G1.1 Involuntary actions (Automaticity)

P1: Line 87-93 (personal communication, February 4, 2022) --- He informed that he unconsciously reacted by standing up to move close to the control panel.

“When I monitored behind the controllers, it seemed like I stood up and came closer to the event. I wanted to help the controller and grab the controller’s microphone. As soon as I started to see traffic keep coming in. when the controller started to control them right away, I got up from the chair and moved closer (unconsciously)”

Code G1.2 Surprise and startle reflex (Unresponsive)

P33: Line 50-53 (personal communication, November 16, 2022) --- She described her surprise.

“It is like what I said that it was shocked like Oh! I had a thing to do. It was like a mood like having things to do. So I was shocked that this issue came up I have never encountered this issue because I just worked on this. I was shocked at how to solve the problem.”

P19: Line 21-22 (personal communication, September 3, 2022) --- She informed me that she was startled.

“Mostly when I faced some events that I had never before, I was still for a while, but not for long and then I started to think about what to do next.”

P19: Line 74-77 (personal communication, September 3, 2022) --- She also described this phenomenon.

“The behavior when I encounter something that I have never encountered will be stunned first and stand still. I am shocked but not like a rant. Then, I will be thinking too much in my head for some situations.”

P21: Line 19 (personal communication, September 27, 2022) --- He recalled what he was at that time when he was surprised and startled.

“I cannot do anything and only stand still. I trembled all over.”

Code G1.3 Reactive responses

P12: Line 26-31 (personal communication, July 5, 2022) --- He provided information about the happening.

“At that time, I had to stand. After knowing the information, I stood up and started yelling calling those people around me whether other doctors or nurses to know the incident and its danger. Then, I began to tell who to do what.”

P P21: Line 15-16 (personal communication, September 27, 2022) --- He also described what he did in rapid responses.

“I shouted ordering people to stop working for everyone went to see a problem. I ordered to break the jobs there first not doing things, after I was mindful.”

Code G1.4 Attentive Responses

P12: Line 20-22 (personal communication, July 5, 2022) --- He provided information that he reacted to the situation by increasing focus.

“At that time, it might be when I was examining other patients so the concentration may not yet be there. However, when an event came, it made me concentrate more on the patients and more on that event.”

2) Theme G2: Excitement

Code G2.1 Fidgety (Behavioral excitement)

P3: Line 10-18 (personal communication, March 24, 2022) --- She described her behavioral reaction at that time.

“I was fidgeting. I thought about what to do, what to do next, and was reckless. I talked to people about what to do first because it does not happen often. We do not often experience this but when it happened, I was surprised. What should I do? From talking with people, the best and fastest way was to contact the airline officers first.... I panicked and looked to the left and the right. Who do we notify first? What should we do?”

Code G2.2 Agitation (Physical excitement)

P1: Line 119-121 (personal communication, February 4, 2022) --- He informed me that he was excited.

“When the situation happened, I had wakefulness-like symptoms. There was a situation where such unforeseen events occurred so my heart beat faster than usual. I tried to control myself to stay calm, not panic.”

3) Theme G3: Effects of stress

Code G3.1 Symptoms of stress

P2: Line 61-64 (personal communication, March 1, 2022) --- She mentioned her symptoms when she gets stressed.

“When it is time to get something difficult, I will feel stressed. For things that happen to the body, of course, the body will feel tense. I worked with focus and high concentration. My shoulders will be tight. The eyes will be too focused on getting the migraine. It is hot inside because I do not drink water.”

P2: Line 87-88 (personal communication, March 1, 2022) --- She added more details about her physical effects.

“I got frowning eyebrows, neck and shoulder pains, and stiffness. It mostly comes out from the face and words.”

P14: Line 37-46 (personal communication, July 12, 2022) --- She also described what she recalled and noticed herself at that time of crisis.

“I was pale and hands are cold..... I was stressed until I developed a migraine. When a migraine came, I got hurt with the eye sockets..... I was thinking about many things.”

P14: Line 126-130 (personal communication, July 12, 2022) --- She added the effects of the pressure on her.

“Suddenly, I cried because the pressure was quite high. This is a kind of insurance work....I could not eat and was paranoid.”

P20: Line 166-169 (personal communication, September 22, 2022) --- She described the feelings.

“I felt hot and fast. I felt like I had to do something, I felt like I could not stay still and walk around all over the place. I walked in front of the store and walked into the store or it was like I would do something. It was walking around and was not able to stay still.”

Code G3.2 Limited capability

P2: Line 75-83 (personal communication, March 1, 2022) --- She mentioned the degradation of capability.

“The worry might come out of the expression on the face. There is insecurity such as when worrying, the ability to speak clearly will decrease. I will start to talk

less and nonverbal behaviors occur, for example, putting your hands on your face and covering your mouth....When I was worried, I talked less and started to think. The reactions will start to slow down. It is clear that the expression on his eyes shows that I am not confident.”

Examples for Category H – Mental Instant Reactions

1) Theme H1: Thought reactions

Code H1.1 (Thinking) Time is limited

P10: Line 7-8 (personal communication, June 26, 2022) --- He told the researcher that the time came to his mind.

“I tried to think about which part I could do first. I had to figure out how to get it done and make it fast.”

P10: Line 32 (personal communication, June 26, 2022) --- He also mentioned about his time awareness.

“It was necessary and cannot be waited for him. What I knew, I would tell him meanwhile I had to do it too.”

Code H1.2 (Thinking) No one is going to take action

P17: Line 437-439 (personal communication, July 31, 2022) --- She described that she was concerned that no one would react to the event.

“I feel that when we see a problem, we feel that, well, there should be responsibility by someone. And if we go find someone to take responsibility for it, it might not exist.”

Code H1.3 (Thinking) I must take an action

P15: Line 208-222 (personal communication, July 19, 2022) --- She described the situation that showed she thought that she must take action.

“I felt that it was okay, I will park a car and then go to walk by that mob to see what's going on. While driving past this, I called my head of HR if she knew this yet and asked her to inform the PPMV team.”

Code H1.4 Being curious why it happened

P5: Line 45-46 (personal communication, April 7, 2022) --- She informed me that she had a feeling about this.

“I had a feeling about what it is. Had anyone come to do anything with it? Who hit what? Why was there a problem like this?”

Code H1.5 Thinking repeatedly (Fixation)

P14: Line 132-137 (personal communication, July 12, 2022) --- She mentioned that she kept thinking about it.

“It was like, oh! My work, my income! Would I pass the work evaluation? It is because, in the insurance job, people have to keep productivity. It was like the idea that I keep thinking, like a stress that emerges by itself. I tried to control something like this but it was out of control. It cannot take this feeling out of my mind.”

2) Theme H2: Positive emotional reactions

Code H2.1 Being challenged

P13: Line 70-81 (personal communication, July 6, 2022) --- He identified that he was challenged by a crisis.

“After I completed listing things, there was feeling came to my mind that I was excited that we could do something different from the regular work. It was like the mood that if we work regularly, it is like we have done it routinely, right? But here I felt it would be a good thing that I might find something unfamiliar. Then I will get to know more people too.....It felt challenging to me.”

Code H2.2 Having a can-do attitude

P27: Line 16-17 (personal communication, October 17, 2022) --- From the interview, it showed that she had this attitude.

“I was shocked. Shocked, but not stressed because I thought that the problem must be solvable.”

3) Theme H3: Negative emotion reactions

Code H3.1 Being fearful and worried

P15: Line 227-236 (personal communication, July 19, 2022) --- She informed that he was concerned and fearful.

“I was concerned and also afraid. I was like anyone who came to talk to them would be scolded by them like ‘Are you a person of this company? Uh, I was afraid. I feared everything.’”

Code H3.2 Being discouraged

P4: Line 38-39 (personal communication, April 4, 2022) --- He described this discouragement.

“I was in a bad mood. I was bored. I wanted to rest for a while.”

P6: Line 116-118 (personal communication, June 20, 2022) --- He shared what he thought at that time.

“Why should I do it? I would better to do nothing. I wanted to run away. If I do not do it, I still survive. I do not have to do it, just let it go or I will run away to live without thinking about money make living like a person in the provinces where they feel comfortable.”

Code H3.3 Need for a pre-action pause

P4: Line 25-28 (personal communication, April 4, 2022) --- He said that he needed some rest to pause.

“I accept that there was stress and boredom. I might want to find a way out. I want to rest for a while. Maybe I walk to outside and take a breath before coming back to deal with another problem”.

Code H3.4 Being frustrated and angry

P4: Line 51-61 (personal communication, April 4, 2022) --- He told the researcher about his bad mood that occurred.

“About the mind, I admit that I was frustrated because this brand often got problems and it was quite sudden every time. They did not inform me in advance. Therefore, I will get frustrated ‘Is it again? What is wrong with this brand? What is it? There were a lot of problems.”

P6: Line 92-93 (personal communication, June 20, 2022) --- He shared the emotions with the physical effects.

“I am serious and stressed about work, usually I want to throw away the phone. I was angry, numb arms, numb legs, headache, hot body, angry, not as expected, or heart trembling.”

P12: Line 38-39 (personal communication, July 5, 2022) --- He also mentioned this frustration in a crisis.

“At first I knew that contaminated chemical are a substance that disintegrates when they contact the water, they can be divided into two things. First, I felt frustrated with myself. Why I knew it too late? Second, I was afraid that if the situation escalated.”

Examples for Category I – Focus on Control

1) Theme I1: Situational engagement

Code I1.1 Keeping moving and concentration

P5: Line 59-60 (personal communication, April 7, 2022) --- She informed me that she kept going to fix a problem.

“Tried to tell myself to stay calm, did it slowly, did not be nervous. Otherwise, it would go even bigger and could not find the causes, gradually finding the causes.”

Code I1.2 Focusing solutions and planning

P18: Line 462-464 (personal communication, August 17, 2022) --- She said that she focused on finding a solution.

“It was severe. I was not much shocked but It was just hey! there was a power shutdown, something like that. But I had to keep thinking about what to do next. How to solve problems, have to talk, have to walk to find someone else?

P18: Line 471-472 (personal communication, August 17, 2022) --- She mentioned that she continued on planning.

“I only felt it just at one moment and then I had to keep thinking about what was to come”

Code I2.3 Writing down their thoughts

P13: Line 93-105 (personal communication, July 6, 2022) --- He identified that the writing always made him focus.

“Most of the time I am a person that If I feel anything, I will write everything down. Once I finished jotting down the paper, I slowly sat down and looked at what I had written. As I said earlier, in the to-do list, some things need to be dealt with. What is the problem?”

2) Theme I2: Deliberate consciousness

Code I2.1 Being consequence-conscious

P18: Line 520-523 (personal communication, August 17, 2022) --- She said that she was conscious of thinking about consequences.

“I had to say that the disadvantage of the happening to customers was that we were not able to fix it. If something happens, something will be damaged. So, for the way to avoid it, it would be safer if I may recommend a nearby branch.”

Code I3.2 Being time-conscious

P18: Line 483-490 (personal communication, August 17, 2022) --- She mentioned that consciousness came from the time pressure.

“My conscious control was that, first of all, we must not be excited showing the customer. This was primary conscious control by informing customers that nothing was serious, it was fine, and it was a power outage. Let us see if power would come back fast enough or not. I describe what we feel in the way that a person who primarily gets an impact is the customer, not ourselves. This is the consciousness that must be brought back that it must first solve the problem for them like asking customers if could they wait. As I said, the customer must be the number one priority in solving the problem.”

Code I3.3 Being aware of the responsibility

P30: Line 4-5 (personal communication, November 5, 2022) --- He explained that responsibility came to his mind.

“I started to feel worried because I had many lives behind me. I had to take responsibility.”

P30: Line 72-76 (personal communication, November 5, 2022) --- He mentioned the position leadership that reflects the concern of responsibility.

“I think because I am who I am. I already have leadership because I have been a leader throughout the trip. No matter what happens, I must remain calm. If I am too excited, people behind me will panic when things happen. There will be a problem and will be difficult to control.”

Examples for Category J – Reference to Control

1) Theme J1: Building up confidence

Code J1.1 Seeking advice

P26: Line 307-323 (personal communication, October 4, 2022) --- He informed me that he asked for help.

“I think that I have a person in the team that I always consult with, like What should I do? It is like my assistant.....It is like I always have been encouraged that I can do it.....He also has some kind of suggestion, or perhaps some time like this crisis, I went to ask him for advice. I got quite a lot of inspiration.”

Code J1.2 Being self-confident

From interviewing participants, this code refers to when crisis leaders control themselves by bringing the self-confidence that can come from the perceived competence they have.

P6: Line 132-137 (personal communication, June 20, 2022) --- He shared that he had the self-confidence to help him.

“This case was stressful but I already have a lot of experience. I thought that I could get through it. I was self-confident enough and I will solve the problem. In the past, I had been afraid before, what should you do? After passing through many times, this story has happened many times in my life. From work as a project, it is not a routine job. The problem will come up all the time. I was confident that in the end we can solve it like people who have already reached the finish line, they are confident that they can pass it every time.”

Code J1.3 “Doing the right things”

From interviewing participants, this code refers to when crisis leaders control themselves by recognizing authenticity as ‘doing the right things’ and driving their actions.

P24: Line 246-249 (personal communication, September 29, 2022) --- He informed the situation that reflected the belief in doing the right thing. So he had to do it.

“Well, while I thought I must catch them, then I had to tell the captain that I would do it myself because the captain said he would let me do it ourselves, so I could. As I thought I would finish it. It must end at this fight. Stealing it is no longer happened in the airlines.”

P24: Line 364-375 (personal communication, September 29, 2022) --- He also mentions the right thing to do.

“Because it is the right thing that we should do it. If we neglect everything, if it happens, it is like a safety issue, some things that we saw and then neglected, it is okay that it doesn't happen to us. We go home when we are comfortable. I think if everyone thinks like this, an organization or a country cannot be driven well. We should not let it be, that is all I thought.”

2) Theme J2: Adhering to learning and experiences

Code J2.1 Recalling knowledge and experiences

P19: Line 350-351 (personal communication, September 3, 2022) --- She informed that she applied knowledge and it helped to control herself.

“The other thing is about the work that I already know what the system is.”

P18: Line 250-255 (personal communication, August 17, 2022) --- She mentioned about knowledge and experience.

“It was like it would be thought that at least we were branch staff, we know, we have some experience, we need to hurry up to solve the crisis first.”

Code J2.2 Following procedures and training

P28: Line 17-19 (personal communication, October 19, 2022) --- He explained that he just followed procedures.

“I had a feeling of alertness. I had to be alert and think in my head what process we have to do next and whether the person at the front line can follow the procedure correctly or not?”

P12: Line 66-69 (personal communication, July 5, 2022) --- For controlling himself, he mentioned that he applied a protocol and followed what he knew.

“At that time, it was when we knew that the event started to get out of control and then began to get angry but one thing I must do is to follow the protocol we learned. If we follow the way we know, we will be able to control so then I applied it.”

Examples for Category K – Pause to Control

1) Theme K1: Mindfulness generation

Code K1.1 Being mindful

P5: Line 68-77 (personal communication, April 7, 2022) --- She informed about practices of mindfulness.

“I tried to stay calm. Sometimes it is like inhaling, exhaling first, letting it calm down first and then thinking over what to do, what caused it, and find out the cause again later.”

P10: Line 6-11 (personal communication, June 26, 2022) --- He also told the researcher that being conscious made him not to be angry.

“I could not be angry, I had to think. If I got angry, I could not help it, my thoughts would be dead. I concentrated and thought carefully. If I only used emotions, like yelling. It is not, I think it is not a solution to the problem. We have to think carefully first. Consciousness, first of all, we have to be conscious enough.”

P21: Line 64-71 (personal communication, September 27, 2022) --- He added information that this is about staying still and keeping calm.

“I remained still for a while, trying to calm myself down. It took some thought. How should I tell him? What to say? I knew what to do in my heart but could not speak out because it was like I was still shaking and shocked.”

Code K1.2 Taking a breather

P4: Line 114-117 (personal communication, April 4, 2022) --- He described how he acted at that time.

“Take two breaths, then maybe take a breather to get some oxygen into my lungs to have the strength to keep pushing, do it, do not be bored. Do not just get up and go out to the convenience store. Do it first, build strength.”

P14: Line 145-156 (personal communication, July 12, 2022) --- She also mentioned the breathtaking.

“Being mindful! The first thing is to take a deep breath first.....So it was like when I knew that I had to tell the client, I just had to take it easy. Okay, call, just call, and at worst just be scolded. Something like this. It was like thinking about a choice for the client.”

1) Theme K2: Stress relief

Code K2.1 Talking

From interviewing participants, this code refers to when crisis leaders control themselves from the impact of stress by talking to or counseling someone. This helps to relax their emotion and relieve the overwhelming situation before bouncing back to fight.

P20: Line 297-306 (personal communication, September 22, 2022) --- She described that she made a conversation for relaxing herself.

“At that time, it might be a conversation that made me feel more comfortable when talking to the area manager with his experience. We exchanged ideas that also made me relaxed.”

Code K2.2 Escaping

From interviewing participants, this code refers to when crisis leaders control themselves from the impact of stress by escaping from the situation. This means they turn to do something else for a while to relieve their stress.

P31: Line 109-113 (personal communication, November 5, 2022) --- He informed that he took a rest by doing something else. It was the way that he managed the stress.

“Also, I go to rest my brain by going to exercise, going biking like this, and then playing with my kid, for example. I will not think about those things and I will relax my brain. This is a way to manage by coming to find good things that I already have and am happy with them. I am going to stay with these things.”

P20: Line 286-289 (personal communication, September 22, 2022) --- She mentioned escaping from the problem for a while.

“I want to go stay alone first. The first one is that, okay, I will be fast, hot, and frustrated inside myself ‘Why have not gotten it yet? Why hasn't this item arrived yet? When is it done? So when I cannot do anything, I will go to stay alone quietly. Let me arrange how it must be. How to fix it?”

Examples for Category L – Strategic Crisis-related Intelligence

1) Theme L1: Vigilance

Code L1.1 Ability to detect signals

P22: Line 110-114 (personal communication, September 28, 2022) --- He described when he detected some unusual things.

“Yes, because the bow was against the waves. Normally, the bow does not head to the waves. Here, there were coming wind and waves the bow was against the waves, like a ship had been anchored and then it was cut. A ship might have lost an anchor. When the waves hit the ship, I felt that if we still stand up here, it tends to stumble.”

Code L1.2 Readiness

P28: Line 103-107 (personal communication, October 19, 2022) --- He identified his readiness when the crisis came

“My feeling and emotion at that time was like unexplainable. It was not excitement or fear but it was readiness. I was ready for coming situations.”

2) Theme L2: Sense-making capability

Code L2.1 Ability to foresee

P22: Line 102-107 (personal communication, September 28, 2022) --- He described his prediction.

“There was a strong surge at the rope. It was the thrust. I don't know whether I am a person who thinks too much or not. The rope looks like it was pulling. When the pulling force reaches its peak, it will twitch and be sheared out. If you slowly pull, it will gradually stretch. But if it twitched, there was a chance.”

Code L2.2 Ability to assess, analyze, and generate options

P5: Line 89-91 (personal communication, April 7, 2022) --- She informed me that she found the facts and assessed the situation for generation options.

“After the incident emerged, I investigated for the reason what the cause of it. Then, when I found a cause, I wondered if I could fix it by myself, such as the machine in the lab running out of refrigerant or air bubbles. I tried to keep doing something like this and tried to measure whether it would be better or not.”

3) Theme L3: Situation awareness

Code L3.1 Time awareness

P12: Line 45-47 (personal communication, July 5, 2022) --- He provided information about this awareness.

“Well, at that time, I did not think much. Once I knew that the situation began to force us. I must hurry to order out as soon as possible. It was true that I was being angry with myself but I had to rapidly order. Let the nurse help to deal with patients”.

Code L3.2 Impact awareness

P11: Line 31-34 (personal communication, June 29, 2022) --- He informed me that he was aware of the impacts.

“I helped to make it less damaged because if there is a water leak, the water seeps, then it will wet the ceiling. Mostly it would be the ceiling. When it reaches the ceiling, it will turn yellow, so it needs to be dismantled and rebuilt. It will damage the property. If I notice it early, I can notify the boss and I hurry up to turn off the water meter so the water will not flow, preventing the damage.”

P24: Line 204-207 (personal communication, September 29, 2022) --- He informed the concern of impacts during his strategic planning and risk assessment.

“How are we going to deal with this problem? Because as we have heard, they are a movement of gangsters. There may be many people. Do you think our crew who are going to catch other passengers will be safe or not? If it happens, there is the other crisis event.”

Code L3.3 Punishment awareness

P4: Line 120-122 (personal communication, April 4, 2022) --- He told about the concern that he had to pay for damages.

“Another thing was, if the whole process was not successful, there would be another factor which is compensation for damages. It will directly affect us.”

Code L3.4 Need-help awareness

P10: Line 47-51 (personal communication, June 26, 2022)--- He said that some parts of actions needed some help.

“Let’s say that other people took action together. If it was about the electricity, then someone had to control it. There must be someone to take care of safety as well. If at some place they forbid others to come in, we still can allow others to come in. If anything happens, the project will be damaged. We will hurt each other and lose money. We have to wait for permission first. If they say it is risky here, wait for them first. They have to look first to get in. If he says okay, then do it. For some parts that we can do, we do it first. The part that we cannot do such is very close to the very dangerous electricity. We have to wait for them to cut the electricity.”

Code L3.5 Stakeholder awareness

P7: Line 90-104 (personal communication, June 21, 2022) --- He described that he was concerned about stakeholders.

“The first thing that I knew came from I directly asked our customers what problems they faced. The main reasons are revenue decreases and sales decreases. They needed to downscale and move all storage space to a rented area that was cheaper but further away than they could accept. Something like this. This is talking directly to the customer. This is the reason the customer told me. Here's how to fix my problem, since the actual user of the inventory is the business owner's subordinate, these real customers are quite close to me. We had a direct conversation. Why does the boss choose to move over there, is there any problem? They said that it was just what the owner said because the sales were getting worse. The employees themselves

are more concerned than me. Because they had to move their workplace their life will change and move quite far. Well, they could easily be laid off and still did not know his future either. Well, they didn't want to move but with the situation, they had to move. Here, when I knew the reason that the customer had informed us. I did not have to think too much. I had two ways out. There was only one way out. I needed to find customers to fill up as quickly as possible.”

P8: Line 128-136 (personal communication, June 21, 2022) --- He informed about the awareness of clients’ perceptions.

“The thing that I had to do. We should have done as best as we can. Some people may think they did not need to do it because he just told us this. We just do as much as we can. But in reality, clients expect us to do it and expect to do our best. It is what I intended. Therefore, if I do it, I must do as much or the best as possible. Some things may be beyond our scope of work but I think that our job at the front line can be figured out and we can try to do it besides the equipment required is too difficult or the clients do not want to do it. We will only do what we have prepared. I believe that if everyone tries to help each other, the work will come out successfully.”

4) Theme L4: Adaptability and applicability of learning

Code L4.1 Knowledge

From interviewing participants, this code refers to formal knowledge from education and training including the understanding of the situation derived from working in the specific area and domain. This comes from training, practices, normal and emergency procedures, book reading, or any result of their learning.

P32: Line 308-309 (personal communication, November 10, 2022) --- He explained that he applied the training he got.

“Because the training of employees has covered everything. It's a setup like this. In this case, it covered all.”

Code L4.2 Work experiences and skills

P9: Line 28-31 (personal communication, June 22, 2022) --- He mentioned the benefit of her experiences.

“Once I knew that the power was out then problems would come. Once I knew how to fix the problem, it was okay. As I said, power outages are normal for restaurants that I have worked in the restaurant before. Therefore, I already knew that

when I went to inform them what the problems would be. I just answered according to the experience I had been through.”

P5: Line 60-62 (personal communication, April 7, 2022) --- She also informed me that she recalled the received knowledge from training.

“I tried to recall what I have learned and experiences for what I can do. For some machines, before using them, they will provide training and teaching. I tried to recall, thinking what could be the causes of the event.”

P30: Line 299-313 (personal communication, November 5, 2022) --- He explained the importance of experiences for his domain of tour business.

“As I said, in the tourism industry, we have to start accumulating experience, and work hours. The more hours the chance that you will encounter problems and you will be able to solve them will increase as much as experienced. It is like you have already received all forms of situations. Like when you go to war, you are both an infantryman and an artillery soldier. You get many things from the war. Of course, you have to have experiences.”

Code L4.3 Past experiences and skills

P16: Line 256-260 (personal communication, July 20, 2022) --- She identified past experiences in her family contributing to her ability.

“If it is based on me, it is probably a matter of family that I have to be a leader. Everything that I have to solve problems in my family. There are some things to be solved. I have applied it in my life at work.”

Code L4.4 Creative and Innovative ideas for problem-solving

P2: Line 185-193 (personal communication, March 1, 2022) --- She mentioned the use of innovative thinking.

“The design process is systematic and it can be interesting and innovative. Seriously, I am a person who will do something different from the tradition, for example, as before, they might make a KPI manual to teach employees what might be normal and look uninteresting. I made it as a guide that is easier to see by making video clips as animation.”

P16: Line 204-209 (personal communication, July 20, 2022) --- Problem-solving is about creativity and she identified that she is the best at encountering problems.

“I think I'm a person who can talk to other people and solve problems at the facing situation well when compared to the other two. It is not a matter of age. I am the youngest one but not the maturity that, for encountering events, I was the person who solves the problem the best.”

Examples for Category M – Heroism

1) Theme M1: Altruism

Code M1.1 Belief that no one is going to take action

P10: Line 7-8 (personal communication, June 26, 2022) --- He described if he thought no one does, he would do it.

“I had to try thinking about which part I could do first. I had to try to figure out how to get it done. Make it fast. When the store opened, I went to buy it first. We collected the bill for him. I waited for him only. When he was busy with his important business and he could not come. I had to make decisions for him.”

P22: Line 384-390 (personal communication, September 28, 2022) --- He described that he was surrounded by people who did not want to take action.

“For these reasons like this, I do not want it to happen. If there is a mistake, it is a mistake for all. It entirely includes a leader of the organization and subordinates. Anyway, all have to sit and be questioned for investigation about who, what, where, when, and how. In addition, the event contains a mistake in every case. Then, there are still mistakes everywhere. It begins from here that everyone is silent, no one does not want to put themselves in it. If they listen to me, it would be good. But if they do not listen to me, maybe, ‘Hey!, what is wrong with you?’ it will be like that.”

Code M1.2 Voluntary

P22: Line 349-356 (personal communication, September 28, 2022) --- He described when he could not stand the situation, he voluntarily took action.

“I am a person that could not resist to help people. I am not a person who does nothing. Persons who do nothing will be dormant..... I am the type of person who if I knew a chance that things would happen, sometimes, I had to let it go, never mind. In the end, I finally could not stand it anyway, even if it was not my business.”

P28: Line 508-513 (personal communication, October 19, 2022) --- He described the situation that he had to act by himself to help other officers.

“Yes, I felt that the passengers were still on the train tracks. I had to go down and organize them. It must be announced clearly. That younger officer may not have skills in announcement yet. We might use loud noises to get passengers interested.”

Code M1.3 Sacrifice

P22: Line 174-181 (personal communication, September 28, 2022) --- He informed the scenario that the others were concerned with self-interests meanwhile he had to do it for everyone.

“At that time, there were two groups. One was seasick people. Another group would probably have thought that it was not their duty if the XO saw this, he would do something. So it was not their business to decide. Then, I found there was no one. Things at the bottom were falling, the waves were strong and there was no one. Finally, I have to come up on deck. Everyone went to bed. One who was concerned more than others had to walk around and check the ropes meanwhile others who were concerned less went to sleep comfortably.”

P17: Line 350-361 (personal communication, July 31, 2022) --- She described she felt discouraged but then she finally thought that she had to do it.

“Why is it me alone? Why is it like this, sitting in charge of something like this alone? Rather feel that I waste a lot of time in my life as I also have personal work. My work has quite an effect. Because I was more concerned with the big picture with problems that may be bigger. Anyway, I still felt that why did I go? What about this, why I had to do it? But when I thought like that, I said, uh, let it continue to survive. If I do nothing, then who will do it? It's like two people arguing. Yes, and no one knows what I am doing, sometimes I feel like, well, should I tell other people that I do it or it is my work? But finally, I did not say anything and just did it.”

2) Theme M2: Kindness

Code M2.1 Loyalty

P7: Line 176-179, 208-209 (personal communication, June 21, 2022) --- He described the feeling that he wanted to help the boss.

“First of all, before I came here. I have been through a lot of work. I have known the owner of this company for almost 10 years and it seems like he allowed me to be here and do it. So I see it as something that I want to help him back. That's all. I

want to serve him.....Like I said, I want to repay my gratitude to my boss as well because he is kind to me.”

P11: Line 45 (personal communication, June 29, 2022) --- He informed the proud of helping his boss.

“I will be proud every time I have helped my boss at work. For some things, the boss does not have to see it or know it but I am proud every time.”

P10: Line 97-98 (personal communication, June 26, 2022) --- He also told the researcher that good performance is good for him and good for his boss.

“It was good for me. If it was not good, I would not get anything, not get work, and not get money. If there is a good performance, the boss will like us. My team works fine. He never blamed us. I then will do my best.”

Code M2.2 Caring the team and others

P27: Line 176-185 (personal communication, October 17, 2022) --- She informed about caring and supporting the team.

“There is a close relationship in the team as well. There is happiness from that we set a team to be the real teamwork. We take care of everything and try to take care of each other. I do not blame them and try to let them do their duty. Also, in a part that I can support, I support. For example, in a meeting with the boss, I will not insult them but praise them for doing well.”

3) Theme M3: Courage

Code M3.1 Bravery

P27: Line 116-119 (personal communication, October 17, 2022) --- She described her bravery in actions and interactions.

“I am a brave person. I dare to speak and confess, and I am the type of person who never gives up on difficulty. I only want the work done successfully because I have been assigned that I must finish the project. I cannot leave it like this.”

Code M3.2 Assertiveness

P12: Line 151-155 (personal communication, July 5, 2022) --- He provided information about actions that he had a standing point to interact with others.

“The neurosurgeon did not agree to let the medicine be taken away. But I talked on the condition that we would give him a chance. Besides, with the technology that the hospital has which is the telemedicine system, at least we were

able to monitor the patient even though we were still at our hospital, so he agreed to break the rule and do it.”

4) Theme M4: Action-oriented personality

Code M4.1 Leading by Example

P11: Line 65 (personal communication, June 29, 2022) --- He informed that he acted as an example for others.

“Somethings that I cannot teach them, I have to let them see me by themselves.”

P25: Line 394-395 (personal communication, October 4, 2022) --- He mentioned that the action in crisis was beneficial as an example for others.

“This is what I want it to be that is the person who works with me, wants to be absorbed in ideas or decision-making to be with them whether it is their current job or other jobs. I think that the younger generation or those who worked here should have seen something from me and applied it after that. I wanted it to happen.”

P17: Line 439-443 (personal communication, July 31, 2022) --- She described that

“I did it so others could see it. It was like hey! just one person can solve the problem whereas others might not do it or ignore the problem. For example, I see the problem because it is a problem and I can solve it by myself. Then, others will see that, oh! she can do it so others may be able to do it too. There might be a feeling like that too.”

Code M4.2 Self-reliance

P12: Line 270-272 (personal communication, July 5, 2022) --- He described his habit of desiring to do by himself

“It may be a matter of personal habits as I am a person who does not like to wait and must get what I want. At that time, I thought that it would be better to manage the situation as soon as possible.”

Code M4.3 Agility

P28: Line 491-493 (personal communication, October 19, 2022) --- He also identified as being a role models but further emphasized being quick and energetic.

“I want to take action or do something that can be an example for the younger staff at the station to see. They have to do this that ‘we have to be quick and energetic; we must not do things awkward’.”

Code M4.4 Pragmatism

P17: Line 318-327 (personal communication, July 31, 2022) --- She described her action-oriented characteristics.

“Because I saw that problem and I thought it should be solved. It seems to me that it should not be let go....I felt that if we didn't do anything and leave it, it might not be fixed. It was probably a feeling of doubt and concern. It felt like it might come back to me again like a haunting. Haunting is like why I do not take action on this problem, something like this, it will follow me to my dream.”

5) Theme M5: Integrity

Code M5.1 Moral

P17: Line 502-504 (personal communication, July 31, 2022) --- She described the morals she had in her actions.

“Also, I feel that I do not like anything that is a wrong thing even if I do it and other people do not like it. If it is not right, I feel I have to stick to the authenticity.”

P20: Line 436-437 (personal communication, September 22, 2022) --- She emphasized that she is a person who does only the right thing.

“The inside is the habit and feeling, right? As I am a person who does not tolerate people. What is wrong is wrong. Whatever it was right, it was trying to compliment people.”

P21: Line 221-225 (personal communication, September 27, 2022) --- He told the other aspect relating to the moral that he felt unwell when saw others suffer.

“It was like the human subconscious mind. When I saw other people suffer and hurt, I was not feeling well. I have seen some people and it hurt me that they did not care about anything. They let things happen as each person worked separately. No one cared, or no one did. When a case occurred, they blamed each other, ‘Why did not you take care of it’.”

Code M5.2 Responsibility

P33: Line 505-510 (personal communication, November 16, 2022) --- She described that she felt responsible.

“It was because I felt that it was my responsibility at that time. I just felt that I did not want anyone to come and say that, like ‘hey’. If I do not do it, I will be blamed because it is my department, I will be blamed for something like that. Then, I felt that I had to take responsibility for it but I did not want to be responsible for just ending the issue. It should be responsible for having an answer for them that why I did things.”

P10: Line 36 (personal communication, June 26, 2022) --- He told the thought that reflects responsibility and professionalism.

“I had to be confident in myself, I have to do it. What I cannot do it, we have to talk. It's not too difficult because I get used to it. I do it every day so it has become a profession already.”

P33: Line 587-588 (personal communication, November 16, 2022) --- She also identified the responsibility.

“Just only one thing I think. It is the responsibility, like that situation, it was my responsibility.”

Code M5.3 Dignity

P6: Line 280 (personal communication, June 20, 2022) --- He mentioned the dignity.

“There are both wins and losses but I will be proud if I fight and then get lost. If I do my best and then lose, I will lose with dignity.”

Code M5.4 Sincerity

P31: Line 320-327 (personal communication, November 5, 2022) --- He described that he communicated with his boss sincerely and it made a relationship.

“It was not like, Oh!, because he is in my father's generation. It is not that close relationship but I have my standpoint. I will not get intimacy with the president much. Well, he likes someone that when he orders something, one goes to make it for him. For me, he said, well, let me go to do this for him. Then, this is exactly what I said, that I had tested it and I also had information that I was not able to do it, I had tried it already. I will talk more scientifically. But he will respond that I have to do it again. So this is like we will contact each other about technology very often.”

P14: Line 506-511 (personal communication, July 12, 2022) --- She informed me that cooperation needed honesty.

“To make the company case getting passed, we already have mutual benefits. We are honest with each other.”

Examples for Category N – Tough attributes

1) Theme N1: Tenacity

Code N1.1 Patience

P14: Line 411-432 (personal communication, July 12, 2022) --- She mentioned her patient in actions.

“For a success factor in insurance work, let's talk about the insurance industry, not only for the leader, the factor of success for every case whether it is easy or hard is that we must be patient.”

Code N1.2 Diligence

P13: Line 622-627 (personal communication, July 6, 2022) --- He described that he has never refused work.

“I think I am the one who, I am not saying that I compliment myself, I also thought that I have strength in aspect of the mind. I think these things can only happen when we do a lot. If we practice a little, we will get less immunity I am lucky that I am a person who never refuses or selects assigned work because my father has taught me since I was young that I should not be too picky in choosing a job. Every job has its value that always gives us something. Even a job that does not make money teaches us something that will come into who we are.”

Code N1.3 Perseverance

P2: Line 258-259 (personal communication, March 1, 2022) --- She mentioned the actions that showed her perseverance.

“The second one is I am a person who is quite determined, dedicated, and will do anything to get it.”

P6: Line 275 (personal communication, June 20, 2022) --- He shared that he solved a problem as a fighter and continues to do it until the end.

“I am a fighter when I fix it and stuck, I will fight again. I do not end it and walk away.”

P31: Line 248-261 (personal communication, November 5, 2022) --- He informed me that he went straight to the goal and did not be distracted by others' words.

“Most people did not present it because they would be laughed at. They will be insulted first that it was impossible.....Maybe it is about personality or personal habits than being ready, like being ready to get hurt, ready to be scolded again, and ready to be ridiculed and laughed at because I am not serious about that. That is, other people will care more about other people's words but mostly I do not care what other people say.”

Code N1.4 Commitment (Do the best)

P27: Line 195-197 (personal communication, October 17, 2022) --- She described her dedication to achieving the goal.

“It was because I am a person with clear goals in my work. Every day I wake up, I try to pursue the goal and make it happen. I will not leave it. I would rather be people with clear goals like this.”

2) Theme N2: Resilience

Code N2.1 “Never give up” attitude/ Bouncing back/ Adaptability

P6: Line 118-122 (personal communication, June 20, 2022) --- He shared that he felt tried but never gave up.

“It was just a flash thought. It cannot stay long like running away from problems. Finally, it was the problem that I knew that I could not escape. If we fled once, we would flee forever. So I came back to try solving the problem. There might be the feeling of carrying the world alone and I felt why I had to solve problems alone. But in the end, every time a problem arises, the solutions will come from me.”

P8: Line 129-207 (personal communication, June 21, 2022) --- He informed that he motivated himself to keep working.

“I tried to make myself think that I tried to do at least I can still work. I still have the ability. This is the inner thing that motivates me. I tried my best to do things.”

P23: Line 286-300 (personal communication, September 29, 2022) --- He pointed out that the adversity quotient (AQ) is important besides IQ and EQ. AQ is a measure of one's resilience and adaptability who can manage the equilibrium of mental state in adverse situations of life as well as find the solutions to coming out of it.

“Let me define a few words. In reality, it is a simple matter of living. When problems come. They come with solutions. IQ (Intelligence Quotient) is the ability to understand and use one's potential. The second is EQ (Emotional Quotient). If you can control it, it will allow you to control your emotional situation without wasting time arguing, complaining, cursing, or finding someone who is your emotional victim. Finally, it is AQ (Adversity Quotient) that is the ability to encounter the problem. For a problem occurring, if it is the first time, it might be understood. If problems emerge repeatedly, a person will solve the problems well with these three things that will handle situations, may not one hundred percent, but resolve as best as possible, something like this.”

Code N2.2 Positive attitude

P27: Line 231-234 (personal communication, October 17, 2022) --- She described that her positive attitude towards situations and her workload.

“Well! I see that in every happening if there was not a person like me, it would not be possible to succeed. And there is probably one person only. I will probably be that person because I want to be and always want to be.”

P33: Line 419-423 (personal communication, November 16, 2022) --- She described when she had a positive attitude to help others calm down.

“It was that I talked calmly. If he had the mood that it was like a kind of ranting, saying things had to be like this like that, but I am the one who does not rant back. I also spoke based on my point, like ‘Oh! This one has arrived. You have to do something like this.’ It will help him to be softer and there was a reason that I had supported.”

Code N2.3 Instinct, intuition, and improvisation

P18: Line 162-173 (personal communication, August 17, 2022) --- She mentioned that the instinct caused her knew to way to react to the situation.

“Maybe it is some instinct, it may happen as I said. Experiences may make us feel like, oh, this one has to be solved in this way. This way may come from my feelings like, Hey, if this, it is OK, this is OK.”

P13: Line 218-220 (personal communication, July 6, 2022) --- He described the instinct told him what would happen and should prepared for. However, the interview he provided meant to be the intuition as well.

“It might be instinct that if it was me, I would be able to decide. Then, I wanted to have information. Therefore, I felt that I then tried to work in detail. Those who will make decisions can make decisions fast. Then, I can take action accordingly quickly.”

P30: Line 168-172 (personal communication, November 5, 2022) --- He also explained that experiences made him improvise in the situation.

“I think being a tour leader depends on their work hours or experiences. If we have never met before, we do not know how we can solve it. Just I have never experienced this. I know what will do next.”

P25: Line 393-406 (personal communication, October 4, 2022) --- He added the mention of improvisation that had to happen in a crisis.

“This kind of unplanned principles and concepts about work required a lot of immediate problem-solving. “

Code N2.4 Development-oriented person

P12: Line 348-353 (personal communication, July 5, 2022) --- He provided information that he wants to learn more about problems to be able to fix more problems.

“As the fact that I want to solve the problem, I go down to the front line a lot. Some people who get a higher position will rarely come down as a worker but I still have the feeling that I still want to come on the ground to work because of small problems or some problems that we think may not happen but it can always happen. Therefore, the more I do by myself, the more I encounter experiences facing many problems. I will be able to fix more problems.”

P12: Line 224-233 (personal communication, July 5, 2022) --- He described his need to develop his department.

“Before I came back from studying emergency medicine, the operating conditions or whether emergency room treatment may not be effective. Sometimes in matters of management for mass casualty response plans, patient care, accidents, and crises. Sometimes when we look back at treatment information. Maybe it did not follow the protocol. Maybe we lack some knowledge to manage when we see the problem. Together with the reputation of the agency that existed in the past ten or twenty years, this may not be good. When I came back, I had the feeling that I wanted

to wipe away all those previous insults. I want to make our agency more effective by empirical evidence. At that time of crisis, it was like there was a pushing force that I had to do something. Let people see that I am good enough. I can make some decisions for you.”

3) Theme N3: Growth mindset

Code N3.1 Self-efficacy and can-do attitude

P17: Line 401-411 (personal communication, July 31, 2022) --- She described the feeling that she can handle problems.

“I felt that when I solved a problem, I felt I should be able to continue solving problems. It was like if there was an incident, it caused a feeling that I was able to handle it.”

P2: Line 262-263 (personal communication, March 1, 2022) --- She mentioned the positive attitude in taking a crisis and learning.

“I am a person that when I have learned or have done something new even if it is hard, I will see it as an opportunity to learn. Then, I will be able to do it, and then do it well.”

Code N3.2 Recognizing own leadership competence

P16: Line 230-232 (personal communication, July 20, 2022) --- She identified the recognition of leadership.

“About feelings, if it is about what I had said and then he listened to what I said, I feel like I have leadership in my feelings. I was glad that when I was saying, he did not argue or disagree with me. He was open to my words. I felt that I had leadership. I felt self-confident.”

P32: Line 262-265 (personal communication, November 10, 2022) --- He explained that he felt he should take the lead.

“It was like I will say the same that from working experience from many sources and doing the same job, I can fix it. In this case, I probably can talk to customers. I have passed many jobs and all services. I should take the lead in handling customers. I think like this.”

Code N3.3 Seeking challenges as adventurous learning

From interviewing participants, this code refers to that crisis leaders love to be challenged or take on their challenges. They know that they grow best by pushing

themselves and embracing challenges as self-directed learning. Challenges motivate, interest, and engage them and fulfill the pleasure of overcoming. They are adventurous and willing to take risks and try new ideas including proving themselves in their performance. Crisis leaders perceive these challenges as learning as well as improving themselves.

P2: Line 260-261 (personal communication, March 1, 2022) --- She mentioned the challenges she liked.

“I am a person who, by nature, wants to stand out and want to be famous. I want people to watch when something is done and want to receive compliments. It drives me that I must get it done and succeed in it. I have to be the first.”

P13: Line 482-490 (personal communication, July 6, 2022) --- He identified that routine things do not make him the development.

“If I had to unpack myself whatever I do things that I never did, I gained experience that I would get something new and I would always develop myself. If it happens like I work regularly like I do every time, I felt it was the same challenge that I might be used to. I would feel difficult when I first did it. When I reached some points and I felt that it was like a routine, it did not develop my potential much more than before. Therefore, when there is a problem or any work that is bigger or newer than before and I little know about it, I feel that I want to experience it. I would like to participate in it to know, Hey!, there is anything else that I know or the problem I have never encountered?”

P26: Line 256-264 (personal communication, October 4, 2022) --- He informed me that he likes to challenge himself.

“It is also because I am a person that, I have to say, it seems like a crazy person in proving myself too.”

Examples for Category O – Tactical attributes

1) Theme O1: Interpersonal intelligence and habits

Code O1.1 Empathy

P17: Line 498-502 (personal communication, July 31, 2022) --- She described her emphatic actions including listening, understanding, and helping.

“I see problems and want to solve them because I think normally I am a good listener. It means for friends I always have been a good listener. When friends had a

problem. They always think of me. They may not think that I could fix problems but it was just I am openly listen to them. So it is the point that I like to help and solve problems for others.”

Code O1.2 Social intelligence and skills

P14: Line 492-503 (personal communication, July 12, 2022) --- She described her analysis and skills in dealing with people.

“It is approachable. It means that I have to approach clients’ identities. I have to see first whether this person’s style of speaking or what he/she likes to talk about. Maybe at the normal time without problems, I should talk to them sometime. It builds a relationship for them to see that they and I are connected and we feel ok to each other.”

Code O1.3 Being communicative

P16: Line 216-222 (personal communication, July 20, 2022) --- She identified that communicative performance is related to effectiveness in solving problems with clients at the clinic.

“I think I am a person who uses words that are more communicative than the other three of us as we have worked together for six and seven years.....Patients did not understand what they said.”

P32: Line 173-178 (personal communication, November 10, 2022) --- He explained that he had to lead people in a crisis because of his skills in communication with people.

“I am talkative with clients. I thought that I could do it better than juniors who have less experience or do not know how to make conversation with clients. There were some cases in which clients were frustrated and could not talk with them understandably causing the client to get bad-tempered. It was like my juniors did not know how to approach them, how to talk, what steps in case of the complaint are, and how to make them calm down.”

Code O14 Humility

P29: Line 341-344 (personal communication, October 26, 2022) --- He mentioned the importance of being humble and humble.

“It is like, in the industry, people work together in society, no matter which industry. If we interact with others by behaving as we have humility and responsibility, people will honor us.”

Code O1.5 Courtesy

P4: Line 208-233 (personal communication, April 4, 2022) --- He informed that he had courtesy in communication.

“I did not convince much. I wrote a normal email by typing politely, using polite words. I used words to convey that the situation we were in at that time was quite serious. As we are the same company, we should help each other and I gave it out in the form of asking for help.”

2) Theme O2: Communication skills

Code O2.1 Communication techniques

P14: Line 185-196 (personal communication, July 12, 2022) --- She described those techniques in speaking.

“I made a phone call and made a begging sound with a soft voice that I had some issues.”

P16: Line 187-192 (personal communication, July 20, 2022) --- She identified the importance of wording in communication.

“It is about using words, I think it is the use of words that if the event at that time happened, I used words to tell information to the patient that patient did not understand of the doctor explained. I had told the dentist to talk about something appropriate for country persons who do not understand the matter of medical technique as the doctor wanted to tell them. In terms of communication, I spoke short words that could be easily understood and the dentist was open to listening to me. If there is a problem in the matter of beauty as I explained, the beauty of the dentist’s meaning is one form, whereas the beauty of patients is different. The dentist will listen to me.”

P22: Line 205-212 (personal communication, September 28, 2022) --- He described when he provided information and creative ideas to suggest XO and persuaded him.

“XO (Executive Officer) came up and was hesitant. Anyway, in sailing back to the land, XO had to ask the CO (Commanding Officer) at the higher level. XO did

not have full authority. So I told him that in this situation we cannot stay here at sea. CO was not here so he could not know this. We should call and tell him and send a video clip because the wind and waves were so extremely strong. I was not sure that there was a situation like this before but not strong like this. In that case, higher people did not allow us to go back. Then, at this time, we need to have a technique by saying that the ship was not able to tolerate anymore, there was a chance to sink.”

Code O2.2 Strategic communication

P6: Line 85-89 (personal communication, June 20, 2022) --- He shared the way to communicate strategically that in some cases he should not communicate with others. As in strategic communication, time and message are important for receivers' perception.

“For our customers, I did not inform them because it would be mistrustful. I had to find another solution.”

3) Theme O3: Political intelligence and skills

Code O3.1 Power awareness

P12: Line 135-139 (personal communication, July 5, 2022) --- He provided information that he was aware of the authority to take action.

“For this one, I must ask the neurologist whether I can bring medicine to go outside the hospital or not that I had decided on my own already that I wanted to take it to the other hospital.”

Code O3.2 Networking

P14: Line 506-511 (personal communication, July 12, 2022) --- She described the advantages of relationships from communication that create networking and can help in some situations.

“Also, it was like our conversation was okay. He might not be close to me but we talked to each other in a lovely way. I admired him or appreciated him to others. People will feel good, right? I complimented him that he could solve any problems at all, something like this. Then, next time, he would like to help me fix something like this.”

Code O3.3 Reciprocating and negotiating skills

P13: Line 226-243 (personal communication, July 6, 2022) --- He described his techniques and skills used in dealing with relevant stakeholders in the automotive industry.

“The easiest way is the auction yard. At the auction yard, I committed to them that I would send the car to their auction but there was a condition that this is what I went to negotiate. There was a condition that they must give me a price for all cars that ended up at the auction, not just the cars I sent. Then I ask for the total price at the end of the auction day. If they give me data on each auction day, I will send cars to them as well. They got benefits, not disadvantages because, in that year, there was flooding disaster. Well, every insurance was the same so they got many cars for auction. Therefore, I had a good database of other insurance's insurance-flooded cars that went in the auction as well. I had enough information for a boss that he was able to compare more easily.”

P20: Line 438-443 (personal communication, September 22, 2022) --- She described that she is a compromising person and it needs negotiation.

“The other one which is my trait is compromising. I feel that I am a compromising person. The more I encountered this kind of thing, the more I knew I had to resolve it with compromise. With the similarities and differences of employees, I feel I have to find a way to manage each person. It must be flexible whether it is ok or not, how they feel, or it needs negotiation.”

P24: Line 76-89 (personal communication, September 29, 2022) --- He informed that he used a technique in reciprocation to persuade others to join his actions by making them perceive benefits.

“As a result, there was a police duty officer who came in, so I informed him of the details. I used words to say that I didn't want to let him look down on or insult our country. It was like coming to break the law in our country without fear at all. They would be scared at least if we caught one of them to be the case by the police.”

Then, at the police station, P24 applied the negotiation techniques to force robberies to confess that they committed the crime.

“I thought I told him that. So I advised him to let us do this. If they do not admit it, we would apply like psychological technique to trap them, the robbers. I

wanted to take an airport security officer who is a big guy that was staying together there to interrogate them. So I asked if the robbers admitted to the robbery or not. They said there was no evidence. Um! For this one, I would like to give an interview as the reality that I did. Then, If so, I let my crew who could speak Chinese say that, and then I, myself, and my security guard will stomp you. Please use the word 'stomp' ('kra-tuep' in Thai), tell them, and then say that there is no evidence either. Is this OK? Yes, if they do this. I will close the room, no camera, nothing.' It was just psychological that we never do that. But saying this, you said there was no evidence. Victims were still there..... Finally, around 4-5 AM, they admitted it. Maybe they were already exhausted and then let it be."

RSQ 3: External mechanism of crisis leadership

Examples for Category Q - External Enablers

1) Theme P1: Systems vulnerability

Code P1.1 Gaps of a system and team

P1: Line 2-6 (personal communication, February 4, 2022) --- He informed that he saw a weakness of team qualification in handling a crisis.

"I saw that this team with my chief had team members working together but these operational controllers have not been qualified about those things. There was only my qualified chief, so it was like, there was no one to help solve the crisis there."

Code P1.2 Possible lack of action/possibility of inaction

P15: Line 243-245 (personal communication, July 19, 2022) --- From the interview, she described actions showing that she was the one who had to take action at first because no one else.

"I felt ok and called the president's secretary. I told her, 'Do you know this? She was like, oh! really, and some.' Then, I replied 'It is okay now.' I also called the head of HR if she had updated this to the management level persons, and what the progress was. was' what did we have to do after that? I felt okay and then tried to talk first and discuss what happened."

P22: Line 165-168 and 174-181 (personal communication, September 28, 2022) --- He described that he tried to find someone to help but he found no one as people got seasick and some thought that it was not their responsibility.

“I went to bulkhead and asked people to help. Anyway, the sea stage was so high. People cannot sleep. So I tried to find people to be a part of my team even though people will get sick easily.....At that time, there were two groups. One was seasick people. Another group would probably have thought that it was not their duty if the XO saw this, he would do something. So it was not their business to decide. Then, I found there was no one. Things at the bottom were falling, the waves were strong and there was no one. Finally, I have to come up on deck. Everyone went to bed. One who was concerned more than others had to walk around and check the ropes meanwhile others who were concerned less went to sleep comfortably.”

2) Theme P2: Pressure

Code P2.1 Impacts affecting stakeholders

P25: Line 158-180 (personal communication, October 4, 2022) --- He described that the impacts on stakeholders were factors to drive actions in a crisis.

“But there is another external factor that was people who are not related to our team were also monitoring. They are a monitoring team that monitors if it is okay or not, such as the volume. They will receive feedback from another channel at the same time. That means we have to communicate with the people involved such as the sales department first, but the other party will come to us in the back channels such as Line chatting or a phone call to help in monitoring so it makes us communicate, talk, report problems, and acknowledge various problems almost at the same time.”

Code P2.2 Time pressure

P26: Line 12-16 (personal communication, October 4, 2022) --- He informed that the time limit provided impacts on him.

“After knowing information, the atmosphere had changed, and the timeline was squeezed. So, as usual, the people in the team had the pressure, right? Also, the scope of work was quite large. It will have more impact on the team members. Our head did not get that much impact. He just expected us.”

Code P2.3 Workload

P33: Line 11-14 (personal communication, November 16, 2022) --- He informed the pressure and high workload within the limited time.

“One idea was that I had to take responsibility for this task because, in the end, it had an impact on me. I thought about how to solve this problem by tomorrow, but

here it was going to finish the work hour for today. Tomorrow early morning! All systems must be completed, the price must be changed, and how much we lost.”

Examples for Category Q - External Enablers

1) Theme Q1: Power

Code Q1.1 Higher-ups' supports

P14: Line 440-445 (personal communication, July 12, 2022) --- She described when she got support from a boss.

“As a team member, let the boss help to deal only because it is like the corporate culture. The organizational culture is that newcomers will have a head to help negotiate, help carry out, and even write a paper and write something for us. We must collect information only and then send it to the company. Therefore, when encountering a problem like this, He told us that this case was stuck here but let him talk to the company before. If there was any progress or could not be fixed. He would tell me.”

Code Q1.2 Autonomy

P7: Line 201-204 (personal communication, June 21, 2022) --- He described that he had the autonomy to take action.

“As the owner is quite a freestyle person, simple and modern, it makes the whole organization be in that style. It is as above, so below. If the owner is an easy person and gives me full power to make a decision. Anything that does not affect the requirements that he set, I can run everything by myself without asking anyone.”

2) Theme Q2: Supporting resources

Code Q2.1 Good resources

P30: Line 78-84 (personal communication, November 5, 2022) --- He explained that he had a good back office team.

“I informed back to Thailand (operations team) first that something happened, waiting for solution.....In this case, I will book the hotel, talk to the hotel, or other phone calls because I cannot both drive and use the telephone. It is hard to solve problems. I asked the team in Thailand to stand by as this situation happened. As when I started to have a solution, I did other things next.”

P30: Line 98-101 (personal communication, November 5, 2022) --- He also added the importance of his assistance.

“I have an assistant as my administrative officer that he was standing by. Ok! If a situation happens, I give you a number, you help me to email or sit in front of the computer because it is faster than what I use on my mobile phone and it has a smaller screen. He used a computer to search for information.”

Code Q2.2 familiar resources

P18: Line 284-297 (personal communication, August 17, 2022) --- She said that the other key to success was that she got familiar with the workplace and people which caused her confidence in her actions.

“It may be possible that some places like external factors, such as some branches where I have been working for a long time, I have the feeling that it is okay and I have the confidence to do things. This is an external factor and confidence is an internal factor. Maybe it is the location or the place I live in is an area that I am quite familiar with. The area I have been there for a long time, it's an external factor. The place where I am, sometimes if I go as a new person. In the new place, expressing opinions is an external factor that I do not dare to comment on much. But for this external factor, assuming that I have been in this branch for 4 or 5 years, it's like, well, appropriate with the area and the surroundings. One may be very familiar with people who dare to express their opinions with something like this. This is an external factor that I feel. I have been in this area for a long time, and people around me are people I might be familiar with and talking to each other, like this.”

Examples for Category R – External Influences

1) Theme R1: Factors fulfilling human safety needs

Code R1.1 Life and family security

P6: Line 152-157 (personal communication, June 20, 2022) --- He shared that thinking about family had motivated him to take action in a crisis and working life.

“I can get through it. It was like having the principle that I did it for my family. I got it through my own emotions. If I do not have a family, I do not know what the reason is for doing this. I can run away but the family made me do this.”

Code R1.2 Recognizing potential returns and rewards

P2: Line 260-261 (personal communication, March 1, 2022) --- She mentioned her motivation that she wants positive feedback from people.

“I want people to see me when something is done. I want to get the compliment. It quite drives me that I have to do it. I must succeed and must be the number one.”

P14: Line 290-291 (personal communication, July 12, 2022) --- She described the rewards and qualification that drives her to put effort into solving problems for success.

“Therefore, it seemed that there were many pressures. There were the number that I committed to the company, maintenance of the balance of the team, the MDRT (the Million Dollar Round Table Association) qualification, and the matter of income which is the main thing. All bonuses are relevant.”

P16: Line 264-268 (personal communication, July 20, 2022) --- She also informed me that the financial aspect also influenced her.

“It is a matter of money, in terms of status. It is like I feel that if I work better, my finances might get better. I think that if I try to do well, I might get a factor that the store can make good sales, and then I may get more money. I think about if it is like this, I will think about income and expenses. I think more about money. If I have to add something, there is a push. What makes me have a pushing force, would better be a factor about money.”

2) Theme R2: Models

Code R2.1 Role models

P13: Line 629-659 (personal communication, July 6, 2022) --- He identified that his father is his role model who taught him to be diligent and not give up.

“Probably from my father, because my father did not graduate with a degree, he was a teacher, graduated with a diploma, and was a teacher in the commercial school being a teacher who doesn't earn a lot. After marrying my mother, it was difficult at first. There are even bigger factories that saw his potential. He asked me to go to work too. At first, he went in and climbed up from the staff, and department manager, and then went up to be the largest factory manager. At that time, my father was the manager of the well-known office furnisher factory. So I felt like my father did not end up in a direct line. My father did not have any background in management knowledge. What he teaches is accounting but he can do everything he wants to do, just open his mind to going in and learning to study it. My father always

teaches me that there is nothing we cannot do. At first, all are difficult, but if we set our minds to it, we could do it all. So I probably adhere to his teachings that have been cultivated.”

P16: Line 250-260 (personal communication, July 20, 2022) --- She also informed me that role models can be people around her.

“I think external factors are likely to come from people around me. If you ask me, I think it comes from the dentist more. The doctor taught me more and I looked at the techniques of talking to the doctor. When there was a problem, how the doctor talked and how she solved the problem. And most of the time, the doctor then taught me as well.”

P6: Line 275-279 (personal communication, June 20, 2022) --- He pointed out that it can be the cartoon key character that succeeds in a crisis and shows various attributes to be adopted.

“I might have liked to watch a cartoon. The leading character was cool. When he loses, he will go back to training again. The cartoon has a happy ending but in real life, we do not know. Kids never know that they can lose because just in the cartoon, they always win. I then remembered from it that I have to fight and fight always until today still fighting”.

Code R2.2 Books

P22: Line 448-457 (personal communication, September 28, 2022) --- He described that the good book provided knowledge and examples that he adopted from them.

“Inside, I have thoughts. I may read books that other people did not read. I might go reading a part where other people don't read it. I might think at the point that the others do not think.....I have read the books for direct sales. I have never done this job, but my girlfriend asked me to go and join with her. After listening to them, they provided a book. This book is a kind of nourishing a brain. Then, I going to read these books. I have read a lot of these books.

P23: Line 215-222 (personal communication, September 29, 2022) --- He also pointed linkage between books and role models that books can be cartoon books that tell stories of heroes or characters who fight in a crisis and the victory.

“The second one that I used to solve problems well is a source of learning, books. A good book can be a role model to do something. It does not have to be a book. I think if we study the characteristics of heroes or main characters in a cartoon, take it easy first and in a drama or a movie. They also have the characteristics to solve problems. The hero gives others more than the villain so we feel that this is such a hero, a leader, a captain, a team leader. People have faith in you. You are ready to lead people to victory. I thought, uh, he solved his problem. I just imitate his way of solving problems. I adopted it like this.”



BIOGRAPHY

Name-Surname

CDR. PAKAWAT PIRIYAPOL

Academic Background

Bachelor Degree in Engineering
Royal Thai Naval Academy
Master Degree in Aviation Management
Griffith University.

Experience

- Military Pilot and Instructor Pilot
- Deputy Head of Department - Aviation Safety, Safety Management, and Human Factors - Officers, Specialist, Instructor, Auditor, and Investigator; Royal Thai Navy
- Deputy Head of Department - Naval Air Station Base Operations and Air Navigation Services; Royal Thai Navy
- Airport Operations Manager; U-tapao International Airport.
- Special Lecturer; Civil Aviation Training Center
- Senior Officer, Aviation Safety Management and Standards Assurance Office; Civil Aviation Authority of Thailand