

**HEALTH COMMUNICATION INNOVATION FOR DEPRESSION
PREVENTION AND SURVEILLANCE**



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**A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
Doctor of Philosophy (Communication Arts and Innovation)
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ABSTRACT

Title of Dissertation	HEALTH COMMUNICATION INNOVATION FOR DEPRESSION PREVENTION AND SURVEILLANCE
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The research entitled, “Health Communication Innovation for Depression Prevention and Surveillance,” is aimed to study the pattern, content, and methods of health communication for preventing depression through social media and to explore the needs of LINE application on health communication for depression prevention, including altering health communication patterns related to depression prevention to reach general receivers more widely with no sex and age limit, nor regardless of their mental condition. The findings are expected to enable easy and convenient accessibility to depression information and to change the perception of health communication towards a more positive attitude through the use of online media as a communication innovation that responds to the lifestyles of people increasingly. Moreover, the findings are expected to yield a new channel for studying and applying preventive health communication information for self-nurturing and surveillance. The developed communication model will emphasize timely depression screening and quick examination and evaluation of the level of depression severity for proper assistance.

The study was conducted with 15 samples aged 20-65 years old in Bangkok, by dividing the samples into three groups: Group 1 consisted of the samples aged 20-30 years old, Group 2 older than 30 to 40 years old, and Group 3 older than 40 up to 65 years old. The research was qualitative, conducted by documentary research through the analysis of information on websites, YouTube, applications, Facebook, and Twitter to examine the patterns and content of health communication related to depression, including communication methods used via social media. Besides, an in-depth interview was conducted with 15 samples twice. The first interview was conducted before the design of the instrument for studying the needs of the Line

application for depression prevention communication. The findings then were collected to design a tool called "m-Mental Health" and a platform of health communication innovation to let the samples assess them. The second interview was conducted with the same group for assessing their satisfaction and expected benefits from the Line application.

From the study, the findings were as follows:

1) The patterns and content of health communication related to depression prevention on five types of social media were found. For websites, the screens are full of infographics, focusing on beauty and attraction with some gimmicks among graphic cartoons. YouTube shares health care and disseminates information through audio-visual systems. Users can read and share the information. Application is divided into a free and paid application for handling users' anxiety and stress, functioning as 24-hour online therapists. Facebook, both Thai and foreign, is not a sphere for health promotion. On the contrary, it can cause users too much anxiety, leading to stress and mental problems. Twitter of foreign countries is found to support useful knowledge about depression, and present a more positive and preventive approach for dealing with depression. However, Twitter in Thailand is quite a scary sphere as it can induce other users to imitate and may lead to suicide eventually. Thus, Twitter in Thailand might yield more harm than usefulness. However, from the content analysis of all five types of social media, not so many differences were found in most of their content. Mostly, the content displayed the prevalence of the depression condition for stimulating awareness and giving knowledge for health care, providing health care consultancy and listening to users' problems, recommended hospitals and institutes of depression treatment, and provided information for depression remedy and reduction. 2) The methods used in communicating depression prevention of five types of social media were found to be different. Websites use both one-way and two-way communication through articles, journals, studies, and infographics for promoting prevention and preventing mental health. YouTube uses one-way communication in the form of videos and interviews with experienced physicians with simple language. Applications use diverse patterns. They perform as a tool for collecting information, disseminating and sharing information,

communicating between the governmental agencies and people, coping with and reducing depression. Both Twitter and Facebook use two-way communication by functioning as a sphere for information exchanges, emphasizing experiential sharing in the form of statements, videos of knowledge and treatment guidelines like talking to medical experts that helps to increase relaxation and feeling at ease. 3) Regarding the need for using the LINE Official Account concerning depression prevention, it was found that the level of the users' needs is at the high level, especially the group of 20-30 years old have the highest needs. All samples perceive it as easy to use and access. Besides, they prefer having information presented in the form of statements, images, infographics, and videos. Some recommendations of the presentation methods are (1) having several kinds of media for choosing to follow, (2) keeping updating the news, (3) being able to communicate via this channel, (4) being able to connect with other websites. Among all methods, infographics and videos are rated by the samples at the highest level, especially 20-30 years old. 4) For the design of the content on the LINE Official Account for communicating depression prevention, the samples want to have an explanation about depression screening and assessment form, self-care and self-surveillance of mental health, channels for contacting hospitals and treatment institutes at the highest level, followed by causes of or factors leading to depression and recommended hospitals and institutes at the high level, and the content about the definition of depression and severity level at the moderate level respectively. 5) For the test of the tool in the Line application, all samples had the highest level of satisfaction. They were satisfied the most with the modernity of the channel and the convenience in answering the depression assessment form. Regarding the benefits gained from the use of Line application as health Communication Innovation for Depression Prevention and Surveillance, all samples evaluated the usefulness of the information at the highest level, especially for mental health care and guidelines for coping with depression, followed by its usefulness in creating social interaction, sharing with other people, and applying in daily life, including advising other people, respectively.

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CHAPTER 1

INTRODUCTION

1.1 Background and Significance of the Problem

Depression or Major Depressive Disorder is a type of psychiatric illness. It is a mental state expressing emotional disorders such as sadness, boredom, melancholy, hopelessness, insomnia, the loss of appetite, distraction, anxiety, and pessimism (Somphop Ruangtrakul, 2000), including sadness and withdrawal behaviors (Beck, 1967) Depression is a mental illness that can occur to anyone, and can turn to be major severe depression and depressive if it cannot be cured properly.

Depression is a psychiatric disorder and considered as one of the severe mental problems. (Weera Churujiporn, 1999) When a person encounters various situations daily, such as the loss of his beloved one, divorce, problems at work, financial issues, or disappointment, etc., these may be social factors that affect a person's mind and cause stress in physical condition, mental condition, and thoughts. All symptoms can yield major effects daily.

According to the data from the World Health Organization (WHO), there are more than 350 million depression patients at all age ranges worldwide. The concentration is at 4 percent of the total world population of 7.5 billion, which means that every 1 out of 20 people is now struggling with depression and the high number of repeat patients reaches 50-70%. What to be concerned about is depression, a mental disorder, is often found in the working-age worldwide with an estimated number of 300 million people, the majority of who go to work, which strongly associates with the quality of life and wellbeing. Fulfilled professional experience establishes positive effects on life quality. On the contrary, if the professional experience is unsatisfactory, it affects physical health, mental health, causing health problems followed by drug use, alcohol, cease to work, and eventually increases a higher chance of having depression.

The Department of Mental Health reveals the current situation of mental problems in Thai citizens at the age of 18 years old or higher. The study found that more than 7 million patients dealing with mental illness caused by 5 major categories which are depression, schizophrenia, anxiety, mental retardation, side effects from drug abuse. It is foreseen that depression will rank the first among all mental issues.

In Thailand, there are 5% of depression patients or 3.15 million, but only 11% of all patients receive treatment while more than 90% is still blended within the society without being aware that they are experiencing depression. Whereas the trend is expected to continuously increase (Apichat Jariyavilas, 2017) According to the statistics of the people who are prone to depression, the study found that women have a 70% higher risk of having depression than men specifically among teenagers aged between 10-19 years old. Now, more than 1 million has been diagnosed and another 3 million is risky out of 8 million teenagers (Boonruang Trairuangvorawat, 2017) For people of working-age between 20-59 years old, their main concern is committing suicide, precisely at the age between 35-39 years-old which has the highest suicidal rate. From the statistics of working-age obtains mental health consultation, psychiatric disorder ranks the top. 20,102 cases of working-age reach out for consultation. The second rank is stress and anxiety problems with the number of 17,347 people which includes depression. (Boonruang Trairuangvorawat, 2017) Depression is most concentrated in Bangkok, followed by the North-Eastern part of the country. However, depression can occur to all genders and all ages. The emotional disorder is mostly developed from adolescent age with stress and high anxiety. Therefore, the more teenagers constantly encounter anxiety, the more risk they will experience depression at an older age.

As a result, at present, depression has been recognized as the world's issue. According to the research from the World Bank collaborated with Harvard University, it shows that in 2020, depression is going to be the 2nd rank of the World's public health problems after coronary heart disease is caused by socio-economic factors.

In the context of Thailand, depression is monitored as a problem ranked the 4th and found more in women than men with a 2:1 ratio (Stahl, 2000) The illness requires serious attention from society as it affects heavily on family members and the society

on a daily activities basis and might affect the economy as a whole. (Manote Lotrakul & Pramote Sukanich, 2005)

The finding is relevant to the report from WHO which states that depression is a cause of the disability of world citizens ranked 1 out of 10 diseases. 10.7% of the World population brings more losses and burdens (World Health Organization, 2012) Furthermore, WHO indicates that depression creates Disability-Adjusted Life Year (DALYs) as the 2nd rank and is resulted in (Kaeota Leelatrakarnkun, & Umaporn Trangkasombat, 2012) quality of life which might eventually lead to suicides especially among severe depression patients or patients who didn't receive proper treatments. As we can see, the effects of depression are dangerous and concerned in today's society. Many news outlets consistently report suicides. The statistics claim that successful suicides happen to a person every 2 hours. The rate of attempted suicides is 20 times higher than successful ones. Moreover, severe depression cases can end people's lives 20 times higher with 10-25% in women and 5-12% in men. (Murray, Lopez, and World Health Organization, 1996) Suicides are the most crucial problem in every age. The data from the Department of Mental Health points out that in 2019, the Thai population has 6.18 suicidal cases per 100,000 populations, expected to keep increasing (Department of Mental Health, 2019) Working-age of 35-39 years old acquires the highest suicide rank with the highest success rates. Thus, it affects mental health, family members, and close friends which relatively causes damage to the national economy. Besides, the failure in suicidal attempts can also result in physical complications and disabilities.

The causes that stimulate depression can be from several factors both controllable and internally uncontrollable such as genetics of mental development, external or environmental factors, for example, serious stress, chronic illness, orphanage childhood, loss of loved ones or family, unemployment, or financial problems, sudden relocation, relationship with close people, etc. Once these circumstances repeatedly occur, depression might be stimulated, along with biological stimulants like neurotransmitters' level change. Even though genetic factors are significant as they can be genetically transmitted, it doesn't prove that if a relative obtains the disease, other family members will do the same. It also depends on other factors as mentioned earlier.

Factors that jeopardize depression can be categorized into 4 groups:

- 1) Persons who have a family background with psychiatric disorders such as depression, bipolar disorder, etc.
- 2) Persons with chronic diseases such as cancer, Kidney disease, congenital anomalies, etc.
- 3) Persons with problems related to the social mind such as heartbreak, drug abuse, pregnancy, academic problems, etc.
- 4) Families that lack warmth and raise their children without education any skills and emotional management.

Depression can be differentiated into 2 types which are major depressive disorder and persistent depressive disorder.

- 1) Major depression Disorder is a state of depression that strongly affects either professional or academic performance including sleeping and eating habits.
- 2) Persistent Depressive Disorder some home shows less severe symptoms. However, persistent depressive disorder carries on a much longer period with a minimum of 2 years. During this time, patients can also be diagnosed with major depressive disorder in the meantime.

From these circumstances, we couldn't deny that every human has to encounter sorrow and all seek happiness. As a consequence, every country creates several festive events such as Christmas Day, New Year's Day, Valentines' Day, also Songkran's Day in Thai Culture. On each joyous occasion, people are full of smiles and laughter celebrating their precious moments together. But believe it or not, depression is one of the illnesses that turn many peoples' lives unhappy and couldn't enjoy their usual activities in the same way. Therefore, everyone should be concerned about the importance of how lives can be affected by depression especially among your family members or close friends. It is important to always observe their behaviors. In case there is any symptom presented, a patient can receive proper treatment in time as many patients are not aware of their illnesses. Moreover, today's lifestyles tend to be rushed and struggling with more individualism. People neglect the physical and mental health of themselves and also of their family members. Once a certain trauma or difficult situation occurs, people collect these tensions and stress

repeatedly. As a result, depression has been unconsciously formed. The lack of treatment brings the degree of depression to a more severe and persistent stage which potentially leads to committing suicides at the end.

From the occurrence of depression and its intensified consequences, many Thai researchers are now studying depression-related topics such as medical biology, psychiatry, medical anthropology, and psychology. They all aim to focus on depression issues to gain a better understanding of the illness (Siriporn Chirawatkul, 2003) It is ambiguous to describe when the first research on depression was originally taken. Although, according to an online database, it shows that the first research on depression was released in 1974. Most depression-related studies are focused more on adult and aging groups while each studies' finding is varied. There are 183 depression-related pieces of research are found, which can be categorized by;

1) Quantitative research: 177 topics which can be designated by the research objectives, as follows:

- (1) The study of the concentration and incidence of depression
- (2) The study of depression-related factors and predictable factors on depression
- (3) The study of the evaluation of depression

2) Qualitative research: 5 topics, which can be designated by the research objectives, as follows;

- (1) Emotion Control managed by external agents such as hospitals
- (2) Self-Control, such as tolerance, the consumption of medication and alcohol, the change in perspective, and life aspects to find out problem causes.

3) Mixed-methods research: 1 topic

Referring to the information above, it reveals that the numbers of depression-related researches have rapidly increased which reflects the importance given to the research studies of depression. The escalated numbers of studies in depression might also be caused by the numerous effects of depression itself in these past years. Therefore, in 1998, the Department of Mental Health initiated policies in dealing with depression by supporting more research studies on depression to help and educate the public about how to prevent depression and also to instruct via the Department's

online database and other media. Since then, the Department of Mental Health provides more apparent operations especially in 2004, the issue of depression was included in one of the objectives under the National Strategy and remains on the agenda until today.

The research survey helps us conclude that the majority of research found in Thailand provides information focused on the concentration including causes and factors that catalyze depression along with knowledge and understanding of depression itself. Nevertheless, there are inadequate numbers of studies that are focused on risk groups, the preventive measures, self-assessment tools, and also the primary self-applied guidance before appointing specialist' visit is required to intensely relieve patients or risk group's suffering from depression.

From the survey of content and communication methods in Thailand, a vast majority of communication is to educate the understanding, the awareness towards the outcomes, the treatment guidelines, recommended institutions or hospitals and also the statistics report of the density of depression-related incidences via articles, journals, research studies which can be sorted by;

A format and content of Health Communication under Depression Prevention through social media below;

1) The Communication via websites It can be distinguished into 2 types based on the websites' objectives, as follows:

(1) Websites for Medical interests such as the website of The Department of Mental Health, 19 websites of psychiatric hospitals, websites of general hospitals from both public and private, websites promoting health, websites of research and information centers of depression issues, etc.

(2) Websites for forum meetings such as Dek-D.com, Kapook.com, Sanook.com, Pantip.com, etc.

2) The Communication via Facebook

In Thailand, 93 Facebook pages talk about depression. From the survey on 12 September 2018, these pages are created for 2 distinct purposes. 73 pages are created for the community while another 20 pages are created to pursue their personal goals.

3) The Communication via events such as mental health fairs, academic seminars, operational meetings, etc.

4) The Communication via Line such as a Line account called “Baan Pak Jai” appeared on Pantip.com, a Line account managed by the Department of Mental Health”, etc. Besides, many communication methods existed in both domestic and international contexts to educate and raise the awareness of the outcomes of certain treatment guidelines, recommended institutions or hospitals, the statistics report of the density of depression-related incidences. Nevertheless, there are inadequate numbers of studies that are focused on preventive measures, self-assessment tools, and proactive communication to educate and intensely relieve patients or risk group’s suffering from depression.

Consequently, researchers are interested in transforming health communication methods in the matter of depression to be more engaging. Also, to provide alternative channels sharing new media on how people can look after themselves within the community and overcome depression. The information can be presented as preventive through screening and searching for people with high tendencies in depression, providing accurate diagnosis and evaluation of depression symptoms, offering accessible sources of information that can be accessed anywhere and anytime. Social media is a recent innovative platform to communicate about depression that is involved in people's lifestyles nowadays. Anyhow, the social trend in engaging more with social media leads to increased numbers of studies of the link between social media and depression. Likewise, a survey mentions that while social media gains more popularity, the rate of people suffering from depression and anxiety is relatively augmented. Today, people of all ages own their social media accounts Like Twitter, Facebook, or Instagram. Therefore, studies are encouraged to find out whether the link between social media and the imminence causing depression and anxiety.

Brian Primack, the Director of the University of Pittsburgh Center for Research on Media Technology and Health, anticipated that the use of multiple social media might cause a risk of suffering from anxiety as a person attempts to adapt to rules and culture. Social media users might struggle with the adaptation due to distraction from using several social media simultaneously. Yet, another finding

shows that sample groups who use Instagram and Snapchat demonstrate loneliness and the lack of self-confidence caused by being threatened and humiliated. (Primack, Shensa, Sidani, Whaite, Lin, Rosen, ... Miller, 2017) Also, they experience sleeping problems as they always repeatedly compare their lives with others.

From further research, the study conducted by Dr. Elizabeth Miller, Professor of Pediatrics at the University of Pittsburgh School of Medicine, and the research team finds that the use of social media directly relates to lonesomeness and depression. Their research was published in the American Journal of Preventive Medicine, indicating that the reason today's young generation, both men and women, participates more on social media is because of the feeling of loneliness. Moreover, the use of social media is also significantly related to teenagers' depressive problems, proven by statistical data. Besides, the research of the use of social media and the perception of social isolation among American teenagers by Dr. Brian A. Primack who also worked with Dr. Elizabeth Miller as one of the research team. The survey in 2017 indicates that if you spend more than 2 hours per day on any social network, you are likely to feel lonely 2 times more than average (Primack et al., 2017) The research team did questionnaires surveying 1,787 Americans aged between 19-32 years and questioned about several social media platforms such as Facebook, YouTube, Twitter, Google Plus, Instagram, Snapchat, Tumblr, Pinterest, Vine, and LinkedIn by describing how each person uses social media. The results are evaluated by the assessment tools testing depressive conditions and are concluded that social media users who spend more than 58 hours per week can feel lonely more than 3 times per week. Even though social media takes a significant role in helping us follow the World's trend and encourage us to be part of a person who shares Fear of Missing Out or FOMO feeling. In the meantime, the research points out that this type of fear can also lead to obsession and serious loneliness. Dr. Elizabeth Miller comments that there is also a possibility that both male and female teenagers who feel socially isolated turn to use social media or it is also possible that the use of social media makes them feel isolated from reality (Primack et al., 2017)

Furthermore, Mr. Time Chuastapanasiri, an academic from the Academic Institute of Public Media, interestingly wrote an article educating about depression on Facebook. In his article, he cited the study published in the Journal of Pediatric

Medicine US (Time Chuastapanasiri, 2017) by Dr. Joanne Davila from Stony Brook University. The study proves that sending messages on Facebook can stimulate children's temper and make them obsessed with sadness, sorrow, anxiety with various issues on Facebook rather than let things go. Another key finding is that people usually sense more negative reactions on Facebook than in the real world. As a result, they start feeling depressed, anxious, and sad. Followed by, people who are rejected or disgusted on Facebook are more harmed than being rejected in reality. Many cases consequently suffer from depression as Facebook creates the "artificial reality" by presenting only good things but hiding all bad things away. Everyone will then witness only people with perfect lives in this virtual reality. Once you compare other people's social media posts with yourself, the feeling of worthlessness occurs. For example, you will lose your confidence if you send a friend request and it hasn't been accepted by the person. The behavior that you keep thinking about why you didn't get what you wanted can be considered as a sign of depression from using Facebook and the solution you made is reducing the amount of time spent on Facebook, read other people's posts less and post more about you to make yourself feel better. This can be defined as Facebook Depression Syndrome. (Time Chuastapanasiri, 2017)

From the above, 10 social media platforms which are Facebook, YouTube, Twitter, Google, Instagram, Snapchat, Reddit, Tumblr, Pinterest, and LinkedIn consists of the risk towards depression especially Facebook. So far, there is yet no research study on Line application whether the platform can also create the risk causing depression. Therefore, the author is interested in and would like to study how Line application can potentially be an innovative health communication platform highlighted on the issue of depression prevention as Line application is widely known as one of the most used applications in Thailand.

Based on the behavior survey monitoring the use of Line application in Thailand in 2017, it shows that Thai people rank the 2nd of the World's highest numbers of Line users, followed only after Japan. 83% of the whole Thai population has Line accounts and 44 million use Line applications via their mobile phones. (Ariya Banomyong, 2017) The key features that differentiate Line from other applications are "stickers" which is a new form of communication that express a variety of emotions and feelings such as stickers that show general feelings, stickers

appeared on special festival and occasions, stickers showing brands and logos, and stickers of famous cartoons, etc.

Moreover, when users need a forum to exclusively exchange their thoughts with familiar group members, they can create group communication to have conversations with diverse people, to connect, and to communicate within the group. Another Line's feature is the ability to communicate through voice calls as if you call with a normal phone without being charged to any network members. No matter how far between you and a recipient, you can always call via voice calls. Refer to all reasons previously mentioned, many smartphone users download Line applications for different purposes of use including organizations. They all use Line as a way of communication to achieve their business objectives. (Supasil Kuljitjuewong, 2013)

According to the research from the online database of “Factors that Affect the Acceptance towards the Line Application”, it describes that there are several significant factors such as social network, media richness, enjoyment, the ease of use, and opinion towards IT which outstandingly affect the acceptance of Line application more than other factors. While the key reason encouraging people to use the Line application, based on the online database survey, is because the application offers shared knowledge, entertainment, and news which highly satisfy all users. (Ketpreeya Kaewsanmuang, 2016). The survey also points out the benefits gained from the Line application which are the implementation of sending stickers to one another via Line chats and Line groups, and also the feature of photo sharing. The majority of users find these benefits worth the price for what they paid for.

Also, the number of Thai people using the Line application is expected to increase as the application is not limited only among teenagers or working groups, but also among the aging community. The application as well offers services for businesses that include businesses in sales, medical, beauty, and education, introduced as Line Official Account. It is like having a website's home page or an account page, just appearing only on Line Official Account. Corporates can create their official accounts no matter which business sizes they are having, from SMEs to large firms. This additional feature for business is a significant platform that makes communication more convenient. Functions that appeared on Line Official Account let the users or so-called “admins” manage to greet messages to new members, to add

other business accounts or default products that the business has set on the system. An automatic response setting is one of the useful functions that help the account's admin response in the chat via auto-reply messages whenever the responsible person is not available. The auto-reply can be set by using Keywords. When a customer greets, the reply can be automatically generated. In addition, Line Official Account can collect surveys and data collection from the account's followers. The collected data can be analyzed and stored. For example, the statistics of the number of viewers for each post on the timeline. As well, the data can be gathered and downloaded into a computer for further marketing plan analysis for the businesses. Line Official Account is then highly recommended to all business sectors, both online and offline. It can be used as a Facebook Fan Page that each post can be scheduled for advertisement or product catalogs. When an account member visits the account, Rich Messages will appear on a chat screen. It will guide a user to links or websites. Another main function of Line Official Account is Broadcasting. An account's admin can send text messages and images to all customers just in one click and the setting can be scheduled in advance as well. As you can see, broadcasting greatly helps to accommodate all users to have a fast and convenient way of communication to larger audiences. (ICOREVIEW, 2017) Being led by all supporting ideas above, the author has a strong interest in implementing Line application as a tool for Health Communication in the issue of Preventive and Precautionary Depression. The study will also propose some recommendations about the introduction of self-care by initiating a self-survey via the Line application. The survey will be a self-assessment that includes the introduction of the risk of having depression, without a doctor visit or any membership fee required. The proposed idea responds to existing lifestyles that people nowadays prefer not to identify their problems and may refuse to have proper treatment especially when there are possibilities that they might be misunderstood and blamed.

Therefore, the research aims to change the way health communication in depression prevention issues are now coped with to access more audiences with no limitation of genders, ages, risk, and health conditions. Also, it is hoped that the assessment tool will provide more accessible and more convenient for everyone to be educated on depression issues through a new format for health communication. A new way of Health Communication will no longer be boring. Social media is adopted to be

a new form of innovation for communicating about depression in relevance with people's lifestyles. The study's objectives are to create a new survey platform promoting the preventive and precautionary measures under depression issues through self-treatment. The proposed process will help to screen people who show a risk of having depression, diagnosing and accurately assessing the severity of depression to provide the most suitable solution based on their level of illness. As a result, the author is strongly interested in the study of Health Communication Innovation Issues of Depression prevention. Thus, the research objectives are as follows:

1.2 Research Questions

- 1) What are the formats and content of health communication related to depression prevention through social media?
- 2) What are the communication methods used in health communication related to depression prevention through social media?
- 3) What are the needs of using social media as a tool of health communication related to depression prevention?
- 4) In which ways should the Line Application be used for health communication related to depression?
- 5) How do people respond to health communication related to depression prevention through the use of the Line Application?

1.3 Research Objectives

- 1) To study the formats and content of health communication related to depression prevention through social media.
- 2) To explore the communication methods used in health communication related to depression prevention through the social media.
- 3) To explore the needs of using the Line Application for health communication related to depression prevention
- 4) To design the Line Application as a tool used in to health communication for depression prevention.

5) To test the designed Line Application as a tool in health communication for depression prevention.

1.4 Research Scope

The research aims to study health communication innovation for depression prevention focusing on receivers who are working, aged 20-65 years old, and reside in Bangkok. Nowadays, the age of retirement is 65 years old. (Sucheera Phattharayuttwat, 2017) The focused working group is divided into 3 sub-groups. The first group is the first jobbers aged between 20-30 years old. This group shows courage and energy to handle their work tasks, while the other group of the age range between 30-40 years old tends to be married, receives job titles, or gets promoted to more senior titles. Then, the last group is the working group aged between 40-65 years-old, which we call, “the seniors.” They are likely to seek happiness and comfort for themselves. (Sucheera Phattharayuttwat, 2017) The research’s mixed methods of qualitative and quantitative is applied in the format of Exploratory Sequential Design with 2 distinct research sequences which are qualitative data collection implementing Textual Analysis to study how and in which format and content health communication for depression prevention are taken into through social media platforms. Following by developing a conceptual framework and quantitative questions through survey research providing close-ended questions as a preliminary data collection tool. The purpose of collecting data is to study satisfaction and benefits expected from the use of the Line application designed for health communication for depression prevention. According to questionnaires answered by 30 survey participants, the focused group is arranged into 3 age groups with 10 people attending in each group. Next, the designed platform made on the Line application is presented to each group. Meanwhile, closed-ended questions and rating scales are adopted as data collection instruments to evaluate the quality of tools proving their advantages, interest, satisfaction, and also to find outsources and obstacles towards the implementation of the Line application as a health communication innovation for depression prevention.

The researcher collected data during March-May 2019, applying textual analysis and survey questionnaires.

1.5 Operational Definitions

Communication Innovation means new technology or a newly developed thing that influences behavioral change in the way of communication, particularly on the Line application which is now carried on a popular trend among Thais. It has been recognized as an easy-to-access medium of health communication that anyone can use and share their information to promptly update ongoing news and incidents together with user's entertainment.

Depressive Disorder and Depression means an emotional disorder that significantly involves depressive symptoms and other indications such as boredom, lack of interest, loss of appetite, sleeping problems, lack of energy, distraction, feeling of worthlessness, and potentially considerable physical harm. These symptoms might affect the quality of life daily to a person and family. Also, patients with depression can define persons who are diagnosed by psychologists having depression, with the age range between 20-59 years old, and develop symptoms listed by the American Psychiatric Association's ICD-10 classification.

For this study, the word "depression" is used as a general term to cover both depressive disorder and depression.

Communication Methods Used in Health Communication for Depression prevention means the way that messengers deliver health-related news and information focused on depression prevention issues to recipients. The methods used to communicate through social media are varied i.e. websites, YouTube, applications, Facebook, Twitter. Also, the communication method can be either one-way communication or two-way communication. Beyond the communication itself, organizing content is necessary and vaguely grouped. Therefore, all recipients can choose information based on an individual's interest. The methods of health communication for depression prevention can also be these categories below;

Communication methods for reporting the density of depression cases mean medical websites utilizing the communication method for reporting the density of depression in the form of reports informing such as medical treatments, numbers of mental problem cases by highlighting the concentrated numbers of depression cases, numbers of patients who receive treatments, etc. The related information sources can

also be found in articles, journals, researches, video clips, including infographics. These available media help educate people about health and health care with the purpose to provide information and knowledge promoting and preventing mental health problems.

Communication methods for instructing, creating awareness, and encouraging health care mean types of communication offering essential medical information by presenting in the format of news releases, articles, books, journals, video presentations discussing health path, general health, women's health, men's health, mental health, food recipes, healthy menus, exercises, lifestyle and health care techniques, advice on adjusting and reducing health risk behaviors, professional health care, alternative medicine, herbal supplements and vitamins, health check-ups, book genres, publishers, reader's reviews, etc. These health-related articles and magazines advise people what depression is and explain causes of illness, initial assessment, treatment options including the suggestion on how to handle when someone you know is encountering depression through easy-to-understand text, images, and recommendations for the real-world practices.

Communication methods for counseling about health care mean another way of communication that is provided as counseling services available via phone calls and online platforms. Persons can consult with psychiatrists, psychologists, well-trained volunteers who help to listen to problems, therapize and heal depression. The private counseling sessions are available in immediate needs, anytime.

Communication methods for recommending hospitals and infirmaries or medical treatment institutes mean alternative health communication methods for depression prevention issues via websites by nominating hospitals and institutes specializing in depression. Lists of medical clinics and hospitals are provided with contact information, maps, and trip instruction. Websites' visitors can search and click links that automatically lead them to other websites. Each website is sorted into main categories such as diseases, medications, hospitals, clinics, contact doctors, hospital queue submission, etc.

Communication methods for providing information on treatment and reducing depression mean how to inform about treatment processes, methods of therapy,

treatment options, diagnosis and treatment for psychiatric patients, general knowledge on mental health for the public to cure and minimize depression.

Formats of health communication for depression prevention mean types of presentation in various forms such as texts, images, sound, videos, including infographics. It is an approach that collects all information and converts it into visual graphics to make data easy to understand within a short period. The format and content shown are communicated on websites, YouTube, applications, Facebook, and Twitter.

The majority of formats of health communication for depression prevention appear on media have the following purposes;

Formats and content of the communication for reporting the density of depression mean formats presenting reports on the density of depression and coming up with shared knowledge, raising awareness, and additional health care information published in articles, journals, depression-related research. Interested persons are encouraged to do further research and supported through consultation in depression issues in companies with recommended hospitals and institutes specializing in depression.

Formats and content of the communication for instructing, creating awareness, and promoting health care mean formats that present information and techniques of depression prevention i.e. a proposed tool for mental health care, a tool assisting to search for emergency assistance. Additionally, preventing depression instruments include depression screening assessments and surveys on emotional changes to guide a self-observation towards risks of having depression. To prevent from experiencing depression, the format mentions using key messages creating awareness, encouraging people to protect themselves from depression, sharing mental health care, pointing out solutions on how to solve, handle and help one another. Furthermore, avoiding risks that may lead to depression is strongly recommended. The instructions are self-observation, self-relaxation, self-learning, caring more about yourself and people around you, self-acceptance in both good and bad points, etc. To reduce stress, a person shall find a way to get rid of all negative feelings such as sadness, anger, disappointment because depressive symptoms are mostly caused by emotional suppression.

Formats and content of the communication for counseling about depression mean formats that explain about treatment processes for depression focused on treatment in both children and adults, drug prescription, extensive therapies, and treatment in psychiatry.

Formats and content of the communication for recommending hospitals and medical treatment institutes mean formats that help to suggest suitable treatment with key purposes to reduce a chance of having depression and encourage people to discover happiness in life through easy-to-understand narrative advising different treatment, assistance and how to look after people with health problems by doctors and psychologists who will ensure patient's improved mental health.

Content of health communication for depression prevention means depression-related information that would be beneficial for public awareness on both individual and societal level in reporting the density of depression as well as main causes and factors that potentially lead to depression. The generated content is aimed to build strong awareness for people to have a better understanding of effects and how to prevent illness. Medical websites present contents about preventive methods, self-treatment, and also assessments measuring a person's stress level and screening any possible risks of having depression. Additionally, these websites provide recommended suitable institutes and hospitals for website visitors.

Social media means digital media that functions on internet websites as an operational social tool. The media is generated by individuals and shared information, news, and personal experience that are instantly opened for online public discussion (Churchill, 2012) and proving common efficiency and mutual interest. (Orawan Wongkaewpotong, 2010)

LINE Official Account Application means Line Official Account or Line OA. It is a service offering official accounts for Line users or even corporate users who would like to create their accounts. The key features of official accounts are the ability to send multiple messages to recipients who link with the account and account administrators can also post news and updates on account timelines. As existing official accounts appearing on Line's platform can reach a large number of users, the services are then considered a great opportunity for brand and business building that can be connected to all Thai users nationwide. The program is set to communicate via

text messages, images, video clips, links, etc. between individuals or between individuals and a larger group of audience. With the purpose to create shared understanding and interaction, Line Corporation developed the application that is available for downloads in both Androids and iOS operating systems. The initiated chat requires an internet connection on compatible devices and technology such as smartphones, desktop computers, tablets, etc. Once Line Official Account is set up, the account supports the communication between friends and family members. However, greater than that, the users can share general information of sales and marketing campaigns or special promotions to other users. Furthermore, the corporate account or "brand" is capable of controlling text messages and photos supported by Line's content management system to eventually provide more solid brand and product recognition.

Need of using Line Application means certain format reflecting users' needs to implement Line Official Account as a tool for health communication for depression with the objectives to indicate the degree of users' interests, main reasons developing interests, in which format people would like to get information from, what kind of content about depression prevention that people would like to receive in particular, presented through Line Official Account.

Line Application Tool Design means a design process to create a Line Official Account platform. The researcher examines collected interviewees' preferences such as the degree of user's interest, the key reason of usage, the preferred format, and content, etc. to meet the needs in providing information about health care and the prevention of depression. The key objective of Line Official Account application design is to enable health communication for depression prevention to be more precise and accurately target the right audiences.

Line Official Account Tool Assessment means the way the researcher surveys by selecting 15 participants from the same study group. All participants are requested to watch video clips presenting sampled platforms simulating the Line Official Account's features used as a tool for health communication for depression prevention which consists of both media content and features. Once all participants watched video clips, the researcher would question participants' satisfaction rates and

advantages of the usage of the Line Official Account as an innovative tool for health communication for depression prevention.

Depression Prevention and Surveillance means any operation responding to prevention and surveillance of depression i.e. the search of persons who are at risk of having depression through the screening process using 2-Question (2Q) depression screening assessment, 9-Question (9Q) depression screening assessment, and lastly 8-Question (8Q) suicide assessment including the introductory self-care to avoid any risk of depression.

Population of the working age group in Bangkok mean all citizens in working-age between 20-65 years old including both employed and unemployed who reside in Bangkok. Nowadays, the age of retirement is 65 years old. The focused working group is divided into 3 sub-groups. The first group is กลุ่มที่เริ่มทำงานใหม่ aged between 20-30 years old. This group shows courage and energy to handle their work tasks. While the following group with the age range between 30-40 years old tends to be in the marriage, receive job titles, or get promoted to more senior titles. Then, the last group is the working group aged between 40-65 years old, or so-called, “the seniors.” They are likely to seek happiness and comfort for themselves.

Depression-related Information Exposure to the Line Official Account means the aspect or pattern of receivers’ action towards the perceived news or health information related to depression via the Line Official Account application i.e. popular headlines, tracking, the length of time spent on reading each time, reading styles, the main reason of reading, interest in format and content to deliver news about depression-related health care.

The Uses of Health Communication for Depression via the Line Official Account application means how the Line Official Account application helps users benefit from self-perception, proper understanding about depression, and the introductory lesson on how to prevent depression, how to look after themselves, how to optimize self-care and nourish others. In addition, users are expected to be able to advise certain recommendations to family members or to implement the knowledge gained from the application within other beneficial extents which are;

News and Information

To be informed and able to follow news and updates, to apply information with self-improvement and self-confidence with the objective of better self-care as a way of living and depression-related problem solving

Social Interactions

The information of depression-related issues are exchanged, discussed, and chosen as a decision-making process especially for self-care, prevention from depression and

Entertainment

The Application daily

Satisfaction towards the use of the Line Official Account Application for depression prevention means how people react to the need for shared content on the Line Official Account application. The satisfaction rate can be measured through screening assessments, convenience in completing assessments, up-to-date content, the content that matches with interest and need of the information guiding how to prevent and surveillance and also suggesting several solutions and listed medical institutes and health promotion institutes. The level of satisfaction consists of 5 rating scales which are highly satisfied, satisfied, neutral, dissatisfied, highly dissatisfied.

1.6 Research Conceptual Framework

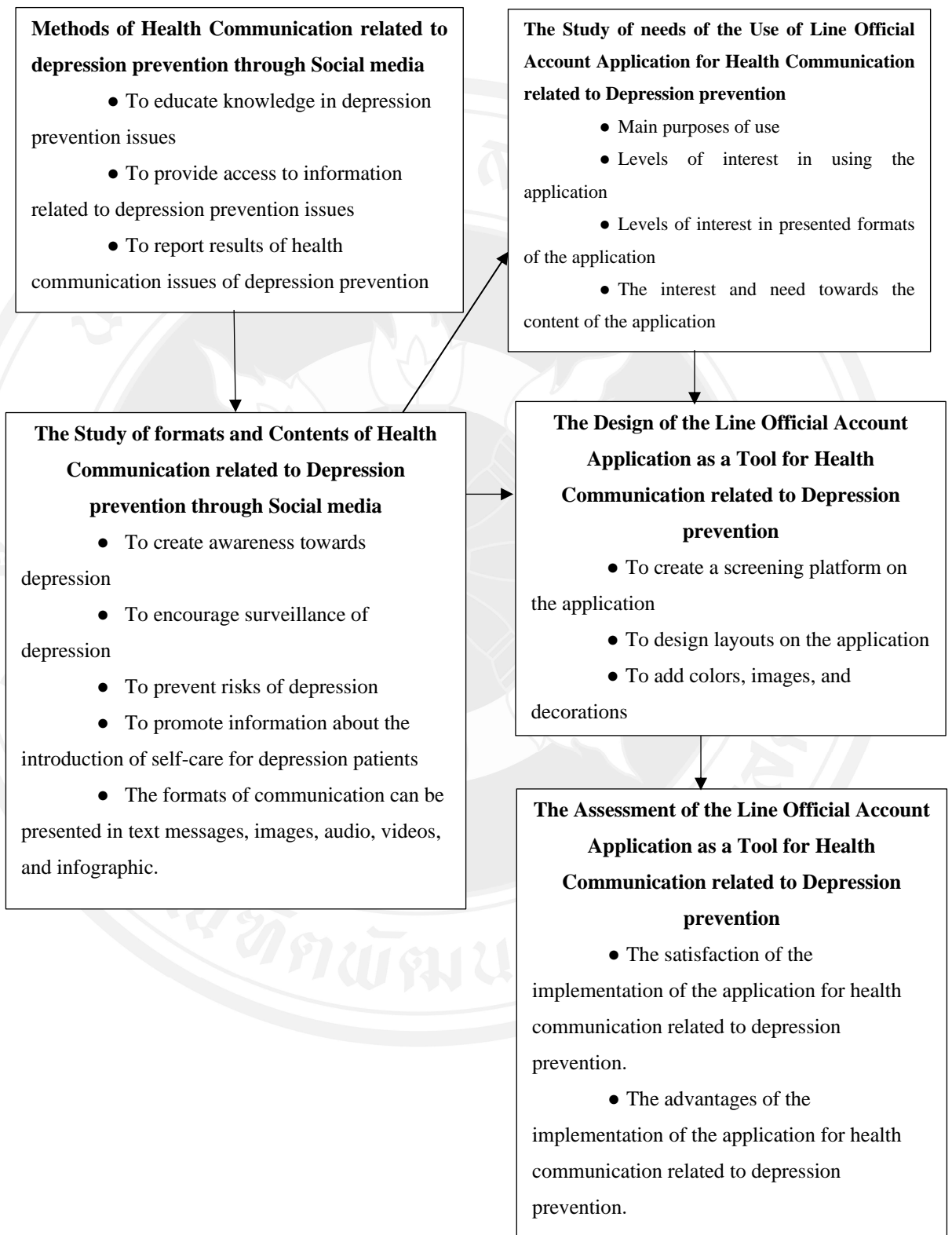


Figure 1.1 Research Conceptual Framework

1.7 Expected Benefits

1) To gain knowledge of suitable and up-to-date channels of communication focused on health communication issues of depression to meet the needs of Bangkok's citizens in the working group, especially on how to look after their mental health and cautiously prevent themselves from depression.

2) To acknowledge benefits and satisfaction of the Line Official Account application as a new form of health communication innovation with the purpose to promote depression prevention-related mental health for individuals particularly in the working group living in Bangkok.

3) To introduce primary findings and recommend them to institutions to support and prevent their employees from having depression. Also, it is important to properly raise awareness and educate employees about depression prevention issues and self-care.

4) To support and develop more alternative communication platforms helping health communication become more interesting and accessible anywhere and anytime. This easy-to-access feature would fit with people's lifestyles in a digital world. Thai citizens of all genders and ages would also conveniently gain more depression-related news and information and can have a better understanding of self-care and how they can improve their quality of life and work performance that, in due course, positively affects organizations and employees.

5) To suggest policy recommendations highlighting depression-related problem-solving.

CHAPTER 2

THEORIES, CONCEPTS, AND RELATED STUDIES

The research “Health Communication Innovation for Depression Prevention and Surveillance” applied the following theories, concepts, and related studies:

- 2.1 Concepts on Demographic Attributes
- 2.2 Concepts on Depression
- 2.3 Concepts on Social Media and LINE Application
- 2.4 Concepts on the Need for New Media
- 2.5 Concepts on the Impact of Social Media Use
- 2.6 Concepts of Uses and Gratification
- 2.7 Related Studies

2.1 Concepts on Demographic Attributes

Concepts of demographic attributes are based on the assumption that all human behaviors are driven by external stimuli and most of them comply with the prototype imposed by society. Generally, each society determines acceptable behaviors differently based on individuals' demographic attributes. For instance, to act shyly may look cute for teen girls, but not for an elderly woman. (Kanjana Kaewthep, 1998, p. 302). Thus, receivers with common demographic attributes tend to have similar attitude and behaviors. Thus, when senders realize who is their target audience and what kind of attributes it possesses, they can plan their communication to respond to their receivers' characteristics, including choosing proper media for them. (Yubol Benjarongkij, 1991, p. 49).

Parama Satawatin (1997, p. 105) explains that the analysis of masses of people based on their demographic attributes assumes that receivers with the same demographic attributes will have similar psychological aspects and vice versa. The main demographic attributes are the following:

1) Age. Age is a factor that makes people have different thoughts and behaviors. Typically, young people tend to have a liberal idea, focus on ideology, be impetuous, but more optimistic than the older people, who are more conservative, practicality-oriented, and cautious as they have experienced more problems and had a longer engagement in society than children or adolescents who live more with the media. Most teenagers are exposed to entertaining media, listening to contemporary music more than watching TV. Adults, watch TV. Listen to the radio, and read a newspaper at almost equal proportion. However, after people are older than 40 years old, they will read the newspaper less, but watch TV more owing to their free time. When they are old, they are often exposed to mass media for discovering some facts rather than entertainment. (Parama Satawatin, 1997, p. 113).

2) Sex. A variety of psychological research reflects that men and women are quite different in ideas, values, and attitudes, influenced by culture and society, which determines their different roles and activities. Women tend to be sensitive and emotional, nurturing-oriented, more susceptible, and easily influenced than men. (Parama Satawatin, 1997, p. 11). Moreover, women pay more attention to health care than men. Regarding media exposure, women spend more time watching TV and listening to the radio than men, especially they prefer watching dramas, while men prefer reading a newspaper. Men watch TV to view news and sports programs. Adolescents are interested in films about scientific advancement and espionage games the most.

3) Socio-economic status. Socio-economic status (i.e., occupation, income, race, ethnicity, family background, etc.) make people with different culture are different in experience, attitude, value, and goals. From the studies, it was found that high-income American people preferred being exposed to printed media and documentaries rather than entertaining news, while people with good economic status and high education tended to expose to documentaries from mass media the most.

In short, people with different population attributes, namely sex, age, education, and social-economic status (i.e., occupation, income, race and ethnicity, and family background), will have different media exposure, especially people with high-income occupation and good education tend to be exposed to hard news rather than soft news or entertainment.

Accordingly, the concept of demographic attributes was applied in this study to analyze the relationship between demographic attributes and media exposure, the need of using online media as a tool for health communication on depression, uses and gratification of using LINE application for health communication on depression, and interest in the content of health communication on depression to see if people of different demographic attributes have different media exposure and if the findings accord with the assumption of the said concept.

2.2 Concepts on Depressive Disorder

2.2.1 Definitions of Depressive Disorder

From the review of literature on depression, it was found that depressive disorder is an illness, both physical, mental, and cognitive, as a result of some diseases facing in daily life, such as eating and sleeping habits. Persons with depressive disorder cannot coordinate their thought and feel for solving problems. Without proper healing, the symptom may last for months. Some depressive disorder is caused by accumulated stress for a long time, which decreases the amount of chemical substance of happiness or hormones of happiness, i.e., Endorphines, Serotonin, in the body and brain, which causes malfunctions. On the other hand, the substance of unhappiness, i.e., Cortisol, Noradrenaline, will increase, which yields several diseases and decreases anti-body. Thus, people can get sick easily, followed by depression, confusion, and Alzheimer's before the proper time.

2.2.2 Epidemiology of Depressive Disorder

From literature review on depression (i.e., Pichet Udomrat, 2004, p. 132; Duangjai Kasantikul, 1999, p. 7; Manit Srisurapanont & Chamlong Ditsayawanit, 1999, p. 166; Somphop Ruangtrakul, 2000, p. 1; Ampaiwan Pumsrisawat, 1998, pp. 120-123), depressive disorder is the second most important problem, next to Myocardial Ischemia or Ischemic Heart Disease. From the health survey among Thai people, 3.2% of the Thai population was sick of depressive disorders. Namely, among Thai people aged between 15-59 years old, no less than 800,000 people had major depressive disorder periodically, and 300,000 had chronic depressive disorders or

Dysthymia. Depressive disorder was found in women than men at the proportion of 2:1. Mostly, people started to get depression at the age of 24 years old., and found the most at the age between 25-40 years old. Manit Srisurapanont and Chamlong Ditsayawanit (1999). When people get older, the severity of symptoms will be increased. Most people with depressive disorder have a family background that is related to chronic drinking, being abandoned, or members' hurting one another. Some people lost their parents since childhood. People facing depression are shy, unconfident, and had no courage. They tend to choose to blame themselves whenever confronting any discomfort. They believe in external locus of control and tend to have obsessive-compulsive disorder or think or do things repeatedly. 80% of people committing suicide or trying to kill themselves tend to have emotional disorders explicitly or implicitly. WHO (1997) reported that among almost one-third of the world population, 3% of them had a severe mental illness. Almost half of the people with mental illness or 44% had psychological disorders, i.e., anxiety disorders (25%), using an addictive substance (25%), and schizophrenia or psychiatric disorders (10%). However, only 25-40% of them got medical treatment, 74% of which were treated by general physicians, and only 12% by psychiatrists. Acceptably, depression or depressive disorder and the rate of suicides have been increasing tremendously, or approximately 200%. Among adolescents or young people, the depressive disorder was found most in the group of divorced, separated, and single persons. Notably, single women were found to have a lower rate than married women, while single men have a higher rate than married men, old men especially with some chronic illness or staying alone. Among general people who did not get medical treatment, women had a higher rate than men. Thus, it indicates that such differences are related to some biological causes, such as sex hormones, working and family responsibility, etc. Moreover, women with depressive disorder were found to have sex-harassment experience in their childhood. In short, depressive disorder occurs as the second most found disease around the world, next to Ischemic Heart Disease. In Thailand, 3.2% of the population had depressive disorders, which was found more in women than men at the proportion of 2:1. Most patients were aged between 25-40 years old. When they are older, the symptom of the disease will be increased by the life experiences of each individual.

Depression is another word used widely in psychiatry, which is different from depression used for explaining economic situations in terms of economics, or in explaining climate conditions in the field of meteorology, or in other biological sciences. In the field of psychiatry, depression has been used in so many meanings that the old meaning is distorted. At present, the word "depression" is related to an emotional response to all losses, either that have occurred or are anticipated. Besides, sadness and disappointment occur when things do not achieve as wished or bring about life changes; consequently, it induces confusion. In the clinical circle, depression may cause psychological disorders and affect individuals' working performance gigantically. Therefore, depression is a kind of severe mental illness that may occur slowly but can cause tremendous losses to both individuals and society. Implicitly, the medical circle needs to diagnose and treat this illness correctly in Thailand. Especially, the use of the word "depression" covers the meaning of generalized sadness, which is normal for human beings, and emotional disorder. Typically, the term "depression" means the emotional state that is evaluated and measured diversely, including being classified by the level of severity. If depression is at a severe level, it tends to lead to depressive disorder. (Suwanna Arunpongpaisal, Thoranin Kongsuk, Narong Maneeton, Benjaluk Maneeton, Kamolnetr Wannasawek, Jintana Leejongpermpoon, Kasaraporn Kenbupa, & Sireethorn Budwong, 2007)

In brief, depressive disorder means changes in emotion, thought, behaviors, and physical condition by feeling sorry, lonely, solitaire, unloved, invaluable, guilty, tired, and restless, in combination with no appetite, losing weight, having a headache, decreased concentration, despair, blaming themselves for fear of making mistakes or being rejected, pessimism, feeling oneself fail, no interest in surrounding things, and isolation. However, normal sadness and depression will be displayed differently, depending on sex, religion, tradition, and language used.

2.2.3 Causes of Depressive Disorder

There are several theories explaining about causes of depression and depressive disorder (i.e., the studies of Manote Lotrakul & Pramote Sukanich, 2005, pp. 146-147; Pichet Udomrat, 2004, pp. 138-141; Somphop Ruangtrakul, 2000, p. 2; Ampaiwan Pumsrisawat, 1998, p. 122; Duangjai Kasantikul, 2000, as cited in

Wanicha Limsila, 2008, p. 17; Manit Srisurapanont & Chamlong Ditsayawanit, 1999, pp. 166-168; Kasem Tantiphlachiva, 1993, pp. 249-250). Mainly, the causes of depressive disorder are divided into two categories: biological disorder factors and psychological factors.

2.2.3.1 Biological Disorder Factors

1) Biochemical Theory

This theory explains that when patients are sad, their biochemical working system will change from the normal condition. Depression is related to the lower level of neurotransmitters or Catecholamine Group, i.e., norepinephrine, dopamine, serotonin, especially norepinephrine. The decreased neurotransmitters may be caused by genetic, or by an internal process in the body. This group will decrease by older age. Depression can also cause by biochemical changes in the brain. Persons with depression will have some abnormalities related to emotional regulation and display. Besides, neurotransmitters can lose balance and deform the work of the brain

2) Abnormalities of Hormone Level and Endocrine Gland

In the brain, the hypothalamus is a central part regulating the levels of many kinds of hormones in the brain. Depression can start from the abnormalities in the brain from the hypothalamus level. . Besides, in the working of endocrine glands, the emotional disorder is found, which is the state of hormonal imbalance. Moreover, abnormalities in the anatomical structure of the brain, including other causes, i.e., sleeping disorder, malfunctions of the brain, and brain anatomy are also found to be related to depression. It is found that persons with depression have a density of brain cells, while temporal and hippocampus decrease, especially at the right side more than the left side. Furthermore, depression may be caused by abnormalities of the limbic system, basal ganglia, and hypothalamus limbic system, which function as producing neurotransmitters related to emotion. The abnormalities of such systems make individuals have slower movement and cognitive impairment related to sleeping and neurophysiological factors (Duangjai Kasantikul, 1999). Emotional disorders of some patients may also be caused by the side effect of some drugs, i.e., steroids, amphetamine; the imbalanced level of electrolyte; or malnourishment. , which is related to emotional and cognition.

2.2.3.2 Psycho-social Problems

Depression is a kind of emotional response happening to everyone when facing life crises or any stressful phenomenon in life that happens repeatedly, while such a person cannot adapt himself or herself to the situation. Thus, severe sadness occurs and is accumulated continually until it becomes depressed. The causes of depression can be explained by various theories as follows:

1) Psychoanalytic Theory

Sigmund Freud explains that mourning and melancholia are consequences of the loss of love-object. However, such a loss is temporary and needs not to heal when a person can manage or solve it properly, then griefs will be gone. However, for some people, depression occurs from unconscious conflicts due to some frustration or grievance, especially at the oral stage or early stage of life, possibly caused by their narcissistic personality. Thus, when they confront some kinds of loss, either actual loss or imaginary loss is suppressed unconsciously. Accordingly, the unsolved loss leads to lower self-esteem or the damage of ones' ego. Normally, self is a mediator of ones' expression of their personality based on their consciousness. It is also a mediator between instinct and external environment, comprising perception, memory, decision-making, and rationality towards problem-solving and decision-making. Human acts involve rationality and appropriateness. Once one's self declines or is damaged, one cannot release one's feelings and anger, while being unable to regulate oneself, so one cannot deal with major changes. On the contrary, one will be driven to create negative self-perception and a feeling of being useless and meaningless. Moreover, some kind of psychological mechanism tends to be used, i.e., introjection or anger turned inward when facing any problem or discomfort. Furthermore, many psychoanalysts explain the causes of depression differently. Sadness is a mixed feeling of many feelings, i.e., fear, anger, shame, and guilt. Anger is the most primitive emotion witnessed since a child is born, while a sense of guilt is the most delicate and complicated feeling, and can happen only in individuals with moral superego. assumes that anger is caused by anger turned inward because of some ambivalence or a mingle between love and hatred towards key persons who are beloved and emotional supporters of patients. On the other hand, they also make them disappointed and frustrated.

Freud further explains that depression is a consequence of losing or departing beloved people through introjection mechanism, which is a unique characteristic of patients by incorporating those who they love and hate at the same time with their ego, which causes disappointment. Aggressiveness thus occurs when two feelings fight each other and cause turbulence in their mind, leading to a sense of guilt and loss of self-pride, and depression. Some patients use regression, a kind of psychological mechanism, at the oral or anal stage. Thus, during these stages, they act childishly, i.e., petulant, self-centered, frightened, thinking, and doing repeatedly.

2) Superego Development Theory

Freud believes that children develop their superego since they are one year-old. Depression occurs when children have relationship problems with their mothers. Thus, depression from the early stage of life brings about depression in their later time in life. Suicide is the punishment or destruction of a person's bad self unconsciously. Kernberg explains that 6-month infants learn that their mother has both good and bad points; however, they will perceive things as either all good or all bad. They learn how to express aggressiveness to their mother (i.e., biting during breastfeeding), but fear is also developed when they hurt someone important to them; thus, depression occurs.

3) Ego Psychology Theory

Jacobson explains that depression occurs from infantile deprivation and frustration, which halts ego and superego development. Individuals thus cannot adapt themselves to the real world properly (i.e., through the psychological mechanism, adjusting mental state, and self-regulation). Consequently, they lack self-pride and develop a feeling of being useless, which leads to a state of depression. Bibring states that depression is caused by a conflict of ego that cannot achieve its ideal ego. It is not a conflict between ego and superego or with the ego of other persons. He views that anxiety and depression are a reaction of the fundamental ego but in a different direction. Anxiety is the reaction against both internal and external danger or harm by using either "fighting" or "avoiding" psychological mechanisms. However, depression is the state in which ego is surrendered, so it yields a feeling of despair and no sense of self-pride. In general, psycho-social factors are

major causes of depressive-disorder symptoms at the first and second time but yield little impact on further illness.

4) **Learned Helplessness Theory.** The theory explains that depression happens when individuals are in the state of being unable to solve a situation. Individuals cannot help themselves, nor ask for assistance from others. They feel that they have not enough power to control or correct the occurring situation (i.e., helplessness). Such a feeling can make individuals let things go naturally without solving the situation as they lack or have inadequate reinforcement, so depression occurs.

5) **Reduced Positive Reinforcement Theory.** Depression is a result of reduced positive reinforcement for oneself unconsciously, i.e., perceived low self-esteem, a sense of guilt, pessimism, inability to regulate things surrounding him or her. When a person confronts some happenings in life, he or she tends to reduce his or her positive reinforcement. Consequently, the person increases his/her self-awareness, self-orientation, and self-criticism, including anticipating negative future occurrences, which lead to dissatisfaction, anxiety, and cognitive and behavioral impairment, including relationships with others.

6) **Cognitive Theory Beck (1967)** believes that human effects and behaviors are caused by learning through a cognitive process. Namely, when people perceive stimulus and interpret such a stimulus that affects how people display their emotion and behaviors towards the stimulus. Cognitive Theory is widely accepted as it can explain causal factors of depression explicitly, while cognitive therapy can heal persons with depression effectively and prevent a return of depression.

2.2.3.3 Critical Incidents in Life

Incidents can be both positive and negative. Positive incidents are marriage, winning major prizes from drawing lotteries, meeting with an old friend who has not seen each other for a long time, getting a good job, furthering higher education, bearing a child, etc. Negative incidents are financial problems caused by being fired, a divorce, loss of beloved persons or belongings, arguments with others, broken hearts, chronic diseases, etc. Persons with depression for the first time will encounter stressful events more often than in the later stage. The occurring stress

often causes a long-term change in the brain in the direction that enables persons to be risky to face further depression despite no external stress. Moreover, stressful persons from the loss of their parents before the age of 11 will be risky to get depressive disorder later. Thus, major incidents are stimulators of repeated depression or relapse. People prone to be mentally sick can have depressive symptoms immediately if they face those major incidents again. Depressive symptoms may occur late, 2-3 months after confronting such major incidents. Generally, depressive symptoms can occur early or late depending on the following factors:

1) Cognition. People with depression often perceive themselves negatively as worthless and non-meaningful for anyone. They perceive their past as full of defects and tend to be pessimistic. They often are shy, sensitive, and unsociable. Depressive mood occurs frequently because of severe mental problems. (Somphop Ruangtrakul, 2000) Patients with depression tend to have negative thoughts of themselves, have no rationales, and perceive things irrationally. Thus, they perceive themselves as invaluable and have lower self-esteem. These people utilize all kinds of reasons to claim their thoughts so it is hard to solve problems through rationality. Thus, it causes negative feeling against themselves, their future, and social surroundings they live in.

2) Individuals' society and environment. Depression occurs when individuals lose their social relations, friends, or are hated by people in society, but they have to confront such stressful situations, i.e., to be abandoned, being fired, which is another cause due to the economic situation. Poor people will be stressed because of a shortage of necessities for living, while people with good economic status can be suffered from family problems or competitive economics. (states that family also plays a part in depression. From the study of depression of Thai secondary students, the family factors were found to be related to depression. Students with a high level of depression were related to a family with divorced or separated parents, parent's marital status, parental relationship, the relationship among family members, and parents' mental health.

3) Symptoms and signs of depressive disorder. Patients with the depressive disorder will have mental symptoms as distinctive symptoms and tend

to have physical sickness in parallel. The symptoms of depressive disorder are as follows:

(1) Mental symptoms. Sadness may not be displayed all the time. Sometimes, patients may feel amused, but once the sickness is much worse, sadness will be displayed almost all the time, but inconsistently all day. Examples of the mental symptoms are:

(1.1) Easily irritable and angry, found in almost every patient, which reflects emotional changes that are uncontrollable. Sometimes, patients may regret what they have done badly

(1.2) Think slowly. Since the early stage of sickness, patients' thinking and movement, including speaking will be slower. Remarkably, they tend to be quiet and listless, with less interest in surrounding things. Contrarily, they pay more attention to themselves and are anxious almost all the time about all kinds of their symptoms. They tend not to be as active or cheerful as before. Patients also know about these changes; thus, it makes them even more anxious as they do not know the cause and try to resist themselves to do something, i.e., speaking, dressing, working, or reading, etc. to make themselves as normal, but they cannot.

(1.3) boredom and a lack of interest. Patients feel bored and lose interest in what they usually do. They do not do daily activities they used to do or like. 60% of patients have less sexual need or none.

(1.4) A feeling of being worthless. Mostly, they feel as no use or worthless, i.e., no capability, poor intellectual ability, no ability to support their family, etc. If patients have such a feeling so strongly and severely, they may want to die or kill themselves.

(1.5) A sense of guilt. Patients often feel guilty and blame themselves despite doing nothing wrong or if any, it will be insignificant issues. The more severely patients feel guilty, the more they blame themselves for doing something sinful and they want to punish themselves by killing themselves.

(1.6) A need to die. With extreme sadness, patients tend to kill themselves. Sadness is found to be related to a need to die. If the need is beyond control, patients will try to find ways for escaping from such suffering and death seems to be the solution of their priority.

(1.7) Fear and anxiety. They are major symptoms found frequently in patients, i.e., they are anxious or afraid why they are in this condition; they are afraid that if they cannot get rid of such anxiety, they will become mad; they are afraid that they have a serious disease; they are afraid of being alone, or hurting themselves. Fear and anxiety will always be in their mind so they can be restless.

(1.8) Loss of concentration, poor memory, and forgetfulness. These symptoms start from their early sickness. 90% of patients cannot recall what they have just said nor can they concentrate on something focused. This induces their extreme anxiety as it affects their work and ability.

(2) Physical symptoms. Frequently found symptoms are loss of appetite, insomnia, loss of weight, dry mouth, headache, chest pain, etc. Every patient will be anxious about these symptoms but misunderstand that they are purely physical symptoms. Especially, when they see a doctor, no sign of sadness is displayed. Patients will feel tired almost all the time despite no energy exertion. More than that, taking a rest or sleeping can make the symptom gone. However, these symptoms may be felt only at some parts of the body, i.e., arms or legs. Some patients may interpret them as a sign of heart disease because of being tired easily. This causes anxiety and leads to heart palpitation or chest pain.

Symptoms of depressive disorder can change people's ways of living and push them out of reality. Some of them may have hallucinations, delusions, illusion, paranoia, fewer daily activities, poor judgment, etc. Their ability in living and daily practices are indicators for classifying the level of severity of the depressive disorder, i.e., the condition of being out of reality in combination with the loss of self-concept or poor insight. (Chanya Sattapong, Kiatkamjorn Kusol, Saifon Aekwarangkoon, & Piyatida Junlapeeya, 2010)

2.2.4 Symptoms of Depression

The symptoms of depression can be divided into 4 levels or degrees of severity: transient, mild, moderate, and severe. At each level or degree, patients will display their symptoms in various aspects: emotional, behavioral, cognitive, and physical.

1) Transient symptoms are a feeling of sadness that can happen to all human beings upon facing despair or hurtful incidents, i.e., loss, etc. However, such a feeling often disappears over time or if individuals can adjust their minds. This kind of feeling is not considered abnormal. The symptoms at this degree or level are:

- (1) Emotional: Discouraged, lonely, disappointed, regretful
- (2) Behavioral: Crying
- (3) Cognitive: Thinking of some strong disappointment or some endless thinking
- (4) Physical: Little tired, weak, or with no need to do anything.

2) Mild depression is the state of sadness as a consequence of severe losses, i.e., someone beloved, important persons in life, valuable property, physical ability, etc. Such incidents are crises of life that persons may not face often. If persons can adjust themselves or deal with those losses properly, sadness symptoms tend to be decreased and diluted. The symptoms at this degree are:

- (1) Emotional: Anxious, anger, feeling guilty, worthless, lonely, desperate, discouraged, or rejecting their feeling.
- (2) Behavioral: Easily crying, regression, isolation, no need to do anything, feeling uneasy and restless.
- (3) Cognitive: Thinking around one's losses, blaming oneself or others, a lack of confidence in living, hesitation, or being unable to make decisions.
- (4) Physical: loss of appetite or much higher appetite, insomnia or sleeping more than usual, and other physical symptoms, i.e., headache, back pain, chest pain, and tiredness.

3) Moderate depression is the state of depression that cannot be managed properly. The adjustment needs more time and all related symptoms augment and are more complicated. Individuals start to express some improper behaviors that affect their daily ways of living. The symptoms of this degree are:

- (1) Emotional: Feeling lonely, desperate, hopeless, feeling like everything around them looks dull, low self-pride, no enjoyment in any activities.
- (2) Behavioral: Having psychomotor retardation, i.e., slow movement, speaking slowly or with few words, no interest in surrounding things, no concern about their physical condition nor health care.

(3) Cognitive: Decreased interest, no concentration, obsession or thinking repeatedly, self-orientation in negative ways, feeling worthless, and having a need to hurt themselves.

(4) Physical: Tremendous loss of appetite explicitly, insomnia (especially early-night insomnia) or too much sleeping, and other physical symptoms, i.e., headache, stomach ache, chest pain, unable to breathe, poor ingestion, and no energy.

4) Severe depression. The symptoms are more than so-called a feeling of sadness to a moderate degree. Patients can express themselves as out of reality with some psychotic symptoms, as follows:

(1) Emotional: Completely desperate, neutral feeling or no affect display, no facial expression, very lonely and unhappy in all activities.

(2) Behavioral: Having psychomotor retardation or walking very slowly, no speaking nor response, no action, and no movement. Irritability and agitation can be seen clearly. Patients have no self-care, especially their bodily cleanliness, and they might hurt themselves from some illusions.

(3) Cognitive: Confusion, no concentration, delusion, pessimism, perceiving themselves as bad and trying to kill themselves, having illusion about their physical sickness or somatic delusions, in combination with auditory hallucination.

(4) Physical: Psychomotor retardation of functioning of systems in the body, loss of appetite, insomnia or trying to sleep all the time without sleeping, irritability, mood swings, uncontrollable emotions, anxiety almost all the time, no enthusiasm, no enjoyment, poor memory, and forgetfulness, including feeling worthless. If the degree is high, they tend to have a need to kill themselves.

2.2.5 Levels or Degrees of Depression

Depression can be expressed in the form of boredom, despair, and hopelessness at different degrees of severity. American Psychiatric Association classifies the degree of depression into three levels:

1) Mild depression or depression at a low level. Mostly, it associates with any incident that stimulates individuals to compare with the actual situation. They will not be cheerful and look dull. Depression at this level may occur

occasionally when there is any loss of individuals' beloved persons or things, or without reasons. For instance, sadness while working heavily, but it can be gone after a while. Then, they can continue their life normally. Individuals can tell or reveal their feeling to others. Besides, they can learn or work normally without any effect on their ways of life.

2) Moderate depression is a higher degree of depression that results in lower working effectiveness. Individuals will feel stressed and sad incongruently with the stimulus. For instance, their expressed anger may not be congruent with the incident they faced. Sometimes, some behaviors may be changed, i.e., being more quiet, speaking with difficulties, working slowly, weaker functioning of body systems, loss of appetite, occasional changes in excretory systems, and rest. Depression at this level can affect daily practices, but generally, individuals can continue their life. (However, some people's ways of living may be affected, i.e., absence from work or school occasionally.

3) Severe depression is the highest degree of depression that yields behavioral changes eminently. Sadness may not be associated with stimulus or can occur without any stimulus. Seemingly, shifting behaviors do not accord with the actual situation. Patients express their psychotic symptoms distinctively, i.e., being unable to perform their daily duties, ineffective working, no socialization, feeling worthless, or having agitation. Some patients may have the idea of hurting themselves because of their illusion. Depression at this level affects patients' ways of life severely. They might have to leave school or their workplace for treatment.

In summary, depression has different levels of severity. Mild depression is found to associate with the actual situation. Individuals will feel uncheerful and bored. Moderate depression will feel uncomfortable and be highly emotional irrationally. Severe depression causes changes in general behaviors apparently, but individuals' sadness has no association with stimulus or can occur without any stimulus. Their expressed behaviors look incompatible with the real situation and psychotic symptoms can be witnessed easily.

In conclusion, sadness thus is a negative feeling. Psychologically, it is a state of emotion that occurs temporarily to general people of every sex and age when

facing losses, failure, rejection. It also occurs in combination with a feeling of disappointment, despair, and suffering.

Depression is overwhelming sadness and cannot be healed despite the receipt of encouragement or rationality. People tend to feel worthless, guilty and want to kill themselves. Frequently, it is found to associate with daily functioning socialization and depressive disorders.

2.2.6 Diagnosis of Depressive Disorders

Patients with depressive disorders are people who have psychotic or mental sickness based on the standards of the International Classification of Diseases and Health-Related Problems (Version 10) of World Health Organization WHO (ICD-10), Episode F32, F33, F34.1, F38, and F39 or “Major Depressive Disorder” and “Dysthymic Disorder,” and the standards of the American Psychiatric Association, 4th edition (DSM-IV), which are criteria for diagnosis of depressive disorders that are widely used. For the study, patients with depressive disorders are those diagnosed by the ICD-10 standards (The Strategy and Policy Office, 2009), and defined as individuals with symptoms that can occur almost all day and almost every day consecutively for no less than two weeks and the depression affects their working and functioning in society. 1) Most typical symptoms: Patients must display at least two symptoms of the following:

- (1) Sadness: all day or almost every day
- (2) Decreased interest or no need to talk to anyone or do anything
- (3) Easy tiredness, exhaustion, and weariness almost every day.

2) Concurrent symptoms: Patients must display at least four symptoms of the following:

- (1) Loss of self-confidence and self-pride
- (2) Blaming oneself and feeling guilty exceedingly
- (3) Planning for dying slowly or trying to kill oneself
- (4) No concentration, being thoughtless, having difficulties in making decisions.

- (5) Psychomotor retardation or irritability
- (6) Insomnia or exceeding sleeping

(7) Substantial weight loss without intended diet or extremely increased weight

2.2.7 Impacts of Depressive Disorders

Depressive disorders cause effects on patients and their families, society, community, and national economics and affect development in various ways, especially, regression, irritability, anger, crying, and decision-making problems.

1) Reduce effectiveness or efficiency, i.e., failing in exams, studying failure, working problems, being fired, failure in household responsibilities or family support, etc.

2) Problems of relationships with others, i.e., quarrel or argument in a spouse, misunderstanding with parents, etc.

3) A need to kill oneself and successful suicide. When someone is sick of depressive disorders, it yields impacts on his/her family, friends, society, community, and national economics. Those with severe depressive disorders and need to kill themselves may kill themselves and those they love, i.e., spouse, children, etc., with the idea that they can take them out of misery and fate, including being able to live together again in the next life. Such an idea is an illusion of people insane, which is very dangerous. Badger et al. (2004) explain that the impact of depressive disorders on a family causes psychological impacts. It is found that most family members feel stressed, worry, ashamed, and anxious about their family condition, their communication with other people, and the fear of being alienated from others in society. Moreover, it also affects society and national economics. It was found that the nation lost budgets and expenses for treating people with depressive disorders increasingly.

Accordingly, the aforementioned theories and concepts were used for analyzing depressive disorders in terms of preventive approaches and for providing such knowledge to help people to take care of themselves and others surrounding them from being depressive disorders, including reducing the rate of suicides caused by depressive disorders in Thailand eventually.

2.3 Concepts and Theories on Social Media and LINE Application

Social media is a channel for communication and exchanging knowledge and ideas among people of the new generation, who gather in groups or form as a society or community on a website, i.e., sport-lover, car-lover, dog-lover groups, etc., including for mobilizing some issues or forming a group of brand-preference. At present, none deny that social media is a very influential tool that enables people to communicate much rapidly and duly. The advantages of social media are that everyone can be both a sender and receiver, people can disclose their ideas, needs, and purposes freely without limitations like in the past, in which people could only receive the message as a one-way communication. Thus, social media is widely used to create a communication channel for their business and establishing good relationships with customers.

2.3.1 Types and Content of Social Media

Social media possesses three main attributes:

- 1) Social media is a medium that disseminating message through social interactions, differently from the old days in which people would join in a face-to-face group to discuss interesting news until it becomes "talk of the town." However, on social media, a message can be disseminated easily and widely through content sharing from anyone else. For instance, in the case of Susan Boyle, she was famous across the world in few weeks after the widespread of her clip from the singing contest, "Britain's Got Talent," through YouTube, etc. Message on social media may be in the form of content, images, audio, or video.

- 2) Social media is transformed from "one-to-many" to "many-to-many" or a dialogue in which anyone can participate. The main feature of social media is that people can have a group discussion in common subjects with a common interest or anyone can criticize products or services without being regulated by anyone. On the contrary, receivers can add, modify, or correct information or content by themselves.

- 3) Social media is the media that transforms receivers from content consumers to content creators or generators. It can change a small man in society with

no argument as he is just a receiver, whereas mass media, i.e., TV, radio, or newspaper, was very influential, to a person who can create and generate his content to other people freely upon the arrival of social media. If a person can produce content that is to the public's liking, he/she can become very powerful easily. Especially in marketing, influencers can persuade followers to decide to buy products or services easily. To simplify it, the meaning of media is the carrier of the message of what we present our letters, images, and others, namely websites on the internet. However, as such media disseminates its content on the internet, we call it "online media," which means the media through which message is transmitted along the wire or line. Although at present message is transmitted through a wireless device, we still call it "online." Previously, each person would be exposed to each website to have a look. Then, some people thought how a receiver who visited a website could not only be exposed to the media, but also could create a message, i.e., typing texts, inserting images, sound, or video on the website. Later, a website was developed to allow general people to access to add content as they wished, so it became a website in which users could participate in creation. Thus, instead of being a personal website of someone, it turned to be a website of a group of people who formed themselves as a group of community or society. Community members could interact with one another. At present, there have been several websites that have been developed to be a mega community with a million members who can communicate and share their stories widely. To illustrate this, one of the websites that becomes a gathering of all kinds of stories from people around the world to share and is a very well-known social media is Facebook.

The meaning of social media comes from the word "social," which means society, and the word "media" which means a carrier of content, stories, articles, videos, songs, images, etc. Thus, social media is a media of a society.

Therefore, the word "social media" also covers social response from all directions through the internet networks. In other words, it is a website on which any person on earth can interact with one another. Besides, social media occurred from the need of people in society, one of which is to have an interaction or social relations with others. Thus, it has evolved according to changes in human needs. Initially, the old days were the period of web 1.0 or webs that displayed content only, so people

could not communicate or interact with one another. Thus, web technology developed into the period of Web 2.0, or web application development, which increased applications or programs for enhancing users' interaction. Each user can interact towards more understanding. Now, in the society of the internet users, each user can visit, have a look, create, and exchange as a social media with other users, for instance, Facebook members can convey their stories, videos, to disseminate to all members in the network, while other members can also present their content for exchange. Ellison and Boyd (2013) thus define "social media as a form of participatory communication that is a kind of website service that permits users to 1) create their biography or history to indicate their identity or uniqueness, 2) to connect with other people with whom they want to establish relationships, and 3) to communicate, create, and exchange information and content

Kaplan and Haenlein (2010, p. 61) state that websites on the internet are created on the technology of Web 2.0, which is two-way communication in which users can create content for exchanging information. Kaplan and Haenlein (2010, pp. 62-64) divide social media into 6 types as follows:

1) Collaborative Project: It is the kind of websites that emphasize users' participation by allowing all users to add, modify, and correct information or content in different issues commonly, i.e., Wikipedia, etc.

2) Blog: It is the kind of website that can display opinions, create statements or texts, images, videos, and others like a personal notebook or online diary that is organized by time sequence. Besides, other users can access to see and express their comments, i.e., WordPress, Blogger, etc.

3) Content Community: It is the kind of website that focuses on sharing content among users. Shared content can be in the form of texts or statements, images, videos, i.e., Flickr, YouTube, Slide share, etc.

4) Social Networking Sites: They have applied programs that users can use to create personal history or biography and connect to friends and other people by typing interactive and real-time statements. Moreover, they can display the status of sharing opinions, information, images, videos, and others, etc., i.e., Facebook, MySpace, Hi5, LINE Application, etc.

5) Virtual Game World: It is a 3-dimensional game in which users can choose characters following the roles of games. Users interact with other players like they are in the real world, i.e., World of Warcraft, etc.

6) Virtual Social World: It is a virtual world in which users can create their characters to have any figure, personality, or movements as they wished (Avatar), i.e., Second Life, etc.

Functions of social media are as follows: (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011, pp. 243-247)

1) Identity is the disclosure of users' information or profile, i.e., name, sex, occupation, education, living place, etc. Kaplan and Haenlien (2010) explain that it is the presentation of users' identity that they want others to perceive, i.e., stories, ideas, emotions, feelings, etc.

2) Conversation is communication within a rapid time, both individually or in the group. It can be texts,

3) Sharing is mutual exchanges of information, i.e., statements, videos, images, Link, and locations, etc.

4) Presence is the setting of users' status. Users can choose their status of using online or offline.

5) Relationships are the creation of a group of more than two users and a leader sets goals for opening an opportunity for group members with similar interests or preferences to exchange their information.

6) Reputation is the expression of preference to certain individuals and content, i.e., pressing Like, etc. with a lot of followers on Facebook, or the number of views, rating on YouTube, etc.

7) Groups are the formation of groups among people with common goals and interests. There are two types of groups: an open group in which everybody can access without asking for permission and a closed group that requires prior permission.

2.3.2 Types of Social Media Applied for Online Communication

2.3.2.1 LINE



LINE is an application in the type of chats, which is interested greatly by users in Thailand. Up to now, there have been more than 18 million users due to its diverse functions and applications, i.e., group chats, share location, clubhouse, video call, sticker shop, etc. Most of them are free services. Besides, its application can be used on smartphone and the computer. The developer of LINE indicated that Thai users use LINE as the third top user around the world. Remarkably, the LINE application has not been used among friends only, but also in organizational communication, as seen in many organizations. However, users may not know if their information is intercepted; thus, none can guarantee if their information can be kept confidential. Moreover, for the intercepted information, if it is of some significance, it might be misused further. Due to the preference for LINE applications, many researchers around the world started to research the LINE application thoroughly. From the headline news in August, 2019, a researcher from the website of Telecom Asia disclosed information about the operation of LINE application on users' application and servers of a service provider in the form of Plain-text in the case of the use of the internet on the 2G/3G network, it has raised a question about the increased measures of keeping users' confidentiality. From such a case, it means that telephone service providers can trap to read users' data easily. Nevertheless, such a case can occur limitedly as only smartphone service providers can see the information or data. Therefore, it is important to consider how mobile phone network service providers will manage to make users trust that their information will not be disclosed or accessed by unauthorized persons. Due to some gaps, researchers of Thai Search investigated the problem and hoped to help users to catch up with threatening

situations and all risks of using technologies nowadays so that users can use them cautiously and more securely.

The researchers of Thai Search analyzed the transmission of information of LINE Application by simulating the information transmission in two ways: via 2G/3G Network and LAN/Wi-Fi Network. A special program was applied for intercepting information on the networks by analyzing all information and testing by using LINE Application Version 3.8.5 on the Android operating system via 2G/3G Network. It was found that the advantage of the transmission with Plain text via HTTP protocol is its rapid transmission, but the disadvantage is if information between users and LINE servers is intercepted, the intercepted information can be viewed immediately. However, as aforementioned, the transmitted information on the 2G/3G network may not be so risky since interception of information techniques on 2G/3G network cannot be done easily among users. The risk is telephone network providers may be able to investigate the use of customers. Moreover, at present, the developers of LINE Application have improved the operations of LINE Application of Version of higher than 3.9 on the Android operating system by shifting to use HTTP protocol for information transmission with encoded secret code to replace the old information transmission with Plain-text. It was thus recommended by Thai Search that users using the LINE Application on the Android operating system investigate the version they use. If the version is lower than 3.0, they should update it immediately.

LINE was introduced after the rapid growth of the smartphone market around the world, so Naver, a development team in search-engine service provider, platform games, and web portals in Japan turned its interest to the application market of smartphones. The team started to research and search for information in January 2011 to explore what was important for users in the age of the smartphone and what it should develop and service to respond to their needs. However, during the study, an earthquake happened in March 2011, which damaged the country a lot, including wired communication, which was the traditional form of communication. However, people still could communicate via the internet so the team saw the importance of communication through the internet. Since then, communication through the internet has been changed including services. Initially, services for open communication were

aimed to look for new friends; however, after the earthquake, Naver Team found that society needed closed services for communication among intimates, family, colleagues, and concerned people. Especially in Japan, earthquakes happen from time to time. Consequently, LINE was developed in April 2011 to serve the need of users as fast as possible. Thus, within 1.5 months, Naver, Japan, launched a new application, or LINE. Subsequently, LINE has been developed continually and industriously. At present, LINE gives several communication innovations, i.e., in the form of stickers, games, and many more functions.

LINE application is social media under the category of social networking sites and is a closed social network, with the following capacities and features:

- 1) Users can choose to accept friends in many ways, i.e., phone number account, QR Code, ID LINE, and Shake it.
- 2) Users can select chat patterns as hidden chats by LINE will automatically delete texts after users have read them. Besides, users can set the time for deleting texts in 2 seconds up to one week.
- 3) In the case that users do not want to accept any chat nor text of someone, they can block or close notifications.

The Functions of LINE Application

The functions of LINE Application are similar to other social media, as aforementioned, as follows:

- 1) Identity. Users can create a personal profile, i.e., name, personal images, and short statements for updating their status, i.e., emotion, feeling, opinions, etc. Besides, they can post texts, images, and opinions on Timeline to create other perceptions of their identity.
- 2) Conversation is communication within a rapid time, both individually or in a group. Users can choose their conversations in various forms, i.e., Text, Voice Message, Voice Call, Video Call, and Hidden Chats. LINE also provides automatic deleting of messages after a user reads them. Besides, users can set deleting time from 2 seconds to one week. Chats can be saved for retrieving it back to see after Real-Time chats.

3) Sharing. Users can share information, i.e., texts or statements, audio, images videos, documentary files (.pdf/.pt/.doc/.jpeg), and location, etc. Moreover, users can select how to share in various forms, i.e., Post on Timeline, Post on Home, including sharing in personal and group Chat rooms.

4) Relationship. Users can create groups by their relationships with other users, i.e., family, colleagues, special-class friends, university friends, etc. LINE can carry group chats of 200 people maximally.

5) Presence. LINE application keeps the users' online status confidential. Other users will be notified only if one starts a conversation in Line. On the other hand, users of Facebook, which is the same kind of social media, can choose to reveal their online status or remain offline while using the application.

6) Reputation. LINE is used for advertising, marketing, and public relations of corporate organizations, agencies, and companies in the form of accounts, to access and distribute their information to consumers. Besides, they can evaluate the access of their consumers who add to be their friends in their account and get free stickers, including news, promotion, and other information about their products or services.

7) Group. It is to join in group chats so that group members can contact, communicate, and exchange opinions. The maximum number of members of each group is 200.

Other Properties of LINE Application

1) It can be used on all kinds of operating systems of smartphones, i.e., iOS, Android, Windows Phone, Blackberry, and Tablet, including PC, such as Windows, Mac OS.

2) Add Friend. Users can add friends in several ways, i.e. phone number, QR Code, ID LINE, and Shake it.

3) Free Messaging. Users can send messages in the form of Text, Audio, images, videos, Files, Link for free in Real-Time.

4) Free Voice & Video Calls. Users can use both nationally and internationally without charge in Real-Time.

5) LINE stickers. LINE provides a service of stickers that can be texts with cartoon characters, or cartoon stickers, as symbols for displaying

emotion, feeling, and action. There are both Animated Stickers and Sound Stickers or Stickers Featuring Sound.

6) Timeline is the space for sharing images, videos, text, and comments.

7) Group. LINE can carry 200 members as the maximum in the chatroom.

Types of Applications of LINE

1) LINE Pay. It is the service of online payment via credit cards to pay for all LINE services, i.e., buying stickers, Theme, and LINE Shop. Once applying to LINE Pay, users must register with their credit card information to make the service effective.

2) LINE Store. Users can choose stores they want to buy games and sticker & theme.

3) LINE Out. Users can use LINE to call home phone numbers with the rate of 0.64 baht/minute for domestic calls, both home, and mobile phones.

4) LINE Game. Users use LINE to play games with other users.

5) Family App.

Other Properties of LINE

1) LINE Dictionary provides an English-Thai dictionary of Oxford and Thai-English of SE-ED.

2) LINE HERE displays location or address to users' family, friends, and intimates from the smartphone in Real-Time.

3) Emoji LINE displays images of cartoons with different facial expressions.

4) Popcorn Buzz is a group call of a maximum of 200 users simultaneously.

5) LINE@ Is online commerce of products and for sending news to customers

6) LINE TV displays TV programs, provided for Thailand and Taiwan use only.

- 7) B612 is a shooting and Selfie service
- 8) Aillis is an image modification or editing service.
- 9) LINE DECO is a service of thematic images for changing

Wallpaper.

- 10) LINE PLAY provides virtual games
- 11) LINE SnapMovie is for taking short video clips within 10 seconds.
- 12) LINE Antivirus is for scanning viruses on the Android operating systems.
- 13) LINE Brush is for line drawing in different kinds, i.e., colored pencils, ink, paintbrush, watercolor, crayons, large-head, and small-head clay, etc., and users can adjust the color tone of the drawing lines.
- 14) LINE Card is for producing cards for various occasions, i.e., happy birthday, Valentine, etc. Users can make E-Card to convey their feelings as well.
- 15) LINE Tools are tools for drawing lines
- 16) LINE SHOP is online shops, only in Thailand
- 17) LINE NEWS is for getting the latest news of LINE
- 18) LINE Music is for listening to music/songs
- 19) LINE Fortune is for fortune telling
- 20) LINE Mall is for buying and selling products among users and users can create stickers and sell to other users.

Functions of LINE for the Elderly

LINE on the iOS Operating System

- 1) Adjust the size of letters to be bigger for easier reading. Four sizes can be selected: Small, medium, large, and extra-large.
- 2) Let Siri read the text for users, not only in LINE Applications, but also in emails, webpages, and notes.
- 3) Speak out for Siri to type the spoken words to solve problems of typing. Thus, it can be used everywhere and in every application, i.e., typing messages on Facebook Application, Messenger, Note, by changing the keyboard to the Thai language if typing is Thai and vice versa for English.

4) Open zoom to expand the screen to be bigger for the elderly with eyes problems

5) Use Choose Filter to select light suitable for each situation, i.e., shifting black to white, or white to black (Inverted), Grayscale, Grayscale Inverted, and Low Light that is suitable for reading in dim light.

6) Show Controller to display Joystick for moving Zoom up and down or to left and right like playing games.

LINE on the Android and Windows Operating Systems

Sizes of the letters can be adjusted in 4 levels: Small, medium, large, and extra-large.

From the survey on 2015, LINE had 560 million users around the world. The countries that had the highest number of users are 1) Japan (54 million), 2) Thailand (33 million), 3) Indonesia (30 million), 4) U.S.A. (25 million), and 5) Spain and Mexico (18 million equally). The total number of monthly users was 170 million all over the world, while the amount of message transmission per day (including video and images) equaled 13,000 million texts/statements. (87% increase from September 2013), video calls and voice messages (34 million times) (120% increase from September 2013). For the statistics of Timeline use, it was found that the amount of daily communication by Post, Like, and Comment equaled 160 million times (202% increase from August 2013). For stickers, the daily transmission was over 1.8 million times with over 20,000 sets of stickers.

2.3.2.2 Facebook



Facebook is a kind of internet service by which users can communication and participate in an activity or several activities with other Facebook

users, i.e., setting an interesting issue, posting images or video clips, writing articles or blogs, chatting live, playing games in a group (which is very popular), and other activities via various supplementary Applications, which have been developed additionally. Facebook is one of the most popular social media in the world. From the previous surveys in a month, year, in foreign countries, Facebook was found to be more popular than Hi5, but in Thailand, Hi5 was the most popular social media among Thai people at that time.

On February 4, 2005, Mark Zuckerberg introduced Facebook, which is a kind of social networking site. At first, Facebook was opened for the use of Harvard University students only. However, due to the popularity of Facebook in the blink of an eye after two weeks of its opening, more than half of Harvard students applied to be Facebook members, and tremendous numbers of students of other universities in the Boston state applied for using Facebook too. Zuckerberg thus persuaded his friend named Dustin Moskowitz and Christ Hughes to help him create Facebook. Within 4 months, Facebook could add the list of students from more than 30 universities. The name "Facebook" was originated from the old high school of Zuckerberg named "Phillips Exeter Academy" in which a book called "the Exeter Facebook" was passed among students in the class to know one another. Thus, Facebook is the name of a book, which Zuckerberg brought to the internet world. After mighty success, Zuckerberg, Moskowitz, and Hughes left for Palo Alto during summer and rented an apartment there. Two weeks later, Zuckerberg talked to Sean Parker (one of the founders of Napster), who later moved to work Zuckerberg in his apartment. Parker introduced his colleagues to Peter Thiel, a big investor, who is one of the PayPal founders and an executive of the Founders Fund. Thiel invested 500,000 US dollars in Facebook. Owing to many million members of Facebook, many companies were interested in Facebook, such as Friendster tried to buy Facebook in the amount of 10 million US Dollars in the mid of 2005, but Facebook rejected it. Later, Facebook received additional funds of 12.4 million US Dollars from Accel Partners. Therefore, at that time, Facebook was estimated to have a value of approximately 100 million US Dollars. Still, Facebook keeps growing until September 2006, Facebook was open for secondary or high schools. In the next month, a new function of sharing photos was added. Such a function was responded to overwhelmingly. In Spring, Facebook got an

additional investment in the amount of 25 million US Dollars from Gridlock Partners and Ameritech Capital, to combine with the first investors: Acela Partners and Peter Thiel. The estimated value of Facebook at that time turned to be 525 million UD Dollars. Subsequently, Facebook opened for over 20,000 business organizations. Until 2007, Facebook opened for everyone with emails.

Concurrently, Zuckerberg as the leader of the team launched a new News Feed, which users can choose to see Feeds more conveniently. Its function is more similar to the version platforms of mobile phones. The new Page News Feed enables users to see what they want to see. They can see everything by time sequences, i.e., to see only occurred activities. The distinctive point of the new News Feed is the appearing content or stories on Page News Feed look more dimensional and interesting, i.e., sharing of images, links, albums, and maps. Everything looks clearer and more interesting. Users can select only the type of Feed they want to display, i.e., Feed on All Friends, Feed only images, or songs, etc. Comparatively, it is like one reading newspaper can choose to read only the column in which they are interested. Web page and Page News Feed seem to have similar patterns increasingly. On the left, it is the status bar for choosing menus, i.e., Feed, message, Fan Page, Applications, etc. Moreover, there are also New Stories for updating new content on Page News Feed-like versions on mobile phones. However, Facebook gradually modifies Page News Feed to suitable for some parts of users.

2.3.2.3 YouTube



YouTube is a kind of website that provides the service of exchanging videos among users for free by applying the technology of Adobe Flash Player to display video. Users can see videos while uploading videos via YouTube for free. After applying to be members, users can load their videos and share them with others. However, if not, they can only see others' videos loaded on YouTube, but they cannot

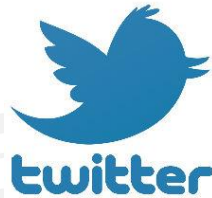
upload their videos. A video that can be uploaded on YouTube must not exceed 15 minutes, except videos from YouTube's partners, which are authorized by YouTube. The volume of a file must not be more than 2 GB. YouTube also accepts video files that are uploaded under different extensions: .AVI, .MOV, .MP4, .FLV, .DivX MPEG, VOB, and .WMV. Besides, it can support 3GP format files uploaded to mobile phones as well.

Benefits of YouTube

Besides, people around the world can view videos uploaded at the website of YouTube.com, at present, YouTube also provides other additional and interesting services, including being a channel for making business. The benefits of YouTube are as follows:

- 1) A source of knowledge. Besides general video clips, someone and other companies also produce video clips for disseminating some information, i.e., IT knowledge, cooking, the introduction of products and other interesting services, etc.
- 2) A source of entertainment. Primarily, what to be found on YouTube are songs, dramas, entertainment reports of the mainstream TV channels, which are uploaded on YouTube. YouTube also creates a station or so-called "channel" for anyone interested in playing it back.
- 3) A source of income. Nowadays, so many people sell their products through video, which makes a lump sum of income, or to have video advertising on YouTube, which also yields very satisfactory outcomes.
- 4) Direct income from YouTube. Since a few years ago, YouTube has provided a service from which video-clip owners can earn income from their clips publicizing to people around the world, which receiving more than 10,000 page views.
- 5) Promoting oneself. A number of Thai people use YouTube for introducing themselves, displaying their capabilities, i.e., singing, playing music, dancing, or cooking, which becomes a channel for public relations, and many people are also successful by using this channel.

2.3.2.4 Twitter



Twitter is a social media service by which users can send their message no more than 140 letters or alphabets to tell what they are doing or tweet (tweet is bird's sound). An updated message transmitted to Twitter will display on the users' webpage on the website. Other users can select to receive or accept those messages via the Twitter website, emails, SMS, Messenger (IM), RSS, or via specific programs, such as Twitterific, Twhirl, Echofon, seismic, which can be connected to the network and exchange information rapidly in Real-Time to answer to the question "what are you doing?"

Twitter.com is a service of sending messages with short sentences to tell what one is doing at that time to be recorded on the website Twitter.com, i.e., "eating" "leaving home," etc. After keeping sending messages, users can look back to see all statements or messages. Then, they can connect all statements and know what they have done each day. Thus, it is more convenient than sitting to write a blog all day. Thus, Twitter.com can replace or help people who do not like writing blogs to use this service increasingly.

However, one thing that makes Twitter more useful and amusing is a person can follow others who write statements on their Twitter of what they are doing. When he/she follows Twitter, he/she will receive those written statements simultaneously. A person can follow several persons at a time. Thus, Twitter becomes a tool or channel for disseminating information of one person to many persons easily via the internet network. Importantly, one can send a message to Twitter through mobile phones via SMS or WAP by visiting <http://m.twitter.com>. Thus, anyone, who has a mobile phone, can transmit his/her message to Twitter easily.

On the other hand, Instant Messaging or programs like MSN Messenger or G-Talk, are programs that a person sends to "known people or acquaintances" to

answer or to get an answer-back. Still, the format of sending a message on Twitter is in the form of "narration" rather than to answer "what I am doing," as it is expected to get a response from persons who receive the message. However, a receiver of the message may want to answer back to the one who sends a message to him or her

2.4 Concepts of New Media

2.4.1 Definitions of New Media

Media is a communication channel for presenting a message, i.e., entertaining information or advertising, to consumers. Owing to changes in technological systems, forms of media have been changed to be more advanced, i.e., from personal media to print, and from print to electronic media, such as radio and television. Up to the present, technologies have still been developed to the internet. Generally, changes in technological systems can divide media into two main types based on the usage aspects: traditional media or media used for radio and television broadcasting and new media. (Pornjit Sombatpanich, 2004, p. 4)

1) Traditional Media means the media by which a sender sends only one type of message or two types of the message simultaneously to receivers so receivers cannot communicate back to the sender. Traditional media can be classified into the following sub-categories:

(1) Media transmitting only one kind of message, i.e., transmitting either letters or images, to a receiver or receivers, such as newspaper, telegrams, and radio

(2) Media transmitting both kinds of message, or both images and sound simultaneously, i.e., television, and films

2) New Media means the media that facilitates a sender and receiver to transmit and to receive messages simultaneously as two-way communication. Besides, the media can transmit several kinds of the message together, i.e., image, sound, and letters or statements by combining technologies of the traditional media with the advancement of technologies, so communication is two-way via the network systems and has potential to be multimedia. At present, new media has been developed diversely and used widely. (Burnett & Marshall, 2003, pp. 40-41)

The roles of present communication technologies, i.e., computer, satellite for communication, telephone networks, audio-visual equipment, etc. affect traditional media, i.e., newspaper, magazines, radio, and television, which led to what is called the "Digital Revolution." Therefore, information, no matter in which form, i.e., statements, sound, moving pictures, still pictures, or graphic work, etc. has been transformed to be identical language. Namely, the message can be read, transmitted rapidly by computer, and presented in any form as needed or needed by users. Such a changing process is called "Digitization," which is a major factor inducing the occurrence of "new media," which involves computerized digital systems and reflective or "interactive" systems. It is expected that new media can respond to the needs of "information seekers" more effectively than traditional media since new media has no limits in time and space like traditional media. (Surasit Vithayarat, 2002)

New media means communication systems or electronic connection of global networks, i.e., the internet network, World Wide Web (WWW), and Commercial Online Service, etc. (Surasit Vithayarat, 2002)

Kevin Kawamoto (1997) defines "new media" as a communication system or a system connecting with an electronic network at a global level.

Thidaporn Chanachai (2007, pp. 1-3) defines "new media" with three key components:

- 1) Digital Media is rapid wireless communication by fiber-optic system connecting information via satellite.
- 2) Media is a new media besides existing traditional media
- 3) Newly created media for supporting some work by focusing on Creativity Innovation

Wertime and Fenwick (2008) propose the concept of new media and digital marketing by defining "new media" as content in the digital format, which comprises 5 freedoms, as follows:

- 1) Freedom from Scheduling. Digital content enables consumers to select to receive and transmit messages at the time they need, without waiting for the scheduled time.
- 2) Freedom from Geological Boundaries. Digital content is content

that can be received throughout the world rapidly. Consumers can selectively receive or search information from any country up to each individual's needs.

3) Freedom to Scale. Digital content can be shortened/ condensed or enlarged, i.e., the adjustment of content to be suitable for worldwide dissemination or only some specific groups.

4) Freedom from Formats. Digital content unnecessarily has a fixed format like traditional media. For instance, advertising spots are determined by TV standards to be 30-second long, or printed media to take a half or full space, etc. However, for digital media, it has no requirement how long a picture taken from a smartphone's camera will take to be uploaded to the website, or how much file resolution is needed.

5) Freedom from Marketer-Driven to Consumer-Initiated, -Created and -Controlled. Because of the evolution of digital technology, media owners may not be able to control the diffusion of media like in the past. The content found in a blog or video clip on the YouTube website and other integrated media may be created by any consumer. Thus, it is consumer-created and consumer-generated content or online word-of-mouth, that can be disseminated rapidly.

In addition, Kwanruethai Saiprdit (2008, p. 43) states about the characteristics of new media that new media is the media that responds to the information needs and information exposure of receivers the most since new media can create computerized programs for containing data system that can be searched for needed information easily. Accordingly, it results in the success of disseminating and compiling more information. Besides, it can apply the properties of computerized program systems to combine with various media, which is called "integrated media."

McQuail (2000, as cited in Sathaporn Singha, 2013) defines new media as the media with a diversity that changes all the time. New media have similar communication channels but are used differently by types of usage, content, and context. Therefore, there are 4 four kinds of new media as follows:

1) Interpersonal Communication Media, i.e., telephone (media with high ability in moving), and email (initially, it was used for working, but now it might be more important than simply conveyed information)

2) Interactive Play Media, i.e., computer, video games, including

virtual reality devices. Compared with old media, despite some similarities, the major difference is its ability in “interactivity” and its process of utility.

3) Information Search Media consists of several types of media, but the most important ones are the internet and WWW. They have unlimited information and accessibility. Nevertheless, the diversity of content and motivation in using new media reflect their useful advantages, besides the consequences of technological development.

4) Collective Participatory Media comprise the use of the internet in sharing and exchanging information, ideas, experiences, and creating relationships via computer-aided communication. Besides, the internet, there are video conferences and smartphones. This type of media is limited in the scope of use to serve the main purpose for work.

Characteristics of new media Kanjana Kaewthep and Thianchai Issaradej (2006) explain about the characteristics of new media as follows:

- 1) Two-way communication.
- 2) Ease of access and dissemination
- 3) Continuous learning
- 4) Alignment and integration
- 5) Creation of a community
- 6) Portability
- 7) Convergence
- 8) Inter-operability
- 9) Aggregation of content
- 10) A variety of long-tail choices
- 11) Reintegration of consumers & producers
- 12) Social collectivity & cyber-cooperation
- 13) Remixed culture
- 14) Transformation of products to services
- 15) User-based transformation of New Media User-generated content

Photsanan Panyaporn (2012) defines "new media" as the media caused by technological changes from analog systems or traditional media to digital systems functioning to transmit a converged message, i.e., images, sound, and statements

simultaneously. Rogers (1995, as cited in Sureerak Wongtip, n.d.) defines "new media" as media technology facilitating an exchange of information based on a huge number of people via computer-aided communication systems. It is apparent that in old age, human beings had a dyadic communication through words and symbols. Later, technological advancement induced communication development increasingly. Communication through several kinds of mass media, i.e., radio, TV, newspaper, etc., thus was developed. Contrarily, nowadays, communication focuses more on specific individuals, but on the other hand, communication is more diverse at the same time. Therefore, this kind of communication is called "social networking" or "social media."

In short, "new media" occurs from technological changes by time by having the internet as a central media for connection and interaction to the form of online social network on the computer and application on the mobile phone, which can share information and ideas rapidly, including modifying or changing the content of media.

2.4.2 Types of New Media

Types of new media are digital content patterns that are found nowadays and tend to play very significant roles in the future. Normally, each type of new media is distinctive and different by its purposes and uses. They can be summarized as follows: (Piyaporn Ketbanpot, 2010, p. 9)

- 1) Internet
- 2) E-mail
- 3) Mobile Platform
- 4) Video games and the virtual world
- 5) Multimedia CD-ROM
- 6) Software
- 7) Blog and Wiki
- 8) E-Book
- 9) Kiosk and Touch Screen
- 10) Interactive TV
- 11) Portable or mobile devices, i.e., mobile phones, PDA, Podcast
- 12) Hypertext fiction

From the above definitions, new media mean media caused by technological changes from the analog systems or traditional media to digital systems, transmitting multiple messages, i.e., images, sound, texts at the same time, such as the Internet, Website, E-Book, E-mail, etc., and being able to respond to information needs more freely. For this study, a prototype of new media for the health care of the elderly will be developed. Especially, mobile platforms will be selectively developed.

2.4.3 Benefits of New Media

From previous studies and articles of Thidaporn Chanachai (2007) and Kwanruethai Saiprdit (2008, pp. 50-51), benefits of new media are as follows:

- 1) Be able to search for answers for some issues by posting the topics. Then, other people who are interested in such topics or knowledgeable people can express their opinions widely.
- 2) Save time and cost in information management
- 3) Support E-Commerce as a form of commerce on the internet that can order products immediately without waiting for a catalog anymore.
- 4) Provide PR information to a variety and a large number of the target groups simultaneously
- 5) Access to the target groups nationally and globally.
- 6) Spend no cost of the air time to radio and TV stations and cost of space for magazines and newspaper. When compared to the costs paid for mass media, i.e., radio, TV, magazines, newspaper, and films, the rate of new media is much lower.
- 7) Be two-way communication, which facilitates users to interact immediately.

In summary, the application of new media for use nowadays can help to access more receivers. It opens for both senders and receivers to access information in various forms, and makes limitations of traditional media more flexible, especially the ability to interact in real-time, and self-learning without dependence on other people.

This concept was thus used to illustrate the importance of developing a health communication channel related to depressive disorders since nowadays communication technology advancement enables people to access information rapidly

from several platforms. Communication for providing knowledge on mental health, especially depressive disorders, silent harm that has threatened people's health at the moment, is thus very essential to be modified to respond to the age of the digital world to create perception, understanding, and awareness, including positive attitude towards depressive disorder problems. New media is aimed to access people diversely, both normal and risky people, to develop their thought, create participation in creating innovations, media, and communication patterns for providing knowledge on mental health and psychiatry creatively towards being a society of good mental health sustainably.

2.5 Concepts of the Impact of Social Media

2.5.1 Social Media Usage Behaviors

At present, there are a lot of internet users around the world. The internet becomes the biggest source of information sharing and exchanges in the world. Besides, communication patterns have been changed from traditional communication in the real world, i.e., face-to-face communication, writing or sending a letter by post, etc., to the use of communication technologies across borders to access masses of people all through the world. People live in a society of the real and virtual world. Social media becomes a phenomenon of connecting interpersonal communication on the internet that grows rapidly and continually, leading to the occurrence of technological evolution and several kinds of social media. (Wiyada Thitimatchima, 2010) Especially, the creation of online communities is focused, which induces people to exchange information for their activity purposes or specific mutual interest. Nowadays, marketing people look for social media as new media that is very popular until it becomes a part of the internet users' culture. Social media is a fundamental service of the website in which users can present themselves to be known by general people by creating their windows or webpage and allowing others who use the same network to share their experiences with such users.

Retrevo (2010) collected data from 1,000 social media users, especially popular websites, i.e., Facebook, LINE, Instagram, Twitter, etc., and found that social media played more roles in their life. Almost half of them followed social media

before going to bed and upon their wake-up in the morning. 16% of them were exposed to daily information from these websites. Moreover, it was found that more than half of them followed their social media at least once daily and more than 10% every couple of hours. Such findings indicate that social media is popular and very influential in the daily life of internet users; thus, it enhances the expansion of social media networks increasingly and continually in the future.

2.5.2 Impacts of Social Media

Now, everything is online, which provides comfort, facilities, and enormous benefits, especially endless knowledge from communication across borders around the world. Users can communicate, update their information and movement globally, look for friends, have language training, and obtain a variety of entertainment, i.e., playing games, watching movies, listening to music, etc. just by a click. In Thailand, the social media that gain most popularity are Facebook, Line, Instagram, and Twitter.

The advantages of social media are to have new friends and also old friends, to be a marketing channel, to get amusement and recreation to relieve users' stress, etc. Especially, websites are a knowledge tank used as a base for searching all kinds of information from various sources, i.e., word-of-mouth, video clips, interviews, etc. They are the space on which users can express and exchange their opinions and knowledge, or raise questions for sharing opinions. However, coins have two sides. Websites do not have only advantages, but also disadvantages.

The disadvantages are

- 1) A waste of time. If users know how to spend time properly on the websites, it will be beneficial. However, if they use them extremely, they will lose time for doing something else that is more useful. For example, if they spend too much time on online media, they will have less time for watching TV, listening to the radio, meeting friends, etc. Thus, their society will be smaller and they will meet only friends on the internet.

- 2) Poor mental health. If users are addicted to the internet, it will be difficult to dissolve it, and it will affect users' physical health as well. Especially, many websites may be an unlawful assembling place of teenagers who use social media in the wrong way, which yields a negative impact for themselves and others.

Some teenagers are so addicted that they neglect to study, play sports, or do some useful and creative activities and hobbies. If users spend all-time on the websites or internet or have Facebook Addict, which means to read and follow comments all day, it will surely affect their ways of life. Each day, teenagers may consume or seek happiness from these websites until they forget their real world. Consequently, they will feel lonely and alienated as they have no friends in the real world, dare not to confront others, and have no social skills.

3) Users may be deceived, as shown often in the news, from their chats or contact via websites. These channels are like a door opening for criminals or people with bad intentions to get acquainted with them. If users do not think it through or are careful enough, they may be deceived easily via the internet or seduced by malicious purposes.

4) Personal data may be disclosed. To reveal personal data or information online may cause some insecurities. Some users reveal their name, image, and everything so other people can perceive it. Thus, users' privacy is decreased and their data may be used in an illegal act. Thus, it is important to select reliable networks and contact only friends. For strangers, data security is the issue to be aware of the most. Besides, users should be aware of various impacts caused by information and communication technologies.

The advancement and growth of information and communication technologies have been expanding very quickly with higher capacities for usage in lower costs and wide application. Therefore, information and communication technologies inevitably involve greatly and directly in human life. To illustrate this, formerly the U.S.A. was mainly an agricultural country with agricultural products as their main products. Later, it changed its structure to be an industrial country, the proportion of industrial products has increased very rapidly until now it has only 5% of agricultural products. However, the value of industrial products decreases and is lower than the service industry, especially information technology service. The use of computers and communication systems is widespread all over the world.

2.5.3 Problems of Social Media Usage: Suicide

It is well accepted that nowadays social media has played a very significant role in human daily life. Such media is a two-edged sword or yields both positive and negative impacts. One of the negative impacts is the dissemination of violent content, i.e. hurting oneself and others or live-stream suicide, etc. All of these problems need to be solved seriously. Regarding the relationship between the use of social media and suicide, the medical circle specifies that the dissemination of statements or content related to violence, including suicide, affects directly the perception of people in society, especially its influence on children and adolescents who cannot think it through and have no problem-solving skill. These children and adolescents may imitate what they perceive from online media, and misunderstand that it might be the best solution. However, the causes of suicide may be multi-dimensional. Factors are not only the imitation from the exposed media or content but also other factors. The most found factor occurs in adolescents due to the capacity of the brain related to inhibitory control, which has not fully developed well as that of emotional control. Thus, they lack capabilities in managing confronting problems. Besides, the stress of adolescents is also diverse due to several changes during this age: physical changes or increased responsibilities. They learn to love and pay attention to something special, which can cause stress and behavioral expressions. The use of social media also influences their behavioral expression quite highly.

The surveillance of adolescents' usage of social media should be done by distant observation of their parents. Parents may use social media with their children, but should not present or identify themselves too much as too much self-presentation may make their children alienate so it will be harder to control the situation. Parents should observe in which area their children are interested, or to which content or topic their children press "like." Parents should give their advice promptly and properly and determine conditions for using the internet to avoid their overuse, which will cause negative impacts on them.

Remarkably, the numbers of live-stream suicide and the dissemination of messages conveying a suicide attempt have been increasing nowadays both nationally and internationally. From many surveys, it was found that successful suicide increases, but no explicit evidence can prove its connection to the use of social media.

Besides, it was found that people who expressed behaviors of sharing such content had many motivations, i.e., online comments or likes, etc. Moreover, some of them have other psychiatric symptoms jointly, which lead to improper behaviors. Another interesting condition of psychiatric symptoms related to the use of social media that one should be aware of is "Facebook Depression Syndrome," or depressive condition caused by Facebook. The symptoms of Facebook Depression Syndrome are as follows:

- 1) Misunderstand their friends' happy daily reality displayed on Facebook
- 2) Be emotional victims of others' daily activities
- 3) Compare the level of their quality of life with that of their friends frequently
- 4) Like to change their profile often to call attention
- 5) Be anxious when they cannot check or follow information or their status as usual
- 6) Tend to update their status to draw attention or post attractive articles, i.e., humorous stories, thorny issues, etc.

However, the above symptoms are just signs of Facebook Depression Syndrome, which are not yet official research findings in psychiatry. Besides, people with these symptoms may have their psychotic symptoms before, i.e., people with depressive disorders use Facebook, so their behavioral expression reflects depressive condition, but is not caused by the use of Facebook. However, the amount of internet use was found to be related to depression symptoms and psychotic symptoms, i.e., anxiety, aggressiveness, improper sexual behaviors, etc. However, it is not classified as a disease or illness yet, but just affects people to have another form of personality from the online-media addiction.

For controlling the cases of suicide disseminated in social media, family members are not the most important. They should look after their family members' behaviors to see if their personality changes, if they express more introverted personality, or if their studies are worsened, including changes in their eating habits, sleeping, and the amount of using social media. Besides, for positive consequences of using social media and the internet, parents are suggested to choose media suitable for

the child's development and learning at each age. They should use social media properly, not more or less, while keeping family members to perform their roles, i.e., studying or household work, properly to avoid online-media addiction.

2.6 Uses and Gratification Theory

Uses and Gratification Theory used for this study is the study of using mass media content to gratify an individual's needs. This theory assumes that social and psychological condition related to individuals' needs leads to their expectation towards the benefits or consequences received from their mass media exposure. Thus, individuals with different social and psychological conditions will have different needs and expectations from mass media. (Katz, Blumler, & Gurevitch, 1974, pp. 21-22). According to this theory, the model comprises of the following:

- 1) Social and psychological condition
- 2) Necessities/ needs of individuals
- 3) Expectation from mass media or other information sources
- 4) Mass media or other information exposure
- 5) Satisfaction as wished
- 6) Other consequences, including unexpected consequences

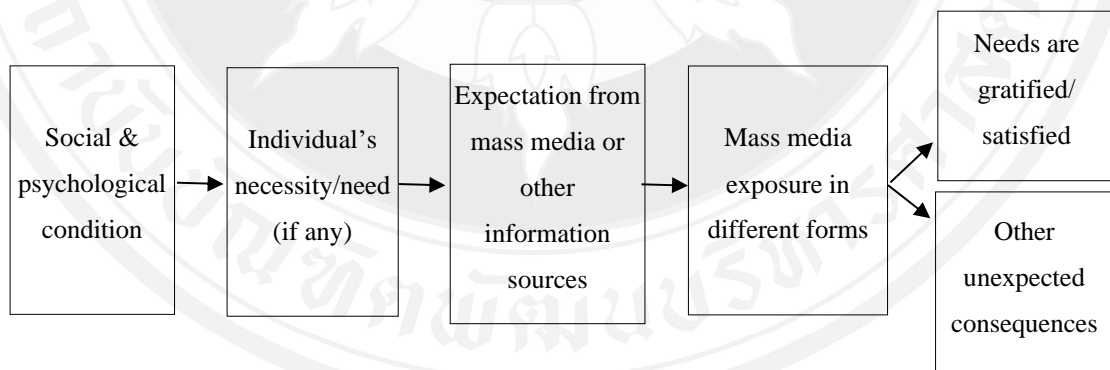


Figure 2.1 The model of Uses and Gratification Theory of Katz et al. (1974)

Source: Katz et al. (1974).

From the above concept, it can be summarized that consumption selection depends on the needs and motivations of receivers. Each receiver has a different

objective, intention, and needs to use mass media differently. Generally, individuals will select to be exposed to information from mass media based on their anticipation and expectation by comparing the received reward value with their expenditures and liabilities following. If the reward value or benefits are higher than the exerted energy or expenditures (or effort in understanding the information), individuals tend to seek such information. Individuals seek information or select to be exposed to information, not only for supporting their predisposed idea or understanding, but also for other benefits, such as to acquire knowledge as guidelines for solving problems, responding to personal interest, and entertainment. Typically, whether individuals will seek or avoid information depends on their assessment or comparison between the exerted effort and the benefits gained from the information from mass media that fulfills their satisfaction and needs. State that individuals use mass media to gratify their needs because of several reasons as follows:

- 1) For surveillance or to observe and follow movements from mass media to catch up with or update what is happening and to know what is significant for them to learn.
- 2) For guidance or to be able to perform themselves correctly, which helps their decision-making in daily life for their survival in the existing social and political systems.
- 3) For excitement or to create a feeling that they involve in the happening to reinforce their prior opinions or support their decisions that have been made.
- 4) For anticipated communication or to create relationships with other people, to exchange information, and to share opinions.
- 5) For entertainment or to release their emotion or to get enjoyment to escape from or to avoid problems.

One interesting study on the uses and gratifications is the study of Wenner (1989, as cited in Somchart Yanyongsatiman, 2002, p. 42), which classified gratifications into four groups:

- 1) Orientation Gratifications mean the use of information for making references as a reinforcement for a relationship between individuals and society. The

type of expressed needs is to follow information or acquire information for facilitating one's decision-making.

2) Social Gratifications are the use of information for connecting information about society with one's network, i.e., using the information to converse with others for persuasion.

3) Para-Social Gratifications means the use of information for maintaining one's identity or referring to one involved with media or phenomena in the media content, i.e., the adherence to or admiration of a reporter as a role model for one's behaviors.

4) Para-Orientation Gratifications means the use of information for reducing or relieving the emotional stress for self-defense, i.e., to use up time for amusement to avoid other dissatisfactory things.

Sirichai Sirikaya and Kanjana Kaewthep (1988) studied what receivers needed from mass media based on what McQuail (2000 as cited in Sathaporn Singha, 2013) developed and modified following receivers' use of mass media as follows:

1) Needs for Information

(1) To know what happens with them, things surrounding, and social happening

(2) To use as a tool for seeking advice for their practices and decision-making

(3) To respond to their curiosity and interest

(4) For self-learning

2) Needs for Creating an Individual's Identity or Uniqueness

(1) To acquire a behavioral role model

(2) To reinforce the personal value

(3) To understand one's real self

3) Needs for Group Formation and Social Interaction

(1) To express their ideas with others

(2) To converse and interact with others

(3) To create familial, friendship, and social bonds

4) Needs for Entertainment

(1) To escape or avoid harms

- (2) To relax themselves
- (3) To use up time with something
- (4) To release emotion
- (5) To obtain aesthetic pleasure

In short, the benefits of health communication are the acquisition of information about the current surrounding situation of the global society. It enhances self-learning and provides additional knowledge about depressive disorders. Besides, it can be adopted to be a role model for behaviors and to entertain oneself, i.e., to release one's stress, reduce one's anxiety about health, and exchange opinions about depressive disorders, leading to social interaction with other people.

Accordingly, Uses and Gratification Theory is used for this study for analyzing the uses of the LINE Application as a tool for health communication on depressive disorders for preventive approaches to see how it is used, to what extent it yields benefits from users' exposure, and if the types of uses accord with the Uses and Gratification Theory, including for exploring the relationship between demographic variables and the use of LINE Application on depressive disorders.

2.7 Related Studies

2.7.1 Studies in Thailand

The Department of Mental Health proposed "the Provincial Systems of Depressive Disorders Surveillance," guidelines for surveillance of depressive disorders at the provincial level, which is an innovation of service system development that connects all national concerned service units. The systems comprise "the Disease Screening Form by 2Q," the innovation of assessing depressive disorders for supporting disease diagnosis and treatment; "the Assessment of Depressive Disorders by 9Q," and the innovation of depressive disorders management that facilitates patients to access the service increasingly, which is the guideline for managing depressive disorders for general practitioners at the primary and secondary service stations (CPGMDD-GP); and "the Provincial Depressive Disorders Surveillance Information System Program," the innovation of the report and evaluation. Thus, the innovation is for surveillance of depressive disorders of Thai

people throughout the country in the form of the web application. Key success gained from such an operation is continual protection and solutions for depressive disorders throughout the country. The outcomes were as follows:

1) Individual Level: More patients could access the service. Specifically, in 2006, the rate of access to the service was 3.7%, but in 2013, it increased to 33.34%. Over 10 million Thai people were screened and acquired knowledge on mental health studies related to depressive disorders sufficiently that they could understand, be aware of, and modified their cognition and behaviors related to depressive disorders. Besides, over 5 million people who had a tendency to have depressive disorders (or had an abnormal level from the screening) were taken care of, while over 1 million people who had depressive disorders from the evaluation by 9Q and over 500,000 people who tended to commit suicide were first aided and delivered to the doctors. Over 400,000 patients were treated and followed continually for 6 months. Almost 300,000 patients were cured, while almost 100,000 were sent to be treated in a hospital or service place with having psychiatrists due to their severe symptoms, and there were 705 patients with recurrence. (recurrence by $9Q \geq 7$). In short, the operation enabled depressive disorder patients to reach the service more than 10 times and 96.5% of service recipients had satisfaction at a high level.

2) National Level: The operations increased the quality and effectiveness of health service systems as follows:

(1) It was worth it if the screening was conducted by 2Q and assessment of symptoms by 9Q up to the stage of diagnosis and treatment by drugs. The expenses would be reduced from 14,381 baht/patient to 930 baht/patient.

(2) It was operated by the collaboration of several health agencies

(3) The effectiveness of medical service and public health, both in and outside the Department of Mental Health was increased. 92.3% of the public health personnel were satisfied at a high level.

(4) It helped to increase and create the potential of mental health research of new generation, including knowledge management of mental health body of knowledge, which can be applied at the area level. Besides, it was resources on depressive disorders from local wisdom at a community level. For local wisdom at the

national level, stakeholders participated in developing and studying towards utilization at a local, regional, and national level.

(5) It was a service system that can strengthen the existing health service system and health service in the hospital. Besides, public health personnel were empowered in the area of mental health service, which can be applied to other health problems as well.

(6) Five sets of Innovation and a new body of knowledge, six guidelines, 3 devices of technologies, and two systems for preventing and solving depressive disorders were acquired and developed, including being applied for surveillance of depressive disorders all through the country. Accordingly, patients with depressive disorders in communities came for treatments 10 times more. Thus, this work received "Thailand Public Service Awards" in the field of outstanding service innovation that can be operated for preventing depressive disorders and reducing losses caused by depressive disorders for the whole country, which would result in a decrease of Disability Adjusted Life Years (DALY) caused by depressive disorders of Thai people.

3) Global Level: Care and Surveillance of Depressive Disorder System is a health service system that covers all dimensions of care and assistance, which is equipped with devices, guidelines for care and assistance, and report systems, which can be applied directly or to other diseases or illness. Such a system was presented at the conference of the World Psychiatric Association, European Union, and many international conferences, i.e., in Spain, Austria, Portugal, etc., and was one of the finalists of United Nations Service Public Awards 2013.

Praneat Chumputra, Dusadee Jungsirakulwit, Yada Thongthammarat, and Priya Praneetpholkrang (2015) studied, "The Study on the Density of Stress and Depression of Adolescents and Early Adults in the Health Zone 9." The purposes of the study were to explore the density of the stress and depression condition among adolescents and early adults. The study was a part of a project called "the Prevention of Depressive Disorder among Adolescents and Early Adults," and selected the samples by the purposive sampling from the population of 1,188 students of 11 academic institutes in Nakhon Ratchasima, Chaiyaphum, Buriram, and Surin, 9 of which were secondary schools and 2 were universities. Data collection took 6 months

from July to December 2014. The stress measurement form of the Department of Mental Health and the depression measurement form (BDI-II) were used to screen the target adolescents and early adults who were risky for depressive disorders. The screening criteria were as follows: having more than 18 scores for the samples of depressive disorders, and/or more than 15 scores for the samples of depression. Data were statistically analyzed by frequencies, percentage, mean, and standard deviation. The study found that 23.90% of the samples in the stress group had a little higher scores than standard scores, 5.38% at a moderate level, and 5.13% at a high level. The stress scores of the overall samples were at a normal level ($X=15.60$, $SD 7.184$) with 34.42% of the density towards the stress condition. For depression, it was found that 19.95% of the samples had depression at a moderate level, 12.88% at a high level, and 6.23% at the highest level. The depression scores of the overall samples were at a low or minimal level ($X=13.04$, $SD 7.905$) with 39.05% of the density towards depression. For the study of the density of stress and depression of the samples, 24.58% had both stress and depression conditions, 9.59% had only stress conditions, 13.55% only depression, and 47.72% of the density towards depressive disorders. In short, almost half of the samples were adolescents and early adults who had a high density of being risky to have depressive disorders. Therefore, it is very important and essential to plan a proper and systematic assistance system development to prevent depressive disorders among adolescents and early adults.

Darawan Thapinta (2015) organized a therapy manual through a problem-solving approach for depressive disorder patients towards proper treatment and for being guidelines for practitioners in the public health service, who were trained in Problem Solving Therapy or PST. Problem Solving Therapy (PST) is the therapy that is patient-oriented by helping patients to understand the nature of problems, problem-solving approaches, and problem-solving methods from a new perspective, including seeking to find ways for solving problems more diversely and selecting the ways for problem-solving through rational problem-solving that are appropriate for the level of severity from mild to moderate level. The therapy takes 7 times with 60-90 minutes each time. The advantages of the use of therapy program of PST are that it has each clear step and it can help treatment recipients to understand what causes their depression and adjust their perspective to enlarge their choices for solving problems

so that they can live and continue their daily life both in a short and long term. There are 7 steps of PST and patients are encouraged to take all steps. Patients will start to learn how to solve problems by themselves from the step 1-3. After they can solve their problems, a simulation will be given for patients to practice their skills in problem-solving in steps 4-6, including summarizing what they learn from problem-solving by themselves. After all steps, patients will be self-therapist. Changes that occur in the patients are that the first step, patients can see the problem. After that, more problems are given to patients for solving. After step 5, patients will adjust the way they view the problem that problems depend on their perspective and the way they perceive the problem.

Chiraporn Srinak (2013) studied “Analysis of Types, Patterns, Content, and Usage of Social Media in Thailand,” with 4 objectives: 1) To study kinds of social media chosen by social media users, 2) to explore the format or patterns of presentation of social media content, 3) to examine content social media users used to communicate via social media, and 4) to study the objectives of the use of social media users. The study was quantitative research as the main method for data collection and was conducted by in-depth interviews with 28 social media users. From the study, it was found that most samples were female, aged between 21-30 years old, with a bachelor's degree. Facebook was the social media known and used the most by the samples. Regarding the presentation pattern of social media content, it was found that Facebook had the most distinguished pattern, especially in having receivers participate in communication and communicate through VDO calls. Most samples used social media to supplement their use of traditional media. Besides, most samples did not reveal their names nor image on social media. They used spoken language mostly. Moreover, the relationship between communicators on social media was at the early stage of building a relationship with general people or new friends. They imposed no rules or norms for social media use. Regarding the purposes of social media use, most samples used for their conversation the most, followed by for entertainment, for acknowledging what was happening that yielded positive impact by helping them to make decisions more easily and being able to contact their old friends and meet new friends. For negative impact, social media reduced their relationships with people in the real world and affected the correctness of the information used in

communication. From testing hypotheses, it was found that most samples used social media continually every day. However, despite the different amount of time and different periods, the samples used social media for responding to their needs not differently. The relationship between the use of social media and the positive and negative impact was found at a low level; with the creation of self or identity via the selection of name and image, the use of language in expressing the relationship with other people, and the compliance with the rules and criteria imposed by the samples themselves and by other users were found at a moderate level; and with the positive and negative impact at a moderate level.

Piyapa Wannasomporn (2013) studied “Uses and Gratifications on Using Facebook of College Students in Chiang Mai Province.” The purposes of the study were to study the uses and gratification of Facebook usage of undergraduate students in Chiang Mai Province. The study was conducted by survey research using questionnaires as a tool for collecting data from 400 samples. The samples were selected from the students who had a Facebook account. The data collection was from April-May 2013. The study found that most samples were female aged over 22 years old, with an income between 2,001-5,000 baht. Most samples were studying at the University of Chiang Mai, mostly in the Faculty of Humanities, Social Science, and Arts. Most of them accessed Facebook every day through a smartphone on the Android operating system the most by using Free WiFi. AIS network was used the most Facebook was used at the university the most. Each time, the samples spent 1-2 hours, and the time they used Facebook the most was between 6.01-9.00 pm. Most samples used Facebook “to search for updated information of both friends, acquaintances, and general matters,” “for entertainment, amusement, and novelty,” “to create social relations with friends,” “to express opinions in the interesting topics,” “to converse with friends and others,” and “to post one’s images and stories,” at a high level, followed by “to spend free time usefully,” and “to create income,” at a moderate level, and “to exchange learning and brainstorming among friends,” the least at a low level. As a whole, the samples were satisfied with “the convenience, rapidity, and ease of information receipt,” “the acquisition of updated information,” “rapid and time-saving communication with friends and others,” “pleasure and enjoyment,” “attractive presentation format,” “ability to express opinions,” “creation

of good relationships among friends and other people,” “information exchange and sharing,” “a display of Like towards images or information,” “spending free time usefully,” at a high level, followed by “novelty of content,” “creation of one’s identity/uniqueness,” and “chats” at a moderate level. As a whole, the problems or obstacles of using Facebook found the most were “careless surveillance of concerned agencies,” at a moderate level, followed by “increased violation of rights and freedom,” “increased cost of equipment and the internet fees,” “improper websites,” “inappropriate language and presentation methods,” “the establishment of interactions with other people,” “the access to Facebook’s users’ account,” “complicating methods,” “quality of information, and the inability of computer equipment to support the multi-media usage,” at a low level.

Thorani Kongsuk et al. (2008) studied “The Evaluation of the Surveillance of Depressive Disorders of General People and Risky Groups, Significance, the Analysis of the Depressive Disorder Situation in the Pilot Area in Yasothon Province in 2006.” The results led to the guidelines for developing the surveillance system of depressive disorder in 2007. The evaluation of depressive disorder surveillance system will be guidelines for further extension. The objectives of the study were to evaluate the surveillance of depressive disorders among people and risky groups in Yasothon Province. The study was conducted by a cross-sectional study from April 24-May 26, 2008. 1,124 samples were selected from the population of 297,588 general people and risky people with depressive disorders who had been screened for depressive disorders by 2 questions through two-step sampling, namely sampling from every district and then sub-district and village. The evaluation was on the surveillance during 2006-2007, based on the CIPP Model, comprising contexts, input factors, process, output, outcome, and impact of the system. Data were analyzed by frequencies and percentage, and content analysis. The findings showed that most samples or 77.6% were female with no chronic disease. After the adoption of the depressive disorder surveillance system, it was found that in terms of contexts, 93.5% of the samples perceived depressive disorders as problems the most, 76% perceived them as family problems, and 88.9% as causing problems to others. Regarding input factors, 99.5% needed to maintain the activities on depressive disorders in the community and assess patients' symptoms regularly the most. For outputs, it was

found that 60% of the samples acquired knowledge about depressive disorders from PR board the most and 67.4% were acknowledged that they were screened for depressive disorders by 2 questions. 46.6% were reported to be normal and only 4.4% were risky or had a tendency to have depressive disorders. 64.2% evaluated that everyone had been informed about mental health studies on depressive disorders. Regarding the outcome, 90.3% of the samples were confident that the depressive disorder surveillance system can help depressive disorder patients in the area and 93.8% evaluated that the community got benefits from the system. As for the impacts caused by the system development, it was found that 99.4% of the samples believed that people in Yasothon Province were willing to assist and support depressive disorder patients. In summary, the development of the depressive disorder surveillance system for general people and risky groups in the pioneer project had yielded important key successes, which were people's confidence and benefits people would acquire from the system, including their willingness to assist depressive disorder patient in the community. Moreover, it was recommended that for further extension of the system, there should be a campaign to adjust people's attitude towards depressive disorder and create an awareness of depressive disorder problems to promote people's prevention and patients' continual treatment.

Thorani Kongsuk (2008) studied "The Development of Information Processing System in the Depressive Disorder Surveillance in Yasothon Province." From the study, it was found that effective surveillance of depressive disorder patients did not come from the development of equipment or personnel, but information systems were significant to help patients. Therefore, information system development for the surveillance should help patients more rapidly, continually with less recurrence. It was important that the system had to be convenient and easily accessed with data security, while concerned personnel could apply it for us through the development of Systems Development Life Cycle or SDLC as a Web application. The output from the development was information systems for surveillance of depressive disorders, which comprises the following: General information of a patient, relatives, and caretakers; information of the treatment/diagnosis; information of the level of severity of depression disorders, evaluated by 9 questions (9Q) and the tendency of suicide by 8 questions (8Q), and the referral information. The results were displayed

in scores and graphs to indicate the status and the period of treatment in which patients' changes are witnessed: 1) during the treatment, 2) during the period in which symptoms were better, but drugs were still given, 3) the period of drug decreasing, 4) appointment and follow-up to avoid recurrence, 5) the recurrence if missing the appointment more than one month, 6) dismissal of the case from the surveillance system (no recurrence for more than one year after 9Q investigation). In terms of the system for regulating the accessing of patients' information, those responsible can record patients' data from all service units, including searching information by names or identity numbers of patients to display sickness status from the beginning up to the present. When patients are transferred, the warning will be displayed on the webpage of Yasothon Provincial Public Health Office after the system has been adopted throughout the province. At the study time, there were 936 cases in the system, divided by the level of severity. It was found that 30.98% (290 cases) were during the treatment, 13.35% (125 cases) got better but still under treatment, 0.96% (9 cases) were treated with reduced medication, 3.74% (35 cases) under the surveillance of recurrence, 0.96% (9 cases) missed the appointment over one month, 0.85% (8 cases) got recurrence, and 0.64 (6 cases) were dismissed from the system. 48.50% or 454 patients indicated that the system displayed correct and complete information in surveillance of depressive disorders continually. However, it was recommended that although the system can be adopted for surveillance of depressive disorders, it requires a follow-up system in assessing patients further.

Ratchanee Sritawan et al. (2008), studied "Technology for Providing Knowledge on Depressive Disorders for Public Health Village Volunteers," The provision of knowledge on depressive disorders for village health volunteers (VHV) is a health service channel for accessing communities by self-administration. The purpose is to empower VHVs to have the knowledge and be able to transfer their knowledge to villagers about depressive disorders, including being guidelines for VHVs in screening risky people among general people in the authorized area. Accordingly, it can strengthen the community networks with the first stage of surveillance of depressive disorders and effective referrals. The samples of the study were 100 VHVs. The study was conducted by action research that was divided into 3 stages: Stage 1) A review of literature on depressive disorders, determination of

conceptual frameworks, meetings of community psychiatrists in the area of technology development, and training of 100 VHVs for adopting and transferring technological knowledge to community members. Stage 2) the transference of technology from VHVs to 1,038 risky people towards depressive disorders in the target area under the consultancy of health staff. Stage 3) The evaluation of the quality of VHVs' knowledge provision by randomly visiting risky people who had acquired technological knowledge from VHVs.

Somkiat Khamnurak (2007). The Development of Suicide Risk Surveillance Patterns by people participation of Nakhon Sawan Province. Committing suicide is one the important public health problems in Nakhon Sawan Province as a result of stress. Without proper and correct treatment, it can become depressive disorders, and suicide may be committed. Thus, the surveillance of people risky for killing themselves is a very essential activity for preventing and solving suicide problems, including rescuing those with depression or risky people from committing suicide. From the study, Nakhon Sawan Province had operating surveillance of the said problem since 2001. From the evaluation of its surveillance in 2005, it was found that the provincial surveillance had not covered the areas thoroughly and had not so good quality. Thus, the researcher perceived the importance and roles of participatory surveillance of the community and conducted the study aimed to develop patterns of surveillance of people risky for committing suicide through a community's participation. The study was R & D research dividing into two stages. The first stage was the stage of analysis and development of a tool for surveillance from innovation and a knowledge management process to strengthen the activity operations in the risky areas of 5 districts: Kao Liew, Tak Pha, Ta Khlee, Krok Phra, and Phai Salee. Stage 2 was the stage of applying the developed tool for surveillance in the said risky areas of five districts for the empowerment of community leaders and mainstays, i.e., VHVs, executives and members of Local Administrative Organization, and health opinion leaders and stimulating collaboration in surveillance, including providing space for knowledge exchange under the action plan of the outcome-evaluation project for measuring community mainstays' participation and impacts occurred, i.e., the results of surveillance and the rate of suicide. From the comparison with the community condition last year, it was found that due to increased empowerment and

collaboration of community mainstays, the community could surveillance through the developed tool: they could screen, evaluate, and follow up to assist the risky groups well beyond expectation. No suicide case was found among people under surveillance; thus, the suicide rate in the areas decreased substantially. Besides, it was found that good support was a major factor in developing the patterns of surveillance, especially to help establish a collaboration of strengthened network partners through knowledge and effective operational plans. Besides, it could stimulate Local Administrative Organization executives to see the importance of suicide prevention and contain it into the surveillance local plan with budget allocation continually.

Weera Churujiporn (1999) studied “Coping with Depression Methods of Thai People.” Depression is emotional change, which is considered a psychotic disorder and severe mental health that can lead people to kill themselves. The study thus aimed to explore to which management or treatment methods Thai people's depression was related. The samples of the study were 7,432 representatives in each public-health area. The tool comprised general information questionnaires, Beck's Depression Inventory Form, and Jalowiec's Coping Scale. The findings showed that 66.2% of the samples (7,432) were female and 33.8% male, aged averagely of 38.3 years old. 38.1% were found to have severe depression and need medical advice, 36.2% were normal, and 25.7% had slightly deviated emotions. It was further found that severe depression was associated with depression coping by emotional release (72.8%), avoidance (71.8%), and pessimism (64.7%) respectively. However, other coping methods, i.e., optimism and dependence on supporting sources were found to have no relationship with statistical significance ($P > 0.05$). On the other hand, confrontation with the problem was found to have a negative relationship with depression, or if more confrontation was applied depression was less or reduced. Finally, the study found that one-third of Thai people were in a state of depression and needed to see a psychiatrist. If not, it might become a more severe mental health. Besides, some specific coping methods found to have a relationship with reduced depression might be beneficial for society if disseminated to the general public to be informed.

2.7.2 Research of Foreign Countries

Jiabao (2018) studied “Content Analysis of the Discourses on Depression via Weibo Web.” (Weibo is a large social media in the Republic of China.) It was found that depression was an emotional disorder that might lead to severe consequences, i.e., hurting oneself or committing suicide. Causes of depression were genetic background, socio-cultural, and individual or personal factors. It was found that most people got information about depression from mass media and discourses appearing in society, which might not be in congruence with scientific knowledge. Accordingly, it led to misunderstanding and wrong treatment. Furthermore, the study also aimed to create a holistic understanding of the patterns of depression and discourses on depression from different sources on social media in China. The study reflected that people had an understanding of depression. Besides, people accepted more scientific explanations, but contrarily, it made them feel more stressed since the media tended to emphasize the detailed severity of the outcome without providing suggestions for prevention and coping with the problems. Therefore, it was important to mobilize people with more well-rounded information for increased understanding of depression.

Moorhead (2013) studied new dimension of health care: a review of the uses system and restrictions of social media for health communication by reviewing contemporary publications to identify benefits and restrictions of social media in health communication for people, patients, and health experts. The study found that there was a gap in advising health research in the future. Besides, from the survey, it was found that social media presented new perspectives in health care. It was media that general people, patients, and health experts could use for communicating health problems and guidelines for health care. Moreover, social media was found to be an effective tool in working with others and creating social interaction between individuals of several groups. However, despite plenty of benefits, the acquired information needed to be examined for its quality, correctness, and credibility. Therefore, it was recommended that there should be an experiment and survey for increasing the quality of the tool and creating higher credibility. More detailed evaluation and review should be conducted by different methods to ensure that social media could help to perform its roles in health communication effectively, both in the short and long terms.

CHAPTER 3

RESEARCH METHODOLOGY

The study of “Health Communication Innovation for Depression Prevention and Surveillance” aims to examine health communication innovation issues of depression prevention of people aged 20-65 years old, residing in Bangkok. The study was conducted by qualitative research through in-depth interviews and documentary research. To elaborate, the researcher conducts the study and analyzes data found on websites, YouTube, applications, Facebook, and Twitter to find out formats and contents of health communication issues of depression prevention and also to consider methods of health communication issues of depression prevention through social media, same as previous sources mentioned. For the interview, 15 samples aged 20-65 years old in Bangkok were divided into 3 groups: 20-30, 30-40, and 40-65 years old.

The interviewing sessions were organized twice. The first session was to interview before the development of a communication tool to find out users’ preferences. Later on, the second session was held with the same study group to interview about satisfaction and benefits of utilization. The data collection was from May to October 2020.

3.1 Research Methodology

3.1.1 Qualitative Research

The study was conducted by both qualitative research through the documentary analysis and in-depth interview, with details as follows:

3.1.2 In-Depth Interview

An in-depth interview was conducted twice. The first interview was conducted before the construction of a research instrument for exploring the samples’ needs. The second interview was conducted with the same groups of respondents for examining

their satisfaction or gratification with the use of information after being exposed to a clip video of the Application of LINE Official Account. During the interview, the interviewees' responses were noted and recorded.

The population of working-age between 20-65 years old, residing in Bangkok was sampled and examined. The group consisted of 15 participants, divided into 3 groups: 20-30 years old (5 interviewees), 30-40 years old (5 interviewees), and 40-65 years old (5 interviewees).

The interviews were conducted twice as follows:

- 1) The first interview was conducted to study the needs of the Application of LINE Official Account as a channel for communicating health communication related to preventive depressive disorders.
- 2) The second interview was conducted to explore the gratification or satisfaction with the use of information after being exposed to the clip video of the Application of LINE Official Account as a channel for communicating health communication related to preventive depressive disorders.

3.2 Samples and Sampling Methods

The researcher conducted a purposive and stratified sampling. The study groups were 15 Bangkok residents in the working-age between 20-65 years old since nowadays the retirement age is extended to 65 years old (Sucheera Phattharayuttawat, 2017), who represented both employed and unemployed samples, and might be people who had or had no direct experiences of depressive disorders. The samples were classified by age into three groups as follows:

- 1) The working group aged 20-30 years old was composed of 5 participants, both experienced and inexperienced in depression. 3 of them were bankers, one was an online merchant and the last one was a tutor.
- 2) The working group aged 30-40 years old was composed of 5 participants both experienced and inexperienced in depression. 3 of them were bankers and the other 2 worked as office employees.

3) The working group aged 40-65 years old was composed of 5 participants both experienced and inexperienced in depression. 3 of them were bankers and the other 2 were office employees.

3.3 Research Instrument and Procedure

For the in-depth interview, a semi-structured interview guide was a research instrument or tool for data collection to understand the users' needs of the Application of LINE Official Account as a health communication platform or channel for preventive depressive disorders

Samples were asked to watch a video clip presenting the Line Application's format and usage. While watching the clip, the samples were required to write ELD notes, and all the process was tape-recorded. After watching the video clip, the samples' utilization and satisfaction were evaluated and recorded. The researcher noted key answers or keywords of the samples responding to the research questions, especially their evaluation of the formats and contents of the Application. The details of the questions are as follows:

1) Questions for studying the needs of Line application as a health communication platform or channel for preventive depressive disorders.

The 1st interview comprises 2 parts

Part 1: Data indicating demographic and background information of the sample group such as gender, age, level of education, income, profession, current health condition (healthy/sick/congenital disease), and health behaviors. (7 questions).

Part 2: The needs of the Line application as a health communication platform or channel for preventive depressive disorders. (4 questions.)

2) Questions for evaluating satisfaction or gratification with the uses of the Application after watching a video clip presenting the Line Application as a health communication platform or channel for preventive depressive disorders, including the content and formats responding to the users' needs gained from the first assessment

The 2nd Interview comprises 2 parts

Part 1: Satisfaction with the Line Application format as a health communication innovative tool or device for preventive depressive disorders (10 questions).

Part 2: The uses or benefits of the Line Application as a health communication innovative tool or device for preventive depressive disorders (3 questions).

3.4 Data Collection

For this study, to collect data, interviews were conducted in 2 stages.

The researcher collected primary data from interviews and subsequently analyzed them based on each research question. The interviewing sessions were organized twice. The first session was conducted before a communication tool was designed to find out the user's preferences. Later on, the second session was held with the same study group to collect secondary data by interviewing about their uses and gratification.

In more detail, the interviewing process started from surveying the samples' opinions via phone calls instead of face-to-face interviews to comply with the announced measures for surveillance, prevention, and control of the spread of Covid-19 virus as social distancing was officially requested for the sake of people's safety during the outbreak.

As the research objectives were to explore the needs of social media, particularly the Line Application as a health communication innovative tool or device for preventive depressive disorders, and to evaluate if the formats and contents presented on the Line Application as a health communication innovative tool or device for preventive depressive disorders gratified the needs of the users, the interview was conducted in two stages:

- 1) The first Interview was organized before a communication tool was designed to find out the user's preferences for the use of the Line Application for health communication for preventive depressive disorders among working citizens who lived in Bangkok. After gaining information from the first interview, the

researcher combined all responses to design an innovative tool for health communication for preventive depressive disorders based on the sample groups' expressed needs. The tool was designed as a platform and presented in the form of infographics and videos, aimed to demonstrate the overview of the instrument, i.e., how it looks like and what are main features.

2) The second interview was conducted with the same sample groups to examine their uses and gratification with the newly designed Line Application for health communication related to preventive depressive disorders. After the completion of the tool's design, the sample groups were asked to watch video clips presenting Line Application as a health communication innovative tool or device for preventive depressive disorders. The innovation was named, "m-Mental Health." Thus, questions were asked to evaluate the quality of the tool in terms of its uses, the users' interest, and satisfaction, including problems and obstacles towards the implementation of the Line Application as a health communication innovative tool or device for preventive depressive disorders.

3.5 Data Analysis

For analyzing data from the documentary research, the researcher analyzed the formats and content of communication on depressive disorder issues, including communication through five kinds of online media: Websites, YouTube, applications, Facebook, and Twitter. The analysis was categorized as follows:

1) The analysis of the 5 formats of communication on depressive disorders through online media:

(1) A communication format for reporting incidents on the density of depressive disorders.

(2) A communication format for giving education, creating awareness, and providing health care methods.

(3) A communication format for consultation and listening to problems related to depressive disorders

(4) A communication format for recommending hospitals and institutions for depressive disorder treatment.

(5) A communication format for promoting information on medical treatments and guidelines for alleviating depression.

2) The analysis of five issues of depressive disorders communicated through social media.

(1) The content to report the density of depressive disorders

(2) The content to provide meanings of depressive disorders

(3) The content to indicate factors and causes of depressive disorders

(4) The content to create awareness, provide health care methods, and prevention of depressive disorders

(5) The content to explain treatments for depressive disorders

3) The analysis of 5 methods for communicating depressive disorder issues through social media.

(1) A communication method for preventive depressive disorders via websites

(2) A communication method for preventive depressive disorders via YouTube

(3) A communication method for preventive depressive disorders via Applications

(4) A communication method for depression prevention via Facebook

(5) A communication method for depressive disorder prevention via Twitter

Moreover, after data analysis from in-depth interviews with 15 samples aged 20-65 years old, the researcher integrated the obtained information and presented it in descriptive statements to explain the phenomenon found in the qualitative research method, which led to major guidelines for further recommendations.

CHAPTER 4

RESEARCH FINDINGS

The findings of the research "Health Communication Innovations on Preventive Depressive Disorder Issues" are presented as follows:

Part 1 Forms and content of health communication on depression prevention issues through social media

Part 2 Methods for communicating health issues of depression prevention through social media

Part 3 The need of using LINE Official Account application as a depression preventive health-related communication

Part 4 Designing a LINE Official Account application tool that can be used to communicate preventive health issues of depression

Part 5 Test the LINE Official Account application tool that is used to communicate preventive health issues of depression

4.1 Format and Content of Communications on Depression Prevention via Social Media

Based on the study, it was found that the formats and content of communication on depression prevention through social media both domestic and international can be divided into 5 types as follows:

Type 1 Communication for reporting the prevalence of depression

Type 2 Communication to educate, raise awareness, and provide health care solutions

Type 3 Communication to offer counsel and to listen to problems about depression

Type 4 Communication for referrals to hospitals and institutions that provide treatment for depression

Type 5 Communication to provide information on treatment and reducing symptoms of depression

The formats and content of health communication on depression prevention via social media both domestically and internationally can be discussed by dividing social media into 5 types: Website, YouTube, Application, Facebook, and Twitter, as follows:

4.1.1 Format and Content of Communication via Website

From the study of types and content of preventive depressive disorder communication via websites both domestically and internationally, it was found that most of the websites contained information about reporting the prevalence of depression, including information that allows readers to learn the causes and factors that can cause depression. As well as providing information that focuses on creating an understanding and awareness. To make readers acknowledge the effects and prevention methods for depression. In particular, medical websites will feature protective content, treatment guidelines, and self-therapy. Moreover, the website also offers stress tests to measure stress levels and to screen for depression symptoms. It also provides detailed information in recommending the institute or hospital that offers treatment to the readers as well. From the results of the study on the types and content of depression prevention communication via website, I would like to discuss the results of the study divided into communication via websites within the country and those in foreign countries as follows:

Format and Content of Communication of Depression Prevention and Surveillance on Websites in Foreign Countries

The majority of the content that was presented was to report the prevalence of depression. Providing information on treatment and health care including educating readers on the subject, raising awareness, and providing additional health care methods in the form of articles, journals, research related to a depressive disorder that interested readers can study and gain knowledge. Also giving counsel and listening to problems regarding depression including referrals to hospitals and institutions that provide additional treatment for depression. The contents are divided as follows:

4.1.1.1 Websites for reporting on the prevalence of depression in foreign countries such as the website of the World Mental Health Organization and the website of the National Institute of Mental Health, etc.

World Mental Health Organization Website

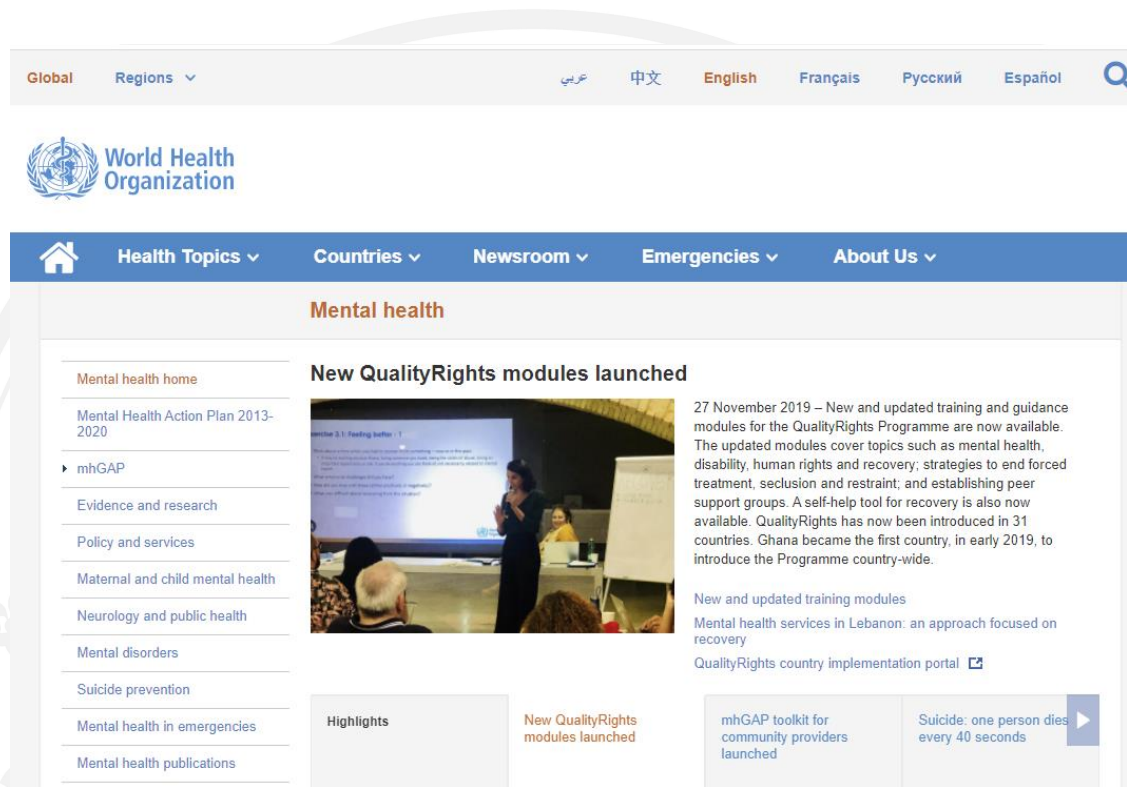


Figure 4.1 World Mental Health Organization Website Page

World Mental Health Organization website is the website of the United Nations on International Public Health. To assist and provide health care services to countries around the world. To promote and coordinate international scientific research on a variety of health issues and serves to reduce symptoms that cannot be cured as well as sharing knowledge, raising awareness on mental health illness issues around the world. Including efforts to strengthen networks to promote the prevention of mental health problems by creating access to mental health services for people around the world. Especially third world countries to make mental health care an accessible treatment. Its target audience is the global population with an interest in mental health.

The Study of Communication Patterns on the World Mental Health Organization Website

The web page has a simple, uncomplicated layout, no graphics, no animated characters. Within the site consists of a menu layout and pictures that help convey meaning. The color of the page and font colors are neutral colors. The menu layout color is light blue, the base color is white and the font color is black. Overall, it is in a neutral color group that looks comfortable on the eyes and makes the information look reliable. There is a navigation system that helps users find the information they need quickly. It is organized by content-based structure and by user-based structure. The layout of the website focuses on presenting the content that readers want to focus on. Most of them are articles, research, and education on depression. The top header of the website page is the name and logo of the website, followed by the menu layout with a simple single-layer layout which is easy to choose to select from the variety of pieces of information, which is suitable for websites where the content is not complicated; the main menu layout consists of topics such as Welcome, About, Treatment, Services, First Visit, Contact us, chronologically. These topics will serve as link points to other pages to contents. Each topic has different content formats as follows:

- 1) Health Topic is a menu that consists of various sub-topics. The sub-topics are sections that serve as link points to other pages such as Data, Fact sheets, Facts in pictures, Publications, Questions & answers regarding depression in the formats of a research database, publication, questions and answers, academic knowledge, etc.

- 2) Countries is a menu about health situation reports from the Ministry of Health from various countries. Inside consists of sub-headings that are lists of foreign countries around the world. It is arranged in alphabetical order to make it easier and more convenient for users to search

- 3) Newsroom is a menu reporting top news on health issues which are Featured news, Featured health topics, Emergencies, Events. This subheading serves as a link point to other content pages. Readers will find needed content and also has readability from the images or graphics on the website. Through

presenting health news that is outstanding as breaking news, up-to-date news, and including news about health services from around the world

4) About Us is a menu about history, which is what most users expect when they visit the site, such as information about the company, product details, news progress, most asked and answered questions, corporate governance organization, organizational structure, and including contact channels which are About WHO, About Us, Contact us, Governance, Leadership, Organizational structure, Programs and clusters WHO

The Study of Information Regarding Depressive Disorder on the World Mental Health Organization Website

Content is divided as follows:

1) The content of the situation report on the prevalence of depression: the purposes of presenting content are divided as follows:

(1) To present the situation of depression such as the amount of prevalence of depression, numbers of patients in children, adolescents, working age and the elderly patients, numbers of people at risk of illness and the global suicide rate, etc. All to aid medical organizations in preparation in dealing with depression-related problems more effectively.

(2) To report numbers of global access to mental health services, e.g. reporting estimates of the number of people receiving treatment and the estimated number of people who have not received treatment but are suffering from depression, etc.

2) The content of meaning of depression: the purposes of presenting content are divided as follows:

(1) To provide definitions of depression, such as explaining in detail what depression is caused by, what malfunction was it stemmed from and what is the severity level and how many levels are they divided into.

(2) To report the types of depression such as how many types of depression there are and what are the symptoms of each type, what behaviors have changed from the original etc.

(3) To describe symptoms of depression, and present the content on details of the symptoms and what the symptoms are, including the changes that follow.

3) The content on factors and causes of depression: To clarify the factors and illustrate the causes that cause depression such as genetic factors, family factors, and biological factors. Interestingly, the cause of depression was found to be related to a combination of aspects and without proper assistance, symptoms can become so severe that depressive disorder is developed

4) The content to raise awareness and provide outlets to take care of your health and prevent depression: the purposes of presenting content are divided as follows:

(1) To provide methods for mental health care such as stress management methods, how to control emotions and how to relieve stress as a guideline for taking care of their mental health and being able to cope with health problems. Also, the use of knowledge gained to take care of the mental health of family members.

(2) To provide techniques for preventing depression such as techniques for self- mental health care, the solution to aid a person's escape from depression, etc.

5) Content on the treatment of depression: the purposes of presenting content are divided as follows:

(1) To provide information about treatment such as treatment methods, treatment model, recommendations of a treatment facility, etc.

(2) To recommend hospitals and institutions that provide treatment for depression, such as recommending hospitals, treatment sites, clinics that offer treatment and suggesting procedures to see a doctor, etc.

National Institute of Mental Health Website Page

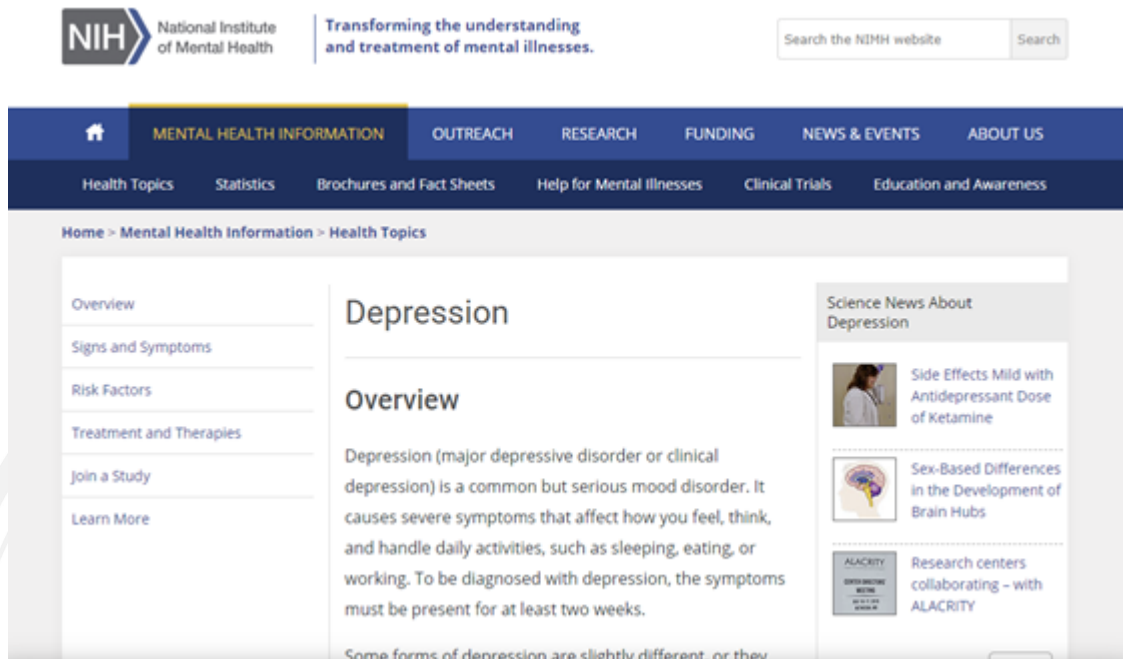


Figure 4.2 National Institute of Mental Health Website Page

National Institute of Mental Health website. The National Institute of Mental Health (NIMH) is the largest biomedical research agency in the world. The NIH is a part of the United States Department of Health and Human Services (HHS) which purpose is to create a website that transfers knowledge for depressive disorder prevention and treat the disorder. The website collects research and academic articles on mental health, neurology, and neuropsychiatry. It also houses knowledge that will help promote and rehabilitate people with mental health problems. Its target audience is generally, people who are interested in mental health issues. At the header of the website, the page is the main menu consisting of a range of topics: mental health information, health topics, statistics, brochures and factsheets, help for mental disorders, clinical trials, education and awareness, research, news, and activities, etc.

The study of communication types on the National Institute of Mental Health website. It has a simple, uncomplicated layout, no graphics, no animated characters. It contains menu layouts that help facilitate use. The page's color and font color are neutral colors. The menu layout color is dark blue and the base color is

white. The font color is black. And there is a navigation system that helps users find the information they need quickly. It is organized by the content-based structure, emphasizing the presentation of contents related to articles, researches, and knowledge about depression. The header of the website page is the Title or Logo of the website. There is a hierarchical menu layout that is suitable for websites with complex information. The contents are divided into different sections, for example, the menu layout is divided into 2 layers; the top layer is the main topics that the website wants to present, namely Mental Health Information, Outreach, Research, Funding, News & Events, About NIMH, chronologically. Whereas there is a menu map that is a sub-menu that the website also presents but does not focus on such as About the Director, Advisory Boards, and Groups, Strategic Plan, Offices, and Divisions, Budget, Careers at NIMH, Staff Directories, Getting to NIMH in chronological order. And within each topic, there are different content formats as follows:

- 1) Mental Health Information consists of topics such as Health Topics, Statistics, Brochures, and Fact Sheets, Help for Mental, Illnesses, Clinical Trials, Education, and Awareness. The main purpose is to share information on mental health, statistics of the illness, leaflets, and information for schizophrenia, clinical trials, education and awareness, and all aspects of depressive disorder in the form of documentary articles on mental health, research database publication, questions and answers, academic knowledge library, etc.

- 2) Outreach consists of topics such as Stakeholder Engagement, Outreach Partnership Program, Alliance for Research Progress, Coalition for Research Progress, and Legislative Activities. Mainly focusing on reporting, sharing knowledge, and cooperation for advances in the research process

- 3) Research consists of topics including Research Funded by NIMH and Research Conducted at NIMH (Intramural Research Program). Mainly focusing on research grants by NIMH to improve the understanding and treatment of diseases and research projects that are conducted within.

- 4) Funding consists of topics such as Opportunities & Announcements, Funding Strategy for Grants, Application Process, Managing Grants, Clinical Research, Training, Small Business Research, with a focus on National

Institutes of Mental Health funding. Users can find opportunities to apply for fellowships related to clinical research and training to increase their learning ability

5) News & Events consists of topics such as Science News, Meetings and Events, Multimedia, Social Media, Press Resources, Newsletters, and NIMH News Feeds which focus on press releases, events, science news, conferences, social media, newsletters, news feeds, etc.

6) About NIMH is a menu about the background, such as information about the National Institute of Mental Health (NIMH), corporate governance, organizational structure, contact outlet, and collaborations. Which contains sub-topics as follows: About the Director, Advisory Boards and Groups, Strategic Plan, Offices and Divisions, Budget, Careers at NIMH Staff Directories Getting to NIMH.

The study of information regarding depression prevention on the National Institute of Mental Health website.

Content is divided as follows:

1) The content of the situation report on the prevalence of depression the content presentation purposes are divided as follows:

(1) To present the situation of depression, such as the amount of depression prevalence, the number of patients, the number of people at risk, the suicide rate to aid medical organizations to prepare to deal with depression more effectively.

(2) To report on the number of global access to mental health services, e.g. to report the number of people receiving treatment and the number of people who have not received treatment but are suffering from the illness, etc.

2) The content of the meaning of depression the content presentation purposes are divided as follows:

(1) To provide definitions of depression, for example, describe in detail what depression is, caused from what malfunction, the level of severity, and how they many levels are they divided into.

(2) To report the types of depression, such as how many types of depression there are, what are the symptoms of each type, which behavior has changed from the original, etc.

(3) To describe the symptoms of depression by presenting the content about descriptive details of the symptoms and how they are, including what kind of changes will occur.

3) Content on factors and causes of depression: To clarify the factors and causes, such as heredity, family, or biological factors. The cause of depression is related to many aspects, without help, symptoms can become so severe that they can turn into depressive disorder.

4) Awareness-raising content: To provide ways to take care of your health and prevent depression. The content presentation purposes are divided as follows:

(1) To provide methods for mental health care, including stress management methods, how to control emotions, how to relieve stress as a guideline to take care of their mental health and be able to cope with problems. Moreover, this knowledge gained can be used to take care of the mental health of family members as well.

(2) To provide techniques for preventing depression such as mental health care techniques, solutions, and recovery tips from depression

4.1.1.2 A Website for Educating Raising Awareness and Providing Health Care Solutions such as the Health Website and the Psychiatric Times Website

Health.com Website

The screenshot shows the Health.com website interface. At the top left is the 'Health' logo with a hamburger menu icon. To the right are links for 'Your Account', 'Login', and 'Sweepstakes'. The main content area displays search results for 'Depression', showing '330 Results'. Two featured articles are visible: '17 Ways to Avoid Depression Relapse' with a sub-headline 'Recovering from depression? The thought of a relapse can be scary. But there are steps you can take to avoid a depression relapse in the future.' and 'Treating Depression Can Help to Heal Your Heart' with a sub-headline 'Treating depression will start your heart on the mend too.' At the bottom, there is a cookie consent banner with the text: 'When you visit this site, it may store or retrieve information on your browser, mostly in the form of cookies. Cookies collect information about your preferences and your device and are used to make the site work as you expect it to, to understand how you interact with the site, and to show advertisements that are targeted to your interests. You can find out more and change our default settings by clicking here. [List of Partners \(vendors\)](#)' and buttons for 'Cookies Settings' and 'Accept Cookies'.

Figure 4.3 Health.com Website

Health.com Website. This site is created by editors and journalists reporting on health and reliable medical information. It provides up-to-date news and useful information by presenting health information; contains in-depth medical content from experts and news reports on the incidence of various diseases including various health problems. The highlight of this website is that it helps raise awareness for everyone regarding the impact of deteriorating health problems. Providing information that makes readers more aware of the importance of taking care of their health. Focusing on content that helps solve problems for those who are stressed, anxious, looking for a way out in their lives. And for those who are facing health problems, to help those readers take care of their health and those around them. At the header of the page, there is a main menu consisting of topics such as health, news, diet, weight loss, beauty, exercise, lifestyle, and newsletters, etc.

The study of communication patterns on the Health.com Website

The web page has a simple, uncomplicated layout. No animated graphics or characters. The web page contains a menu layout that helps facilitate the usage. Besides, some pictures help convey the meaning of the content. The color of the page and the color of the text are neutral colors. The color of the menu layout is white. The base color is white and the font color is black. There is a navigation system that helps users find the information they need quickly and not get confused. The webpage is organized by content-based structure, and the header of the website in the left-hand corner shows an icon called Hamburger Icon leading to various menus that are hidden under the three visible dashes. And next is the name of the website and the right side is a blank space to enter search words. The menu layout consists of topics such as HEALTH A-ZNEWS, FOOD, WEIGHT LOSS, BEAUTY, FITNESS, LIFE, NEWSLETTER, Latest Content, chronologically. These topics are linked to other pages within the same topic, whereas the different content formats are as follows:

1) HEALTH A-ZNEWS contains various topics about health. The information is presented in alphabetical order, such as Anxiety, Cholesterol, Chronic Pain, Depression, Eye Health, Heart Disease, etc., which makes it easy to search for health issues according to interests. Each topic is linked to the next page that contains contents of that topic; in the form of papers, articles on mental health, research, questions, and answers, etc.

2) FOOD, WEIGHT LOSS, BEAUTY, FITNESS is a menu about food recommendations according to nutrition principles emphasizing health care, recommendations for weight loss guidelines, shape care, exercise, and beauty. With the website format that emphasizes images and focused content to show both comprehensive contents with relating visuals. This allows the reader to get both the content that they want to learn, as well as staying interested.

3) LIFE is a menu about health care for the body and mind, focusing on everything from exercising and nutrition to travel and technology. And including finding the right health insurance plan to support your lifestyle so that you can live a quality life.

4) NEWSLETTER is a menu that features the latest health trends, diet tips, exercise videos, fitness challenges, and more, including press releases and outlets of contact, etc.

The study of information regarding depression prevention on the Health.com website

The content is divided into 3 main themes, as the situation report on the prevalence of depression, raising awareness, providing ways to take care of your health and prevent depressive symptoms, and the treatment of depression. The content of each theme has different details as follows:

1) The content of the situation report on the prevalence of depression It presents the content of the overview depressive disorder situation and prevalence of depression to report on the overview situation of depression, such as the amount of depression prevalence, the number of patients, the number of people at risk, the illness tendencies, and suicide rates, etc.

2) Awareness-raising content, providing ways to take care of your health and preventing depressive symptoms and the treatment of depression contents The purpose of presenting contents are divided as follows:

(1) To provide information on how to take care of one's mental health, including how to deal with stress, how to control emotions, how to relieve stress, how to manage to suffer, ways to relieve stress, guidelines for taking care of your mental health, etc. This is a guideline to take care of your mental health so that you are not susceptible to stress and to be able to cope with health problems that can arise. The information is also applicable knowledge that can be used to take care of the mental health of those close to you and your family members.

(2) To provide information on dealing with depression, such as introducing techniques and tips for self-care, avoiding the tendencies that cause depression, self-help to reduce stress which is the source of depression, etc.

3) Content on the treatment of depression the purpose of presenting content are divided as follows:

(1) To provide information about treatment such as treatment methods, therapeutic model, recommendation of treatment institutions, etc.

(2) To recommend hospitals and institutions that provide treatment for depression and suggestions for ways to see doctors, recommending doctors, psychologists with expertise in treatment as well as suggesting channels for consultations, etc.

Psychiatric Times Website

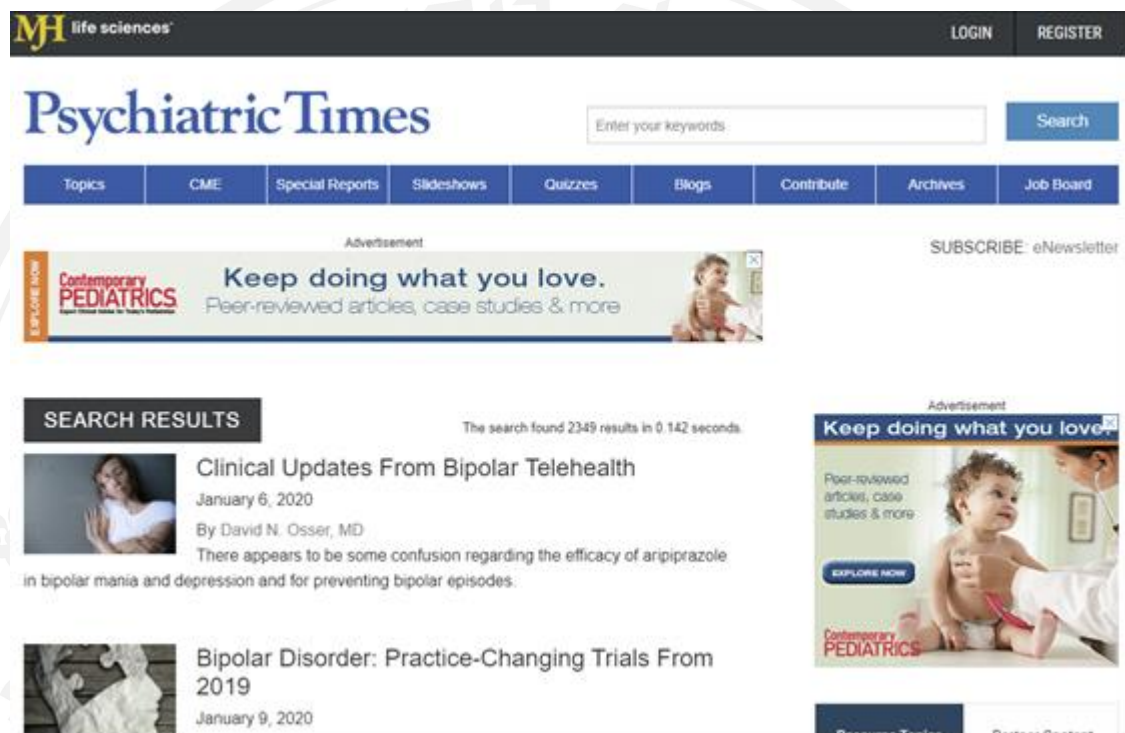


Figure 4.4 Psychiatric Times Website Page

The Psychiatric Times website is owned by a major private medical company specializing in psychiatry in the United States. The site has a unique way of providing content on psychiatric disorders and mental health problems. It also provides a report on psychiatry, depression treatment, prevention tips, and up-to-date new researches and new articles regarding psychiatric disorders that include the care of psychiatric patients from primary care physicians and also specialists that diagnose and assist with the treatment. There are also specialists available for consultation, providing advice and guidance on health care. The website has attracted millions of readers, including patients and people with health problems. The header of the website has a main menu with topics such as special reports, mental health quizzes,

knowledge blogs, slideshows, and the 2020 Psychiatry newsletter archive among others.

The study of communication patterns on the Psychiatric Times website

The web page has a simple layout, no graphics, no animated characters.

The web page contains menu layouts that are easy to use and images that help convey the meaning of the content. The page and font color are neutral colors. The menu layout color is dark blue. The base color is white and the font color is dark grey. There is a navigation system that allows users to find the information they need quickly. The website is organized by content-based structure and at the top header of the website in the left-hand corner is the name and logo of the website. Next to it on the right is a space for a typing search query. And next to it is a menu layout consisting of topics such as Topics, CME, Special Reports, Slideshows, Quizzes, Blogs, Contribute, Archives, Job Board, chronologically. These topics are linked to the other pages. Within each topic, the content formats are as follows:

1) Topics consist of various topics about health by presenting the data in alphabetical order. Makes it easy to find health issues according to interest. And each topic will have a link directing to the page of contents that you want to go next, in the form of articles on mental health, research, questions, and answers, etc.

2) CME (Continuing Medical Education) is a menu about information centers for continuing medical education, in the form of articles, research on managing depression, care, and protection, etc.

3) Special Reports is a menu for contextual reporting of social dimensions, the culture and psychology of psychiatrists' care for managing psychiatric symptoms.

4) Slideshows are about slideshows and presentations that feature articles related to the treatment of depression. special report on psychiatry, psychiatric problems in elderly patients and depression tests, etc.

5) Quizzes is a menu of Q&A and quizzes about health issues.

6) Blogs is a blog menu and columns that are dedicated to discussing issues in the field of psychiatry and features comments expressed by bloggers.

7) Contribute is a menu about the history, information of the founding of the site, visions, corporate mission, events collection, etc.

8) Archives is a menu about the presentation of the website's work, such as published articles and published research.

9) Job Board is a menu that is a link to other pages about job advice related to psychiatrists, psychologists, medical professionals, academics in psychiatry, etc.

The study of information regarding depression prevention on the Psychiatric Times website.

Content is divided as follows:

1) The content of the situation report on the prevalence of depression the purpose of presenting content is divided as follows:

(1) To present the situation of depression, such as the number of patients in children, adolescents, working age and the elderly, the number of people at risk and suicide rates, etc.

(2) To report the number of access to mental health services in Thailand, such as to report the estimated number of people receiving treatment and the estimated number of people who have not received treatment but are ill. To serve as a database for developing plans for the mental health service system to reach as many people as possible

2) Awareness-raising content for health care and prevention of depression the purpose of presenting content is divided as follows:

(1) To provide information on how to take care of one's mental health, including how to deal with stress, how to control emotions, how to relieve stress, how to manage to suffer, ways to relieve stress, guidelines for taking care of your mental health, etc. Also, a guideline to take care of your mental health so that you are not susceptible to stress and to be able to cope with health problems that can arise. The information is also applicable knowledge that can be used to take care of the mental health of those close to you and your family members.

Health care consultation and hearing websites such as Richardson Psychiatric Associates website and NetDoctor website

The format and content of the website for preventive depressive disorder communication is a website for health care counseling and consulting problems for treatment and reducing of symptoms of depression. The website contains content about consulting services and serves as a friend to talk to, to help people. The content on the site is in an easy-to-understand language. Provides content that covers all aspects of physical and mental health. Ready to serve as a listener, discussions of problems, and provide close attention to the members of the website. The aim of the website is also to assist, provide support for people with health problems with a team of doctors, psychologists, who are ready to take part in helping improve the quality of life of members for their better physical and mental health, etc. Throughout the website, each one has the following components:

Richardson Psychiatric Associates Website



Figure 4.5 Richardson Psychiatric Associates Website

The Richardson Psychiatric Associates website is primarily a website for mental health services and care. Focusing on treating psychiatric patients and committed to providing good treatment in a convenient, private environment

according to customer needs. There are also one-on-one consultations with trained therapists that are safe, attentive, and confidential by highly competent doctors available. At the website's header, there is a main menu that consists of a range of topics: drug management, counseling, consumption, one-on-one individual counseling with a caring trained therapist in a confidential and understanding environment, and also psychiatric assessments to diagnose emotional behavioral conditions, etc.

The study of communication types on the Richardson Psychiatric Associates website

The web page has a simple layout, no graphics, no animated characters. The website has a background of white flowers in a green field and has a menu layout that helps convey the meanings of the content. The color of the page and the color of the text are neutral colors. The color of the menu layout is dark blue. The base color is white and the font color is dark blue. At the top header of the website is the name and logo of the website. Next to it on the right is a space for a typing search query. The next layer is a menu layout that has a simple layout that is easy to choose to access a variety of information. Suitable for websites where the content is not complicated. The main menu layout consisting of topics: Welcome, About, Treatment, Services, First Visit, Contact us, chronologically. Within each topic, there are different content formats as follows:

- 1) Welcome is a menu introducing the services of the website and emphasizing offering psychiatric treatment for outpatients, including adults, adolescents, children, etc.

- 2) It is a menu about histories such as information about the team, office, details of work and including corporate information and contact channels which contains sub-topics such as Our team, Office, Testimonials, etc.

- 3) Treatment is a menu about recommending treatments and treat diseases such as anxiety problems, neurodevelopment problems, schizophrenia, and other psychotic disorders, etc.

- 4) Service is a menu about the form of service, treatment methods, and medication management. The purpose of administering medication is to prescribe medications to treat psychiatric disorders such as depression and introducing the model of the consulting process, etc.

5) First Visit is a menu about visiting the website. Appointment recommendations, procedures for receiving treatment and booking an appointment, etc.

6) Contact us is a menu about history, company information, corporate governance, organizational structure, contact channels, address, telephone number, opening hours, and travel suggestions. It contains sub-topics such as Richardson Psychiatric Associates, Office Hours, Additional Information, Additional Location Information, etc.

The study of information regarding depression prevention on the Richardson Psychiatric Associates website.

An emphasis is on the content on the treatment of depressive disorder as follows:

1) Content on the treatment of depression the purpose of presenting content are divided as follows:

(1) To provide information about treatment such as treatment methods, therapeutic model, the recommendation for treatment facilities and form of consulting, etc.

(2) To provide information about medications used in the treatment of depression, such as how many types of medications are there, which of them are available, recommendation of which medications are suitable for depression in children, adolescence, working-age, the elderly, etc., and to educate about the side effects that can be seen from the medications. For readers to learn the information and recognize their symptoms after taking the medications, it helps the reader to have more knowledge and have a better understanding of the medications.

NetDoctor Website Page



Figure 4.6 NetDoctor Website Page

The NetDoctor website is a collaboration between 250+UK and European physicians and healthcare professionals who believed that medical practice should be based on quality, compliance, and standardized information equivalent to leading medical journals. The content of NetDoctor.co.uk apart from the education on self-care for patients and having a team of health professionals to answer questions and help address concerns for readers who are facing general health issues. Contents are distributed; the header of the website page is the main menu that contains topics such as mental health, healthy eating, family health, services and medications for treatment, etc.

The study of communication patterns on the NetDoctor website

The page has a layout where the entire page is filled with images, both graphics, and portraits. The layout focuses on beauty as the main focus with the content related. It is a layout that is popular for readers to get both the needd content as well as being readable, by using graphics and alternating between cartoon and real portraits of people to draw more attention. There is a menu layout that helps convey the meaning of the content. The font color is neutral colors. The menu panel color is

dark blue. And the font color is white. The top header uses a cloud image in a blue background and at the center of the page is the name of the website with yellow text on a bright blue background to make it look more interesting. Next to it is a menu layout that has a simple single-layer layout. The far left corner of the menu displays a Hamburger Icon in graphical form to link to various menus. These include Conditions, Healthy Living, Healthy Eating, Medicines, Privacy Notice, Cookies Policy. These topics are hidden by three dashes and the right side of the menu layout contains a magnifying glass icon for typing in a search query. The main menu layout contains the topics: Mental health, Healthy Eating, Family health, Conditions, Follow, chronologically. Also below the website are images of psychologists for further introduction to those interested. And within the menu layout, there are different contents as follows:

- 1) Mental health is a menu that introduces mental health care and how to deal with anxiety including problem-solving skills, etc.
- 2) Healthy Eating is a menu about healthy eating information and advice.
- 3) Family health is a menu about health care advice for family members.
- 4) Conditions is a menu about medical and diagnostic information for the most common chronic and acute diseases from experts.
- 5) Follow is a menu introducing channels to follow the news of the web.

The study of information regarding depression prevention on the NetDoctor website

It was found that the content was presented specifically to provide information on the treatment of depression. The content has different details as follows:

Content on the treatment of depressive disorder This is an overview of the content to present methods for treating depression. The purposes are to provide information about the treatment, such as treatment methods, therapeutic model, recommendations of treatment facilities, recommendations of hospitals and institutions that provide treatment as well as suggesting ways to see a doctor, etc.

In short, the format and content of health care counseling and listening to problems to treat and reduce depressive disorder contain content related to health and wellness. It is a resource for depression and various psychiatric disorders, including physical health illness with a team of doctors and experts to provide knowledge and give advice, care and preventative measures, management of depression, rehabilitation care, managing stress and anxiety, and facilitating doctor visits without going to the hospital. It is also an inquiry-and-consultation area and receives treatment with a private channel with psychologists. And provide suggestions for various health consulting services such as contacting a doctor, booking an appointment, consulting problems without having to go to the hospital. There is also a presentation of content about health, both physical and mental health, articles and research to educate about health, healthy food choices, health and beauty tips, various products related to enhancing health, etc.

4.1.1.3 Websites to Introduce Hospitals and Institutions that Provide Treatment for Depressive Disorders Infinity Hope Center Website and Health Care Global Website Page, etc.

Infinity Hope Center Website Page

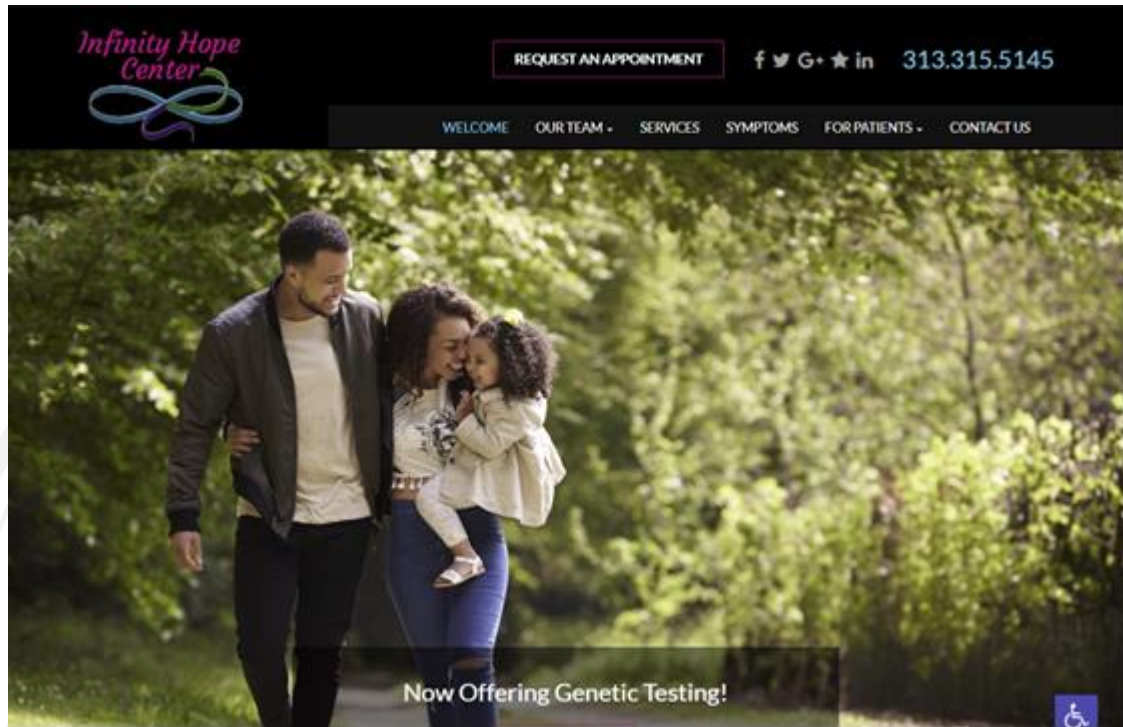


Figure 4.7 Infinity Hope Center Website

The Infinity Hope Center website is a service website of Dr. Thompson that aims to provide comprehensive mental health care services to help customers to have better health. The website offers content on referrals to physicians and alternative medicine for counseling and psychotherapy services in a variety of ways. It combines modern and traditional practices. At the header of the website page, menus are containing various topics such as team introduction, service introduction, details, and channels to contact the medical team, etc.

The study of communication patterns on the Infinity Hope Center website

The website page is formatted in such a way that most of the entire page is filled with images, graphics, and portraits. The layout focuses on beauty as the main focus with the content related. Allowing readers to acquire the content and enjoy the visuals at the same time. The website looks interesting by the use of graphic techniques to add color. The color of the web page is mainly black and the text color

is neutral colors. There is a menu panel that helps convey the meaning of the content. The menu color is black and the font color is white. The header on the top left corner is the name and logo of the website. The center is a space for a search query and the right corner is the contact number. Down from that is the main menu panel that has one simple layout that is commonly used. It includes topics such as Welcome Our, Team, Services, Symptoms for, Patients, Contact Us in chronological order. Also at the bottom are images of professional psychologists and availability for further guidance for those interested. And within the menu layout, there are different contents as follows:

- 1) Welcome Our is a menu about introductions.
- 2) Team is a menu about recommendations.
- 3) Service is a menu about the recommendations of mental health website services, such as medication services, short-term problem solving, therapy, counseling, comprehensive psychiatric evaluation, etc.
- 4) Symptoms For is a menu about how to take care of yourself, guidelines for self-care, guidelines for self-treatment, etc.
- 5) Patients is an educational menu for patients. It is a channel for contact and inquiries, questions and answers are provided. And reviews from people with direct experience, etc.
- 6) Contact Us is a menu for phone numbers and contact channels.

The study of information regarding depressive disorder on the Infinity Hope Center website.

It was found that content specific to the treatment of depression was presented with details as follows:

- 1) Content on the treatment of depression the purposes of presenting content are divided as follows:

- (1) To provide information about treatment such as treatment methods, therapeutic model, the recommendation for treatment facilities, etc.

- (2) To provide recommendations for hospitals and institutions that give treatment for depression, such as recommending services,

referring to treatment sites, treatment clinics and introduction to ways of contacting the medical team, etc.

Health Care Global Website Page

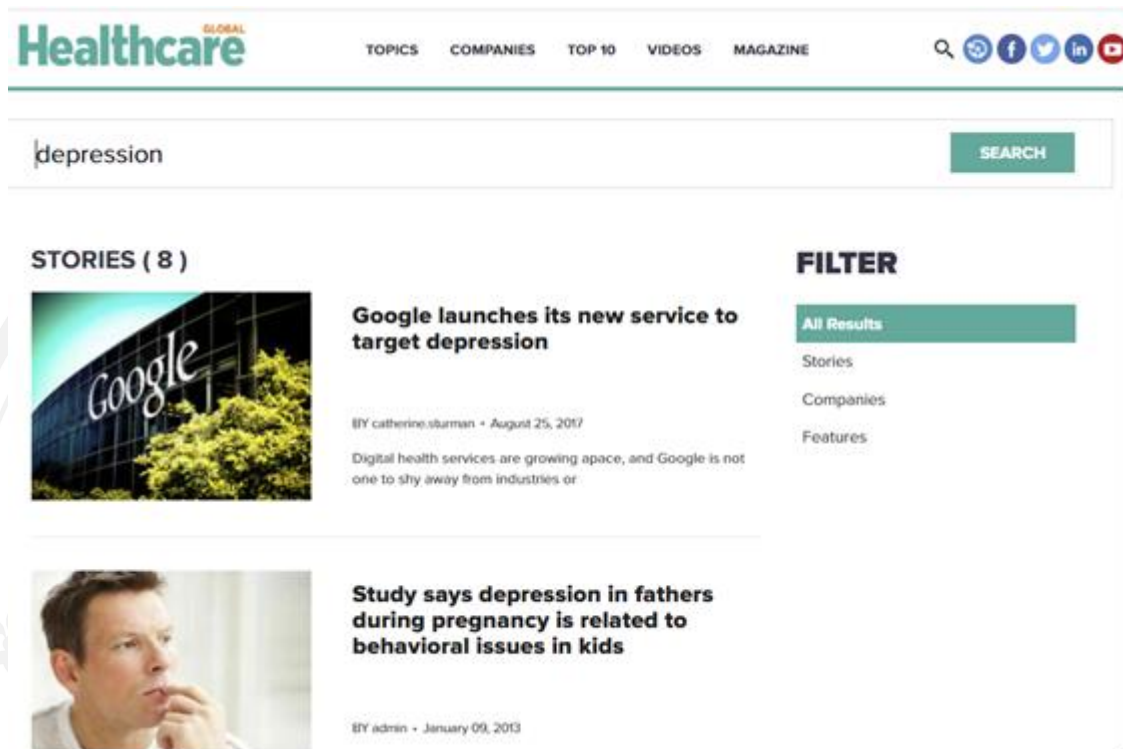


Figure 4.8 Health Care Global Website Page

Health care global website is a hub for health resources and innovative healthcare information that focuses on providing business executives with health information. The highlight is that the website layout is designed to be interactive for readers, giving the impression that they are entering the world of health care thoroughly and entertainingly. It also provides comprehensive insights into health issues; both physical health and mental health. Modern technology will play a role in promoting the good health of the readers. It also provides reliable health care information. The Healthcare Global website is committed to improving the format of healthcare to become more modern, not monotonous, and accessible to create an open dialogue with interactive readers. To help solve problems, help raise awareness, increase knowledge and understanding for readers to be able to take care of their

health and prevent health problems for themselves. At the header of the page, is the main menu with topics such as Global Healthcare, Magazines, Videos, Top 10 Events, Hospitals, Technology, Pharmacy, and Public Health, among others.

The study of communication patterns on the health care global website

The web page has a simple layout containing both graphics and portraits. The layout is to create a website that focuses on aesthetics combined with comprehensive content. Allowing readers to acquire content and enjoy the visuals at the same time. The color of the web page is mainly white and the text color is in neutral colors. There is a menu map that helps convey the content of the menu with white color and black font color. The header on the top left corner is the name and logo of the website. The right corner is a search query space. Followed by contact number and information. The middle section is the main menu panel with a simple, single-tier layout. It includes topics such as Topics, Companies, Top 10, Videos, Magazine, chronologically.

And within the menu layout, there are different contents as follows:

- 1) Topic is a menu that introduces important topics of the website such as hospitals, technology, pharmaceuticals, corporate sponsorships, public health news, including introductions to the team and work skills, etc.
- 2) Company is a menu about corporate identity, the organization, contact, advertising, press releases, etc.
- 3) Top 10 is a menu about what's on the top 10 topics such as top 10 interesting health news, top 10 health facts, top 10 trending news, top 10 largest hospitals, etc.
- 4) Video is a menu about the presentation of medical knowledge, health care guidelines, exercise methods, antidepressant treatment, healthy food choices suggestions, etc.
- 5) Magazine is a menu about magazine recommendations, articles on social issues health-wise, etc.

The study of the information regarding depression prevention on the Health Care Global website

It was found that the content was presented as follows:

Awareness-raising content and suggestive ways to take care of your health and prevent depression. Emphasis on providing information on how to take care of their mental health, suggest ways to solve problems when entering a stressful state, providing techniques on how to prevent depression, providing information on how to monitor the occurrence of depressive symptoms to help create awareness among readers to pay more attention to mental health care.

Website to provide information on treatment and help reduce depression, such as the Mayo Clinic website and the Compassion Mental Health website.

The format and content are to provide treatment information and help reduce depressive disorders. The website contains informational content and recommendations for treatment to reduce depression. The presentation is in an easy-to-understand language and provides comprehensive content about the treatment, therapeutic model. The aim of the website is also to assist, provide care for people with health problems. There is a team of doctors, psychologists, to help treat patients to improve their mental health, etc. Within the website has the following content components:

Mayo Clinic Website Page

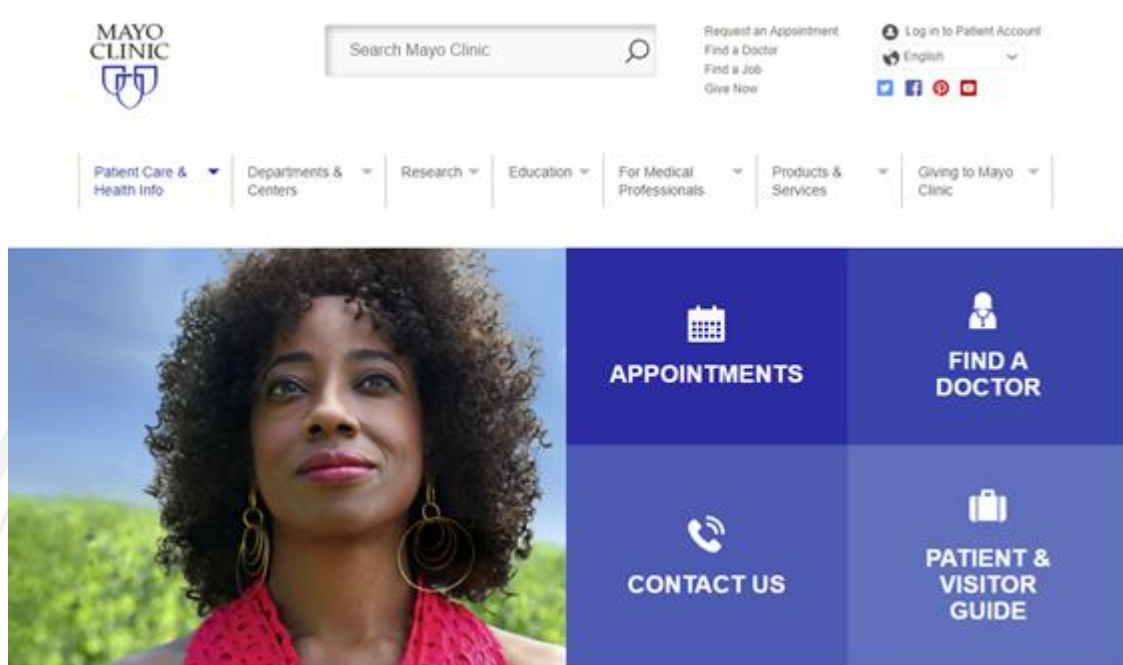


Figure 4.9 Mayo Clinic Website Page

The Mayo Clinic website is a non-profit organization committed to providing specialist care for anyone in need of treatment and care. The website's mission is to inspire hope and lead everyone to better health and well-being by providing the best health care solutions and mainly encourage information and content from a team of specialist doctors, psychologists, volunteers, and academics. The website's main value is that the needs of the patients always come first and that they are always ready to provide the best service and care to those who come to use the service to the best of their ability. It also encourages the patients to become healthier, have good mental health, and can return to society, and lead a normal and quality life. At the header of the page, there is a menu containing the main topics such as patient care and healthy lifestyle guidelines, medications and supplements, patient and visitor guide, online services, doctors and healthcare professionals, research centers, search queries, clinical Trials, training programs, and medical products, etc.

The study of communication patterns on the Mayo Clinic website

The web page has a simple layout containing both graphics and portraits. The layout is to create a website that focuses on aesthetics combined with comprehensive content. The color of the web page is mainly white and blue. The color of the text is neutral colors. There is a menu map that helps convey the meaning of the content which is in white. And the font color is black. The header on the top left corner is the name and logo of the website. The center is the search query space. The right side shows a contact number and other communication channels. Lower is the main menu panel that has a simple layout that is commonly seen. The topics include Patient Care & Health Info, Departments & Centers, Research, Education, For Medical Professionals, Products & Services, Giving to Mayo Clinic, chronologically. And within the menu layout, there are different contents as follows.

1) Patient Care & Health Info is a menu that introduces patient care information and health care which includes many topics including healthy lifestyle, tests and procedures appointments, patient and visitor guidelines, and patient online services. Each topic is laid out in alphabetical order to facilitate readers to find information quickly and easily.

2) Departments & Centers is a menu about information of doctors and healthcare professionals, medical departments and center, international services, Research & Program Center about Mayo Clinic, and contact information

3) Research is a menu for presenting research, search for clinical trials, research teams, medical magazines, and search for publications including training programs from this topic

4) Education is a menu that provides information on admission and tuition fees. And search programs for information on admissions and tuition fees.

5) For Medical Professionals It is a menu that introduces professional service from medical experts

6) Products & Services is a menu about health products and services of the website.

7) Giving to Mayo Clinic is a menu for asking for external support to help develop innovations effectively in patient care and increase the quality of research

The study of information regarding depression prevention on the Mayo Clinic website.

It was found that the content presented focuses on the treatment of depression with details as follows:

Content on the treatment of depression To provide information about treatment methods, therapeutic model, the recommendation for treatment facilities, patient care, and health information, etc.

Compassion Mental Health Website

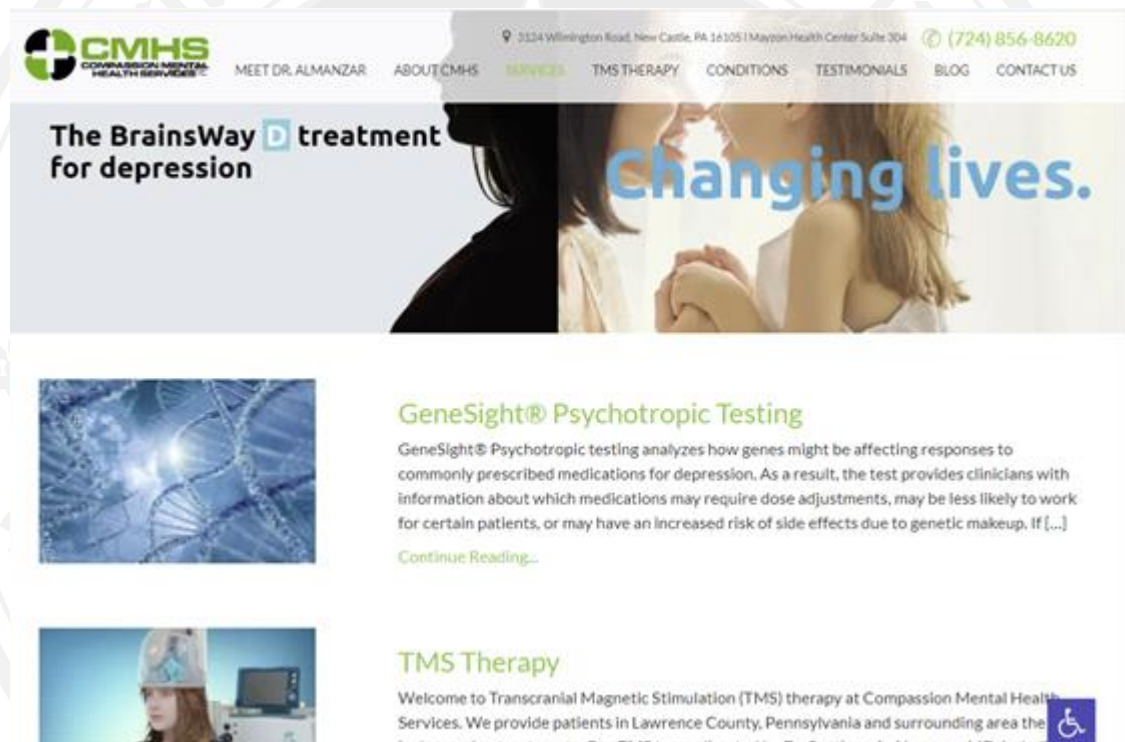


Figure 4.10 Compassion Mental Health Website

The Compassion Mental Health Website is Pennsylvania's leading mental health service website that provides comprehensive mental health care for teens, adults, and families. The CMHS website was created from the service shortages in the area of mental health as well as community concerns about the prevalence of mental health disorders. The problem is that most people with the disease go untreated because mental health services are not accessible to the community. The website, therefore, aims to focus on creating innovative services ranging from creating

inspiration, encouragement and can aid in finding solutions to prevent mental health problems. Including the prevention of depressive disorder, management of the disease, psychiatric evaluation, psychotherapy by a team of doctors with expertise in patient care with modern treatment methods. With the purpose to help restore mental health and help relieve symptoms associated with depression. Within the website page, the header of the page there is a main menu that contains topics such as psychiatric assessments, treatment services for children and adults, problems of intervention, medication management, treatment, and comprehensive psychiatric treatment, etc.

The study of communication patterns on the Compassion Mental Health website

Web pages are formatted in such a way that most of the entire page is filled with images, graphics, and portraits. The layout is to create a website that focuses primarily on aesthetics combined with comprehensive content. Allowing readers to acquire content and enjoy the visuals at the same time. Make the website more interesting by using graphic techniques to help with creating colors. The color of the web page is mainly black and the font color is neutral colors. There is a menu map that helps convey the meaning of the content with white color. And the font color is black. The header at the top left corner is the name and logo of the website. At the center is the main menu panel with a simple, single-tier layout that is commonly seen. It includes topics such as Meet DR. Almanzar, About CMHS, Service, TMS Therapy, Conditions, Testimonials, Blog and Contact us, chronologically. Also at the bottom are images of professional psychologists' pages that are ready to give further guidance to those interested. And within the menu layout, there are different contents as follows:

- 1) Meet DR. Almanzar is a menu that introduces Pennsylvania health care services (CMHS), a comprehensive introduction to mental health and family care.

- 2) About CMHS is an introduction to the history of the organization, mission, role of the Pennsylvania Mental Health Service Organization (CMHS) which provides a wide range of services ranging from prevention,

psychiatric assessments as well as ongoing management and medication administration.

3) Service is a menu to recommend the existing services of the organization, suggestion for service models that is suitable for each type of customer group, etc.

4) TMS Therapy is a menu about introducing therapeutic methods, therapy model, therapy techniques for patients with depression, etc.

5) Condition is a menu that offers additional health articles on depression, various mental health problems, managing and taking care of one's mental health, etc.

6) Testimonial is a menu featuring interviews and impressions from real experiences from users through the website.

7) Blog is a menu featuring a column of articles about depression written by a blogger on how to prevent and treat depression and mental health when facing symptoms of depression to educate and provide understanding to those who are interested

8) Contact us is a menu about contact channels, addresses, phone numbers, opening hours travel information, recommendations for nearby places, etc.

Based on the study of information regarding depressive disorder on the Compassion Mental Health website.

Content is divided as follows:

1) Awareness-raising content to provide ways to take care of your health and prevent depression. Emphasis is placed on providing information for surveillance of depression causes such as stress surveys, tests to screen for depression, and the suicide risk test including a survey of mood changes. All surveys are intended as a preliminary assessment of the level of stress and whether or not one is at risk of developing depression. And are they likely to kill themselves? To know the severity of depression and find solutions to reduce the problems that arise

2) Content on the treatment of depression This is an overview of the content on how to treat depression. Its purpose is to present content to provide information about therapies such as pediatric and adult treatment services, medication

management, therapeutics, and comprehensive psychiatric treatment, including methods of the treatment model, etc.

Forms and content of preventive communication regarding depressive disorder throughout websites in Thailand.

The study can be divided according to the purposes of creating a website as follows:

Websites to report the prevalence of depression, such as the Department of Mental Health website, the Health Promotion Foundation website, etc. They mainly present content in reporting the prevalence of depression. Providing information on medical treatment, including articles, journals, and research related to depression that interested persons can study and acquire knowledge. Recommendations of hospitals and institutions that provide treatment for depression and counseling for problems listening relating to depression, also to provide education with content, raising awareness and providing additional health care methods. Each website has different content components as follows:

Department of Mental Health Website

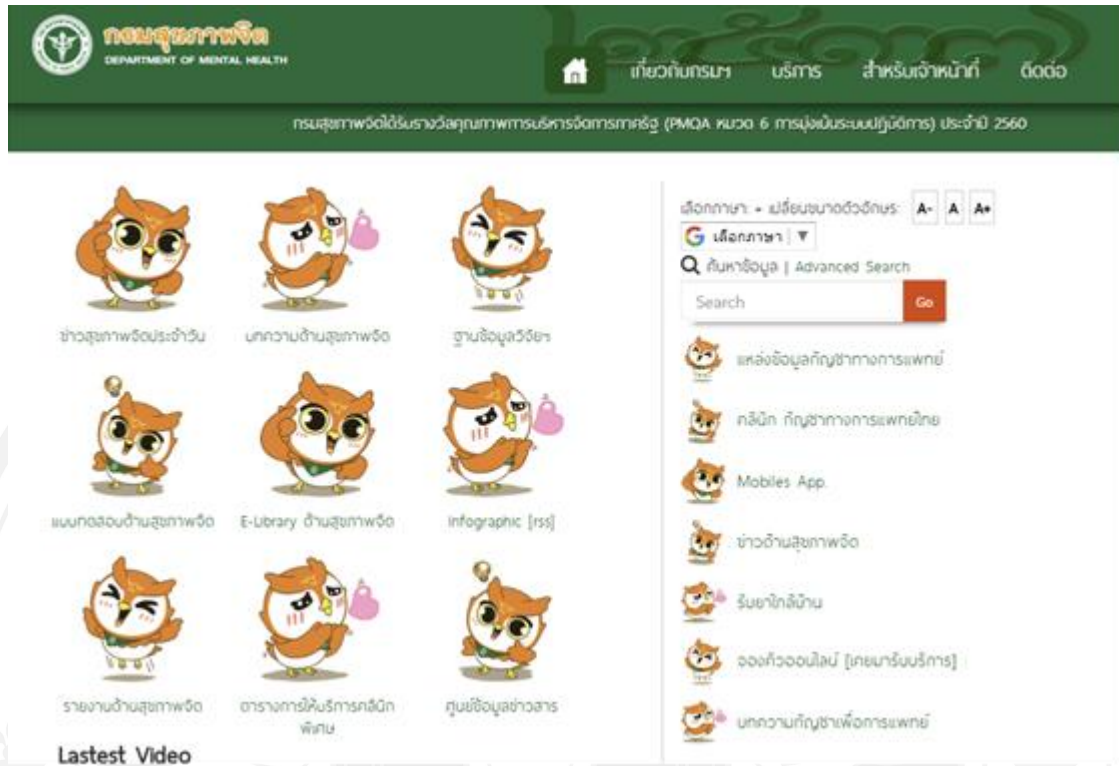


Figure 4.11 Department of Mental Health Website Page

Department of Mental Health website is a Thai website established by an agency under the Ministry of Public Health that has direct duties and responsibilities in the development of the country's mental health. The aim is to create a website for academic development, distribute knowledge, promotion of drug problem prevention technology, treatment, and rehabilitation. Also, including providing mental health services to patients with mental health problems. The target audience is generally people who are interested in both physical and mental health. At the header of the page is the main menu consisting of various topics such as news for the masses. daily mental health news, articles about mental health, research databases, mental health quizzes, E-Library on mental health, infographics, academic knowledge libraries, etc.

The study of communication patterns on the website of the Department of Mental Health

The web page has a layout where the entire page is filled with graphic images. The layout focuses on beauty as the main focus with the content covered. A cartoon owl is used as a total of 9 icons to represent the main menus on the website. Using graphic techniques to help create more color, allowing readers to acquire content and enjoy the visuals at the same time. The color of the web page's main color is dark green and the font color is neutral colors. There is a menu map that helps convey the meaning of the content, which is dark green with white font color. The header on the top left corner is the name and logo of the website. At the center is a menu layout, introducing the website with a simple layout that is commonly seen which consists of topics such as details about the department, services, for officers, contact, chronologically. And within the menu layout, there are different contents as follows.

- 1) About the department is a menu that introduces the history, a gathering of Department of Mental Health's policy, vision and mission, Department of Mental Health Values, organizational structure as well as the missions and responsibilities of the organization.

- 2) Service is a menu about service introduction of the Department of Mental Health, mobile application service, receiving complaints and recommendations, mental health quiz service, question and answer service on mental health problems, news reports/announcements/job applications, etc.

- 3) For officers It is a menu for officers, such as a corporate engagement assessment form. Behavior assessment form for compliance with the Code, etc.

- 4) Contact is a menu about providing travel instructions information, contact address, phone number, etc.

The owl icon that is the main menu is placed in the center of the page for a prominent, attractive, and engaging readership with the cuteness of the cartoon owl. It contains topics such as daily mental health news, mental health articles, research database, mental health quiz, Mental Health E-Library, and within the menu layout, there are different contents as follows:

- 1) Daily Mental Health News is a menu for presenting new mental health news every day.

2) Mental Health Articles is a menu for presenting articles, medical journals on depression and other schizophrenia disorders.

3) Research Database is a menu that features information, findings, and researches on depression

4) Mental Health Quiz is a menu for readers to take a stress assessment test to assess depression and suicide probability

5) Mental Health E-Library is a menu for providing knowledge with E-Books on mental health and psychiatry.

6) Infographic is a menu for public relations of the Department of Mental Health. An infographic is a cartoon image accompanying the content to make the information more interesting. This topic presents knowledge about depression, meaning, types, symptoms, treatment, etc.

7) Mental Health Report is a menu for reporting suicide rates, the prevalence of depression, problem reporting and troubleshooting system for depression and suicide, national death prevention reporting system, etc.

8) Service Schedule is a menu for presenting a schedule of mental health and psychiatric services within the agencies under the Department of Mental Health

9) Information Center is a menu for information services about mental health problems.

The study of information regarding depression prevention on the Department of Mental Health website

Content is divided as follows:

1) The content of the situation report on the prevalence of depression the purpose of presenting content can be divided as follows:

(1) To present the situation of depression, such as the amount of depression prevalence, number of patients, number of people at risk, and suicide rate to create awareness for Thai people to pay more attention to mental health care. And it can help medical organizations to have better preparation in dealing with depression problems more effectively.

(2) To report the number of access to mental health services in Thailand, such as to report the number of people receiving treatment and

the number of people who have not received treatment. The Department of Mental Health was a surveyor to develop a plan for the mental health service system of Thailand to increase accessibility to as many people as possible.

2) The content of the meaning of depression the purpose of presenting content can be divided as follows:

(1) To provide definitions of depression, for example, describe in detail what depression is, what causes it, and what are the severity levels, how many levels can it be divided to. For readers to understand the meaning of depression correctly and have more knowledge about depression

(2) To report the types of depression, such as how many types of depression there are and what are the symptoms of each type and is what behavior has changed from the beginning and how can we observe, provide definitions for each type and how the symptoms of each type of depression are different. For example; Major Depression is a disorder characterized by longer depressive moods. The patient will suffer depressive moods for over 2 weeks consecutively, they will have no interest in any activities.

Dysthymia Depression is less severe than the first type but is continually longer.

Bipolar disorder is when some people can experience depression. Depression alternating with a different mood or a polar opposite mood. This type of depression affects decision-making and often causes problems. Suicidal thoughts may occur during depressive episodes.

(3) To describe the symptoms of depression, how are they shown and how should you observe yourself and your family members. This aims for readers to have knowledge and understanding of the symptoms of depression and know the ways to observe yourself and those around you for a risk of depression.

3) Content on factors and causes of depression The purpose of presenting content is divided as follows:

To clarify various factors and tell the factors that cause depression, for example, identifying important factors related such as genetic factors, family factors, biological factors. However, the factor is caused by the relationship of

many aspects, both the person and the environment. People who face stressful situations such as unemployment, divorce, or neglect are more prone to depression.

4) Awareness-raising content Provide ways to take care of your health and prevent depression. The purpose of presenting content is divided as follows:

(1) To provide information on how to take care of one's mental health, including how to deal with stress, how to control emotions, how to relieve stress as a guideline for taking care of their mental health, to be able to cope with health problems that may arise. The knowledge gained can be used to take care of the mental health of those close to them and their family members.

(2) To provide information for surveillance of depressive symptoms such as stress surveys, tests to screen for depression, suicide risk tests. All surveys were intended to provide a preliminary assessment of the presence of stress. To examine yourself whether there is a risk of depression or not. Is there a tendency to kill yourself, to know the severity of depression, and find solutions for it?

(3) To provide information on techniques for preventing depression, such as prevention methods, how to take care of one's mental health, how to avoid causes of depression, countermeasures that lead to prevention, practice accepting what you have as both advantages and disadvantages to help you cope with frustrating and disappointing situations.

5) Content on the treatment of depression The purpose of presenting content can be divided as follows:

(1) To provide information about treatment such as treatment methods, therapeutic model recommendation of treatment facilities, etc.

(2) To recommend hospitals and institutions that provide treatment for depression, such as recommending hospitals, treatment sites, clinics that receive treatment recommend a psychologist as well as suggesting channels for consultations, etc.

(3) To provide information about medications used to treat depression, such as how many types are available, and which medications are appropriate for depression in each age group. To educate the readers about the side

effects that can be found in medications for the readers to know and have a better understanding.

Thai Health Promotion Foundation Website



Figure 4.12 Thai Health Promotion Foundation Website Page

The Thai Health Promotion Foundation (ThaiHealth) website is a Thai website to create a website for a public organization under the supervision of the Prime Minister. To be the main organization responsible for encouraging, motivating, and supporting along with the other agencies to promote health care. It is a source of health information and a channel for good health promotion encouraging Thai people to have good physical, mental, intellectual, and social health. Also to reduce the morbidity rate and premature death of Thai people. The target group is Thai people of all genders and ages. At the header of the page, there is a main menu that consists of topics such as news that generates happiness, health content, friends for well-being, happy media, announcements, getting to know Thaihealth, and happiness at the tip of the pen, etc. This website is very popular for people who are interested in articles, mental health news, and health tips. The website also has featured topics such as health information and happiness generating media, news articles, and video clips that

spark joy in people who are discouraged, awakening the strength within them. This also includes infographics as media to create knowledge about health, health care, raising awareness of self-health care, and other illness-related media that helps readers to be more aware of the ever-changing trend of healthcare. And also healthcare tips that are suitable for children, teenagers, working people, as well as the elderly. This makes it possible for anyone interested to research more about health issues from this website.

The study of communication patterns on the Thai Health Promotion Foundation website

The web page has a simple layout, the top of the page contains both graphics and portraits. The layout is to create a website that focuses on aesthetics combined with comprehensive content. The color of the web page is mainly white and blue. The color of the text is neutral colors. There is a menu map that helps convey the meaning of the content with the color green. The font color is white. The header on the top left corner is the name and logo of the website. The center is a search query space. The right side shows a contact number and other communication channels. At the bottom is the simple main menu layout that is commonly seen which consists of various topics: homepage, happy news, health content, friends for well-being, happy media, announcements, getting to know ThaiHealth, happiness at the tip of the pen, chronologically. And within the menu layout, there are different contents as follows.

- 1) Home page is the main menu for connecting to the website page.
- 2) Happy News is a menu for presenting health news and pictures of organized health activities.
- 3) Health content is a menu for presenting information on health trends, health care tips, health knowledge, etc.
- 4) Friends for well-being is a menu that presents the project information, storytelling, etc.
- 5) Happy media is a menu that presents multimedia, infographics, book recommendations, galleries, advertisement clips, radio spots, and health music, etc.

6) Announcement is a menu that presents information about capital announcements, procurement announcements, general announcements, etc.

7) Getting to know Thaihealth is a menu for introducing the organization, board report, order, contact information, information center, etc.

8) Happiness at the tip of the pen is a menu about presenting columns of articles written by bloggers, such as general health care that provides education and understanding to those who are interested

The study of information regarding depression prevention on the website of the Thai Health Promotion Foundation

Content is divided as follows:

1) Content on the meaning of depression. The purposes of presenting content are divided as follows:

(1) To provide definitions of depression, such as explaining in detail what depression is caused by, what malfunction does it stem from, what are the severity levels, how many levels can it be divided into? This is to help readers understand the meaning of depression correctly.

(2) To report the types of depression, such as how many types of depression there are and what are the symptoms of each type.

(3) To describe the symptoms of depression, what they are and how should be observed. And to provide readers with more knowledge about the symptoms of depression.

2) Content of factors and causes of depression: To present the content to various factors that affect the occurrence of depression and identify the cause of depression. To urge readers to know what triggers depression to be aware of the disease and avoid the risks.

3) Awareness-raising content: To provide ways to take care of your health and prevent depression. The purpose of presenting content is divided as follows:

(1) To provide information on how to take care of one's mental health, including how to deal with stress, ways to relieve stress, and guidelines for taking care of your physical, mental health, etc.

(2) To provide information on techniques for preventing depression, such as providing awareness-raising content, education on prevention, suggestive ways to help prevent it. And to provide techniques for preventing, how to take care of mental health for yourself and your family including avoiding the risk of causing depression.

A website to educate raise awareness and providing health care solutions. such as the Good Life Update website, the Health 2 Click website, and the Sanook.com website.

The format and content of preventive depressive disorder communication, surveillance through the educational website. Raising awareness and providing health care solutions. Most of the content is presented to educate, create an understanding, and help create awareness among readers about how to prevent it and know how to observe their physical health. The website also provides content on how to prevent and maintain one's health. Within each website has different content components as follows:

Good Life Update Website Page



Figure 4.13 Good Life Update Website Page

Good life update website is a Thai website created to be a source that keeps all quality lifestyle articles. At the header of the page, there will be the main menu consisting of topics related to health care such as happy eating, happy body, happy mind, dharma, recipes, healthy menus, exercise, inspiration, weight loss, love, merit-making, herbs, lifestyle and health tips, etc.

The study of communication patterns on the Good Life Update website

The web page has a simple, uncomplicated layout, no graphics, no animated characters. The web page contains menu layouts that are convenient to use. Page colors and text colors are neutral colors. The menu layout color is white and the base color is white. The font color is black and white. There is a navigation system that helps users find the information they need quickly. Organized by content-based structure. The header at the top of the page is a pink-purple consisting of the name and logo of the website, followed by another layer with a simple main menu layout that is commonly seen. Which consists of topics such as home page, lifestyle, happy

eating, healthy body, happy mind, shopping, online program, chronologically. Within each topic, there are content formats as follows:

1) Home page is the main page for introducing an overview of the website.

2) Lifestyle is a menu for introducing articles about love, married life, feelings that arise between two people, and good advice on love for a more stable life.

3) Happy eating is a menu for advice on how to eat and how to cook happily. It contains cooking tips, recipes, original menus, popular menu recipes, cooking clips, stores information, and promotions.

4) Healthy body is a menu that suggests ways to make your body happy, such as prevention and resistance to disease, health tips, exercise, healthy food, information on caring for the elderly, etc.

5) Happy mind is a menu for introducing happiness and increasing knowledge of Dharma to help solve daily problems with website tips

6) Shopping is a menu for selling mother and child books, health and beauty products, food and drinks, home furniture, electrical appliances, garden, and outdoor equipment, automotive, etc.

7) Online program is a menu for presenting all items within the website in the form of video clips, such as product reviews, auntie reviews, Cheewajit Kitchen, etc.

The study of information regarding depression prevention on the Good Life Update website.

The content is divided into two areas as follows:

1) Content on the meaning of depression The purposes of presenting content are divided as follows:

(1) To provide the meaning of depression, such as details of what depression is, what causes it, it, for readers to understand the correct meaning and have more knowledge about depression

(2) To report the types of depression, such as how many types of depression there are and what are the symptoms of each type, how and what can we observe from.

2) Awareness-raising content, to provide ways to take care of your health and prevent depression The purpose of presenting content can be divided as follows:

(1) To provide information on how to take care of one's mental health, including how to manage stress, how to control emotions, how to relieve stress as a guideline for mental health care for oneself and family.

(2) To provide information on techniques for preventing depression, such as providing techniques for preventing, suggestive ways to take care of mental health, solution and coping methods that ultimately leads to the prevention of depression.

Health 2 Click Website Page

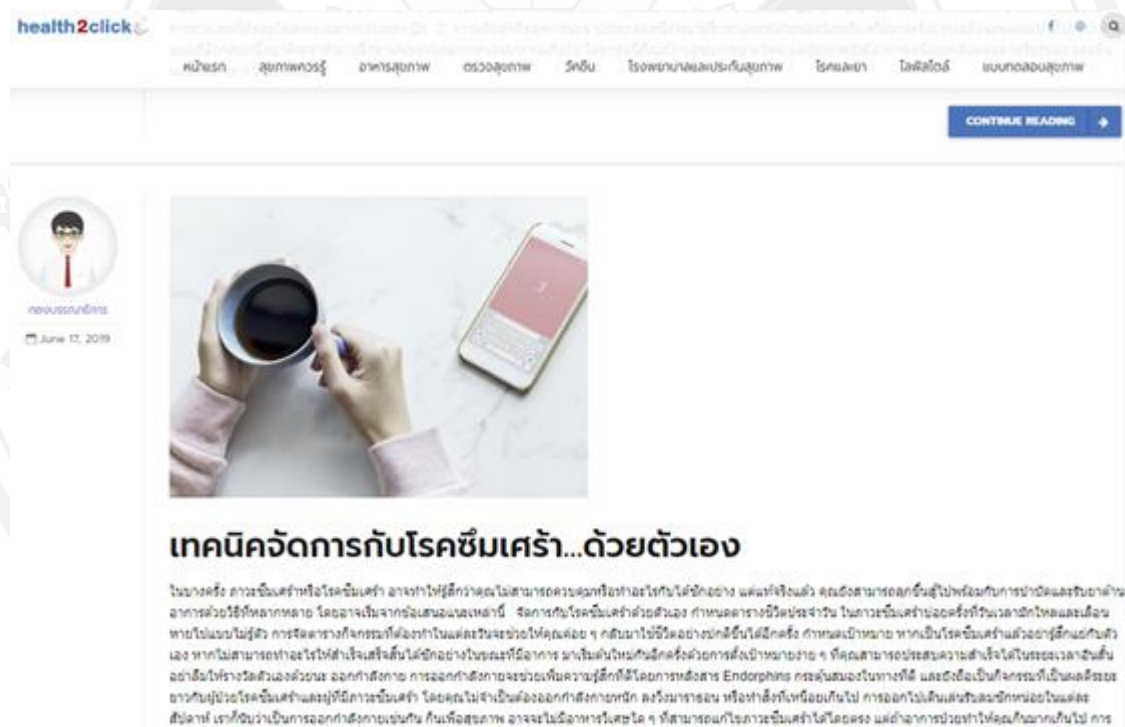


Figure 4.14 Health 2 Click Website Page

Health 2 click website is a Thai website aiming to be the center of knowledge of health care, lifestyle, disease prevention for working age. At the header of the page, there is a main menu consisting of various topics related to health care such as must-know health facts, health content, techniques on risk-reducing behavior,

exercise technique, professional health care, alternative medicine, wellness path, general health, women's health, men's health, mental health, herbs and alternative medicine, healthy food, nutritious eating, supplements and vitamins, health check-ups, health numbers calculations, vaccines, vaccines for working-age and elderly, hospitals and health insurance, hospital and innovation, life insurance and health insurance, diseases and drugs, search by symptoms, common diseases, medicines you should know, healthy lifestyle, join the health loving group and recreation, health quizzes, etc. Especially the health content topic that contains articles on health knowledge, techniques on risk-reducing behavior, professional health care, alternative medicine, wellness path are full of educational content regarding depressive disorder, for example, this article focuses on the warning signs of depression, techniques, and tips for dealing with depression yourself, health checks for working age. This allows readers to gain knowledge on how to take care of their health and know-how to observe their health and cope with the disease promptly.

The study of communication patterns on the Health2Click website

The web page has a simple, uncomplicated layout, no graphics, no animated characters. It contains menu layouts that help facilitate use. The color of the web page and the font color are neutral colors. The color of the menu layout is white. The base color is white. And the font color is black and white. There is a navigation system that helps users find the information they need quickly. Organized by content-based structure. At the top, the left corner of the website's header is the website's name and logo, while the top right corner is a magnifying glass icon for a search query. Next to it is the menu layout with a simple single-layer layout. It contains topics: Homepage, Health, Healthy Food, Health Check-ups, Vaccines, Hospital & Health Insurance, Disease & Medicine, Lifestyle, Health Quiz. chronologically. Within each topic, there are content formats as follows:

- 1) Home page is the main page for introducing an overview of the website.
- 2) Health is a menu that presents health issues such as knowledge of depression, techniques on risk-reducing behavior, exercise techniques, professional health care, etc.

3) Healthy food is a menu that recommends healthy food, suggestions on what to eat, etc.

4) Health Check-ups are a menu that recommends physical and mental health checks, calculates health numbers, etc.

5) Vaccine is a menu for recommendations of vaccines in working age, elderly and pediatric vaccines.

6) Hospital and Health insurance is a menu that recommends hospitals and health insurance, etc.

7) Diseases and Medicines is a menu for introduction to diseases and medicines, medicines you should know, etc.

8) Lifestyle is a menu for recommendations on healthy lifestyle, health conscious groups, etc.

9) Health Quiz is a menu that presents a health test and a mental health problem test, etc.

The study of information regarding depression prevention on the Health2Click website.

Content is divided as follows:

1) Awareness-raising content and to provide ways to take care of your health and prevent depression. The purpose of presenting content is divided as follows:

(1) To provide information on how to take care of one's mental health, including how to deal with stress, ways to relieve stress, guidelines for taking care of your physical, mental health, etc.

(2) To provide information on techniques of preventing depression, such as providing content that raises awareness, educate on prevention, provide information on how to take care of mental health for yourself and your family including avoiding the risk of causing depression

Sanook Dot Com Website



Figure 4.15 Sanook Dot com Website Page

Sanook.com website is a Thai website to create a website for business and marketing. There are different target audiences. At the header of the page, there is a main menu that consists of topics such as general news, entertainment news, cars, IT, games, sports, men, women, health, travel-eat, fortune-telling, and a variety of entertainment, especially a prominent column that discusses the health of all ages, such as "health" which features articles on health tips, physical health, mental-brain health, disease awareness, medicine knowledge, etc. With services that cover the subject matter and various services for internet users that everyone, regardless of age, gender, can access to study and research for information on health care from this website. Which can be viewed on both computers and mobile phones.

The study of communication patterns on the website Sanook.com

The web page has a complex layout. Within the web page, the top header is the name and logo of the website, and the center is a large advertising

branding graphic. And down at the bottom is a menu layout with a proper navigation system that helps users find the information they need quickly. The color of the page and text are neutral colors. The color of the menu layout is gray. The base color is white with black font color. Organized by content-based structure. The menu layout is laid out in a simple, single layer that is commonly seen. Which consists of topics such as recommended, news, entertainment news, cars, IT, games, sports, women, men, health, travel-eat, fortune telling, music, chronologically. Each topic has the following content formats:

1) Recommended is a menu for recommending stories worth reading, latest updates, recommended songs, Thai dramas - famous series video clips, etc.

2) News is a menu for introducing the latest news in the last 7 days, divided into subject categories such as crime, politics, foreign affairs, society, region, sports, economy, etc.

3) Entertainment news is a menu for presenting talk show news throughout the city, special scoops, news from yesterday and all entertainment news, etc.

4) Car is a menu for presenting news about cars, new car reviews, automotive tips, etc.

5) IT is a menu for presenting IT news, IT equipment, telephones, etc.

6) Game is a menu for introducing games, etc.

7) Sport is a menu for presenting the highlights of sports in the last 7 days.

8) Men is a menu for presenting about health, dressing, general issues about men, etc.

9) Women is a menu for presenting health, dressing, general issues about women, etc.

10) Health is a menu that presents physical health care, mental and brain health, disease awareness, medicine knowledge, etc.

11) Travel-Eat is a menu that recommends attractions, accommodations, restaurants, traveling abroad, etc.

12) Horoscope is a menu for presenting horoscopes, love horoscopes, predictions, greetings, etc.

13) Music is a menu for recommending new songs, updates and presenting artists of the week, etc.

The study of information regarding depression prevention on the sanook.com website

Content is divided as follows:

1) Content on the meaning of depression the purpose of presenting content can be divided as follows:

(1) To provide definitions of depression, for example, describe in detail what depression is, what causes it, and what is its severity. How many levels can it be divided into? The aim is to help readers understand the meaning of depression correctly and become more knowledgeable about depression

(2) To describe the symptoms of depression for example; describe what the symptoms are like, how is it expressed, how and when should you observe yourself and your family members.

2) Content on the treatment of depression. To provide information about treatment such as treatment methods, therapeutic model, how to take care of mental recovery, etc.

3) Websites that provide health care consultations and listens to problems such as Samaritans Thailand website, I strong website, and One Man Counselor website.

With the form and content for counseling in health care and listening to problems, inside contains content about services, consulting, becoming a listening companion on the phone. To help people enjoy life and help people who need spiritual support get back to normal. It is a gathering place for psychologists. and human development experts to provide both corporate and individual services and designing new mental health tools to increase the effectiveness of assistance. Within each website, there are different content as follows:

Samaritans Thailand Website

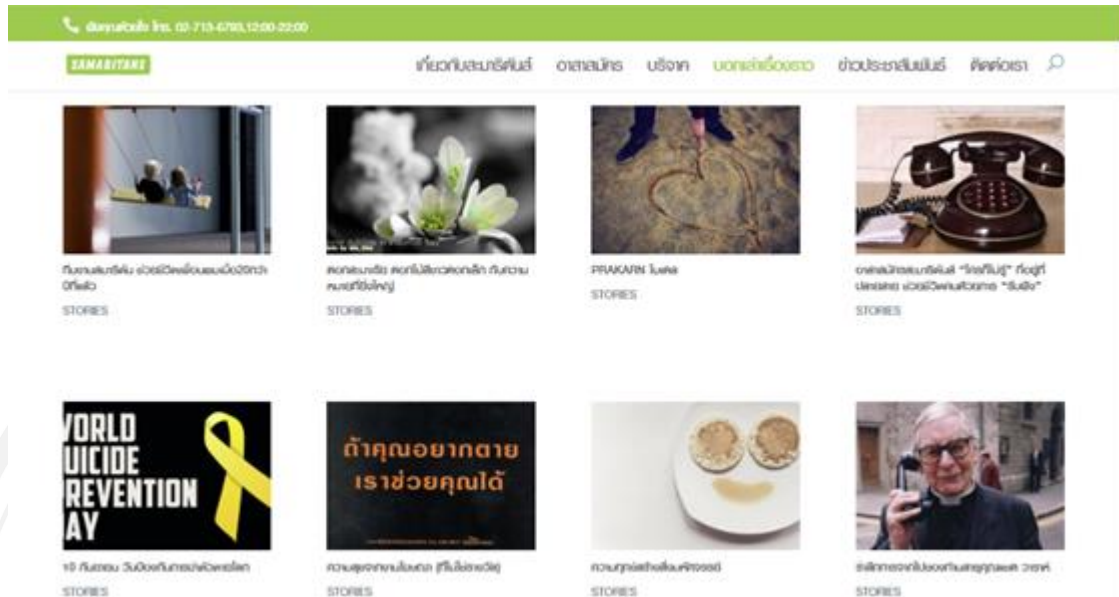


Figure 4.16 Samaritans Thailand Website Page

Samaritans Thailand website, the founder of the Samaritans was Rev. Chad Varah, who noticed that England at that time has many suicide occurrences. Whereas sometimes the cause of suicide is due to lack of understanding. Later on, it was found that these caregivers can be a listener and help relieve the suffering for those who come to them without having to be a licensed psychiatrist or psychologist. He had the idea of accepting volunteers for this role and has expanded to Samaritans centers around the world and has taken place in Thailand as well. This website offers a friendly chat service on the phone. The work is based on the principle that it is not related to any religion, philosophy, or political ideology, the main purpose is to prevent suicide. With volunteers such as psychiatrists, psychologists, celebrities, and actors taking turns performing duties without compensation and adhere to the service slogan "You can be a good listener, just listen with an open heart." At the header of the website page, there is a main menu consisting of topics: about Samaritans, volunteering, donating, storytelling, press releases and contact us, etc.

The study of communication patterns on the Samaritans Thailand website

The web page has a simple and uncomplicated layout, with images and graphics. The top left header of the page is the name and logo of the website. On the right side is a menu map. There is a navigation system that helps users find the information they need quickly. The menu layout color is green and the font color is white. The base color is white. Organized by content-based structure. The menu layout is arranged in a hierarchical row with topics such as Samaritans, volunteering, donating, storytelling, press release, and contact us. Which these topics will link to other content. Each topic has the following content formats:

- 1) About Samaritans is a menu for presenting the history of the organization.
- 2) Volunteer is a menu that presents what qualifications are needed to be a Samaritan volunteer.
- 3) Donate is a menu for encouraging donations to support the work of the organization
- 4) Storytelling is a menu that tells a story of encouragement and hope in the form of articles.
- 5) Press Release is a menu for presenting activities such as training sessions, workshops of Samaritans.
- 6) Contact us is a menu for information on contact channels, travel, phone numbers, etc.

The study of information regarding depression prevention on the Samaritans Thailand website.

It was found that the content was presented uniquely. Because it focuses on consulting problems and using listening to problems as the main way to alleviate suffering. The website does not contain content on other issues related.

iStrong Website



Figure 4.17 iStrong Website Page

iStrong website is a Thai website. The origin of iStrong was born from an ideology of wanting to help people find happiness in life and help people who need spiritual help get back to normal. Today, iStrong.co is a gathering place for psychologists, psychotherapists, and people development and lifestyle specialists to offer their expertise creating great benefits for the people. It provides services to both corporate and individual levels, as well as designing new supporting tools to increase the effectiveness of assistance. The main mission of iStrong.co is to promote and develop a happy mind. To prevent and help those who are facing stress, suffering, and going through life problems. To offer them advice accurately and on time and also to rehabilitate those who have problems. Whereas Khun Phichawee Mekchaiyai, an organizational psychologist who works in the field of human development with both organizations and individuals. As she sees that many people need the right help and guidance. Therefore, initiated a telephone consulting service for those in need named

iStrong. At the header of the page, there is a main menu consisting of topics such as homepage, services, experts, articles, about us, etc.

The study of communication styles on the iStrong website

The web page has a simple, uncomplicated layout with graphic pictures. The layout focuses on images and content. The top header of the webpage, on the left, is the name and logo of the website, on the right is a channel for consultation. Under that is the menu layout laid out as a hierarchical format, which is suitable for websites with relatively complex data. The content must be divided into different parts. Therefore, the menu layout is divided into 2 layers, with the top layer being the main topic that the website wants to focus on, i.e. homepage, services, consulting, articles, about, chronologically. And there is a menu layout below it as a secondary menu that the website also wants to present additionally about the services such as consultation with a psychiatrist/psychologist, certificate course, for consultants, corporate services, family services, a psychology course, chronologically. Each topic will link to other content. Within each topic, there are different content formats as follows:

- 1) The first page is a menu for introducing an overview of the available services of the website. And a mental health test on the home page, such as a psychological assessment, depression assessment, emotional intelligence, self-esteem, and mental strength
- 2) Service is a menu for introducing services such as corporate services, family services psychology course
- 3) Counselling is a menu for recommending a psychiatrist, clinical psychologist, counseling psychologist
- 4) Article is a menu for presenting articles on mental health care, prevention, etc.
- 5) About is a menu for presenting the history of the organization and contact channels

The study of information regarding depression prevention on the iStrong website

Content is divided as follows:

1) Awareness-raising content and providing methods for health care and prevention of depression the purpose of presenting content can be divided as follows:

(1) To provide information on depression surveillance, such as a screening method to assess depression, to assess whether there is a risk of depression or not, and to know the severity of depression and find a way to fix it

(2) To provide information on techniques for preventing depression, such as techniques for mental health care, avoiding the risk of depression countermeasures that lead to prevention

2) Content on the treatment of depression. To recommend doctors, psychologists, and present psychologists and psychotherapists profile information for users to choose according to their interests

One Man Counselor Website



Figure 4.18 One Man Counselor Website Page

One Man Counselor website is a website that provides consulting services for life problems with psychologists. To help users understand the root cause of the problem until you can adjust your way of thinking and adjust the way of life to

be more aligned, to solve problems within the mind and be happy again. The aim is to create a website that focuses on talking and not taking medications, with short-term consultation and no appointment needed. No further appointments are required if the results are satisfactory from the first consultation. The continuing appointments are subject to the voluntary and needs of the users with the experienced psychologists. The story that is shared is confidential between you and your psychologist. Rest assured that nothing will be shared with the public and affect your personal and professional life. More importantly, easy to make an appointment quickly with no long wait. In the header of the page, there is a main menu that consists of topics such as psychological counseling services, online appointments, about the website and contact channels, etc.

The study of communication styles on the One Man Counselor website

The web page has a simple, uncomplicated layout. There are large graphic images of flowers all over the website. The website layout focuses on images and content. The page colors and text colors are neutral. The menu layout color is white and the font color is black. There is a navigation system that allows users to find the information they need quickly. Organized by content-based structure. The top left header of the web page is the name and logo of the website. On the right is the menu layout that divides the content into different parts. These are the main topics that the website wants to focus on, such as homepage, services, about, contact, chronologically. Within each topic, there is a format to link to other content and each topic has the following content formats:

- 1) Home page is a menu for introducing an overview of the website. What it consists of. There are both consultations with psychologists that focus on talking, not using medications, and short-term counseling without continuous appointments, service by experienced psychologists, consult in person or online and making an appointment without having to queue for a long time

- 2) Service is a menu for presenting services such as psychological counseling through articles and TV interviews

- 3) About is a menu for introducing services, introducing the history and work of psychologists.

4) Contact is a menu for contact information like phone numbers, contact channels, appointment channels

The study on the information regarding depression prevention on the One Man Counselor website.

It was found that this website does not provide content on the situation of depressive prevalence, the definition of depression, factors and causes of depression, prevention and surveillance of depression at all. There is only one aspect of depression treatment content. It emphasizes recommendations of therapeutic procedures, such as procedures for appointments, details of services and fees, and suggesting ways to contact for consultations, etc.

Summary of formats and content for counseling in health care and listening to problems. Most of the content is presented in the scope of advice on services, offer listening ear to problems, provide counseling, recommendation of institutions that provide treatment for depression, facilitate the search for hospitals under the Department of Mental Health and travel instructions followed by the content to educate, provide a way to take care of health, content to provide counseling about depression. The website contains content about the service as a friend to talk to on the phone, committed to helping within each web site, there are different content components, such as presenting content in the form of articles and knowledge-related health issues, counseling for depression, management of depression, rehabilitation care, managing stress, and anxiety, asking and talking to the doctor and exchange opinions about depression. And can also come to study and research easily and easily accessible.

4.1.1.4 Websites to introduce hospitals and institutions that provide treatment for depression, such as HonestDocs and Doctors websites, etc.

HonestDocs Website

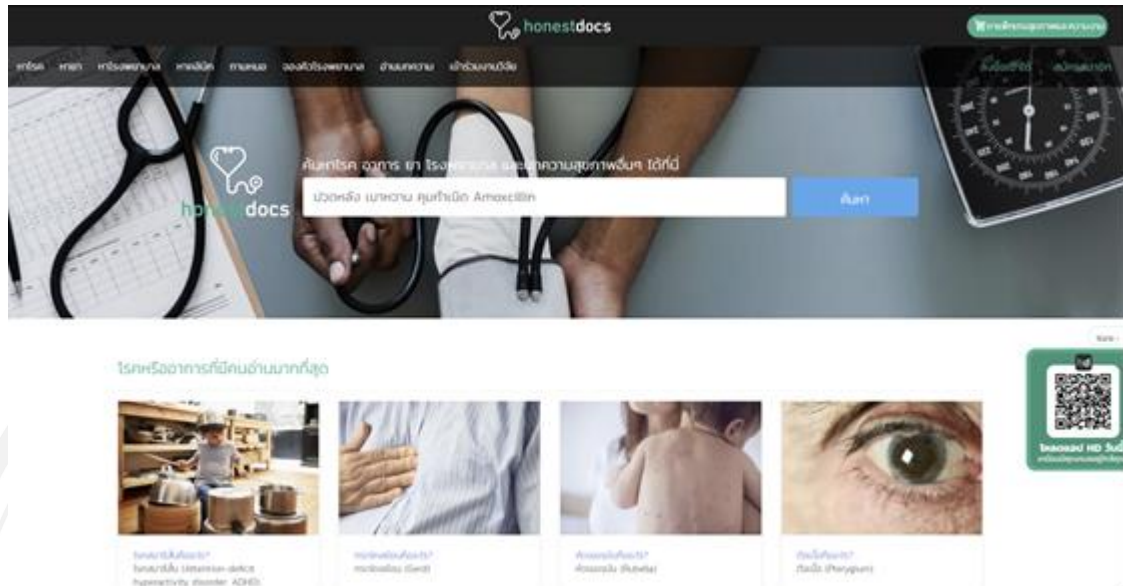


Figure 4.19 HonestDocs Website Page

HonestDocs website is a Thai website founded in 2017 to provide knowledge, information, products, and service channels to help all Thai people take care of their health more effectively and help to be a part of solving Thai people's health problems. Because of the inconvenience of people who lives far from hospitals or bedridden patients to go to the doctor or struggle to find health products near their houses, therefore did not receive treatment promptly. The purpose of this website is to introduce the leading clinics and hospitals, pharmacies, and insurance that offer health check-up programs, accident insurance, health insurance, life insurance. Users can choose the link that they are interested in, and it will automatically go to other web pages of information. A compiled list of clinics and hospitals, contact information, maps, travel instructions, reputable doctor names, prices, health check-up programs, and reviews from real users, for users to use as a part of their decision-making information before entering the examination or receiving treatment. At the header of the web page, there is a main menu consisting of topics such as finding diseases, finding medicines, finding hospitals, finding clinics, ask the doctor, booking a hospital appointment, read articles, participating in research, etc.

The study of communication patterns within the HonestDocs website

The web page has a layout where the entire page is filled with both graphics and portraits. It is to create a website that focuses mainly on aesthetics and comprehensive content. Allowing readers to acquire content and enjoy the visuals at the same time. The website uses graphic techniques to help add colors. The page color is black and the font color is in neutral colors. There is a menu map that helps convey the meaning of the content in the color black. The font color is white. The top header in the center is the name and logo of the website. Next to it is a menu layout that has a simple single-layer layout. This includes topics such as finding a disease, finding medicines, finding hospitals, finding clinics, booking a hospital appointment, reading articles, participating in research. Additionally, at the center of the website, there is a large branding image with a space to type a search query and within the menu layout, there are the following contents:

- 1) Finding Disease is a menu for searching for information about diseases presented in the form of articles.
- 2) Finding Medicines is a menu for finding information about medicine, presented in article format.
- 3) Finding Hospitals It is a menu for searching for various hospitals.
- 4) Finding Clinics is a menu for searching for various clinics.
- 5) Ask the Doctor is a menu for asking and answering health problems with a specialist doctor.
- 6) Book an appointment with the hospital is a menu for booking an appointment for hospital service.
- 7) Read articles is a menu that presents articles on mental health and video recommendations, for example.
- 8) Participate in research is a menu for inviting participants to research mental health.

The study of the information regarding depression prevention on the HonestDocs website.

Content is divided as follows:

1) Content on the meaning of depression the purpose of presenting content are divided as follows:

(1) To provide definitions of depression, such as explaining in detail what depression is, how many levels can it be divided into, what are the severity levels.

(2) To report the types of depression, such as how many types of depression there are, what are the symptoms of each type, how are behaviors effected

(3) To describe the symptoms of depression and how they are. How and when should you observe yourself and your family members, to give readers a way to observe themselves and those around them if they are at risk of depression or not.

Haamor Website

The screenshot shows the Haamor website interface. At the top, there is a search bar and social media sharing options (Like, Share, Tweet). Below the navigation bar, the page title is 'โรคซึมเศร้า (Major Depressive Disorder หรือ MDD)'. The main content area is divided into two columns: 'สารบัญ' (Table of Contents) and 'บทความที่เกี่ยวข้อง' (Related Articles). The 'สารบัญ' column lists several questions related to MDD, such as 'บ่น่า', 'อารมณ์คืออะไร?', 'อารมณ์ที่เกิดปกติคืออะไร?', 'โรคซึมเศร้ามีอุบัติการณ์เป็นอย่างไร?', 'อาการของโรคซึมเศร้าเป็นอย่างไร?', 'โรคซึมเศร้ามีสาเหตุจากอะไร?', 'ใครมีปัจจัยเสี่ยงที่จะเกิดโรคซึมเศร้า?', 'อะไรเป็นตัวกระตุ้นให้เกิดซึมเศร้า หรือทำให้อาการรุนแรง?', 'มีอาการอย่างไรจึงควรพบจิตแพทย์ และควรไปพบแพทย์เมื่อไหร่?', 'พบแพทย์ทำไมไม่ได้ไหม?', 'แพทย์สามารถวินิจฉัยโรคซึมเศร้าได้อย่างไร?', and 'การรักษาโรคซึมเศร้าทำได้อย่างไร?'. The 'บทความที่เกี่ยวข้อง' column lists related topics: 'ยาค้านเศร้า(Antidepressants)', 'โรคจิต (Psychosis)', 'ยาลดความกังวล (Anxiolytic)', 'ยานอนหลับ (Hypnotic drug)', 'นอนไม่หลับ (Insomnia)', 'ยาเสพติด (Narcotic drug)', and 'วัตถุออกฤทธิ์ (Psychotropic substances)'.

Figure 4.20 Haamor Website Page

The Haamor website is a Thai website to create website that presents knowledge about diseases and health with a team of doctors and experts to give reliable advice. This website has the slogan "Guide to every disease, recommendations to every doctor", meaning that it provides advice and knowledge for every disease and introduces doctors who specialize in each disease. and will be the first in Thailand that strives to meet international standards. It was launched on October 1st, 2011 with various articles on the subject of illness, the story of various medicines, hospital offices, and a list of doctors across the country. These statistics will be updated and increasing the number all the time. The aim is to create a website for the general public to use. Most of the authors of the articles are doctors, nurses, pharmacists, and medical science personnel from various fields of expertise of various institutions, both from public and private sectors, as well as providing information about medicine databases, doctors and hospitals as well. On the website's header page, there is a main menu that contains topics such as interesting articles, disease pathology, drug regimen, child health, elderly health, women's health, and beauty, etc.

The study of communication patterns on the Haamor website (haamor.com)

The web page has a simple, uncomplicated layout. No animated graphics or characters. Inside the web page at the top left is the name and logo of the website, the font color is blue and cyan. It has a blue gradient background. In the center is a space to type a search query and has a dark blue menu layout, the font color is white. There is a proper navigation system to help find the information they need quickly. Organized in a content-based structure. The menu layout consists of topics such as homepage, blogs, health articles, hospital search, about us, web boards, health check-up packages, chronologically. These topics will link to other pages of content. Within each topic, there are different content formats as follows:

- 1) The first page is a menu for introductions about Haamor.com through video clips.
- 2) Blogs is a menu for presenting information about mental health, physical health in article format
- 3) Health Articles is a menu for presenting mental health articles and general health tips.

4) Hospital Search is a menu for hospitals, clinics, and insurance networks searches.

5) About us is a menu for introducing the history and corporate information

6) Web board is a menu for introducing other web pages about health care.

7) Health Check-up Package is a menu for recommending health check-up packages and price information.

The study of the information regarding depression prevention on the Haamor website

Content is divided as follows:

1) The content of the situation report on the prevalence of depression presents the content about the depressive situation in society and provides information about the prevalence of depression. The purpose of presenting content is to illustrate the situation of depression, such as the amount of depression prevalence, number of patients, number of people at risk and suicide rates, etc.

2) The content of the meaning of depression It presents the content of what depression is, what causes it, and what is its severity, how many levels can it be divided into, how many types, what are the symptoms, what can be observed, to give readers a way to observe themselves and those around them if they are at risk of depression or not.

3) Content on factors and causes of depression It is a presentation of the overall content that explains various factors that affect the occurrence of depression and relay the cause of depression, risk factors for depression, triggers for depression or what causes severe symptoms, etc.

4) Awareness-raising content and providing methods for health care and prevention of depression. It is a presentation that focuses on providing information on how to take care of one's mental health as well as suggest ways to solve problems when entering a stressful and anxious state and provide techniques on how to prevent depression as well as providing information for surveillance of depression problems. Additionally, it presents information on the negative effects of depression as well to help create awareness for readers to pay more attention to their

mental health care, etc., Overall to provide a way to deal with stress, how to control emotions, ways to relieve stress, guidelines for taking care of your mental health to be able to cope with health problems that may arise. The knowledge gained can be used to take care of the mental health of those close to you and your family members. For instance, providing content that raises awareness, education on prevention, suggesting ways to help prevent, providing techniques for preventing and how to take care of mental health for yourself and your family, etc.

5) Content on the treatment of depression the purposes of presenting content are divided as follows:

(1) To provide information about treatment such as treatment methods, therapeutic model, recommendation a place to receive treatment, etc.

(2) To recommend hospitals and institutions that provide treatment for depression and to recommend physicians, psychologists, and specialists in the treatment as well as suggesting channels for consultations, etc.

(3) To provide information about medications used to treat depression, such as how many types of drugs there are, what are the medications, what is the name is. And also provides additional knowledge about the side effects of antidepressant medications.

4.1.1.5 Websites to provide information on treatment and help reduce depression, For example, the psychiatric hospital websites such as the Chaophraya Institute of Psychiatry website, Khon Kaen Rajanagarindra Psychiatric Hospital website, Suanprung Hospital website, Songkhla Rajanagarindra Psychiatric Hospital website, and the Kalaya Rajanagarindra Institute website, etc.

Examples of Various Psychiatric Hospital Websites



Figure 4.21 Website of Somdet Chaopraya Institute of Psychiatry



Figure 4.22 The Website of Khon Kaen Rajanagarindra Psychiatric Hospital



Figure 4.23 Suanprung Hospital Website

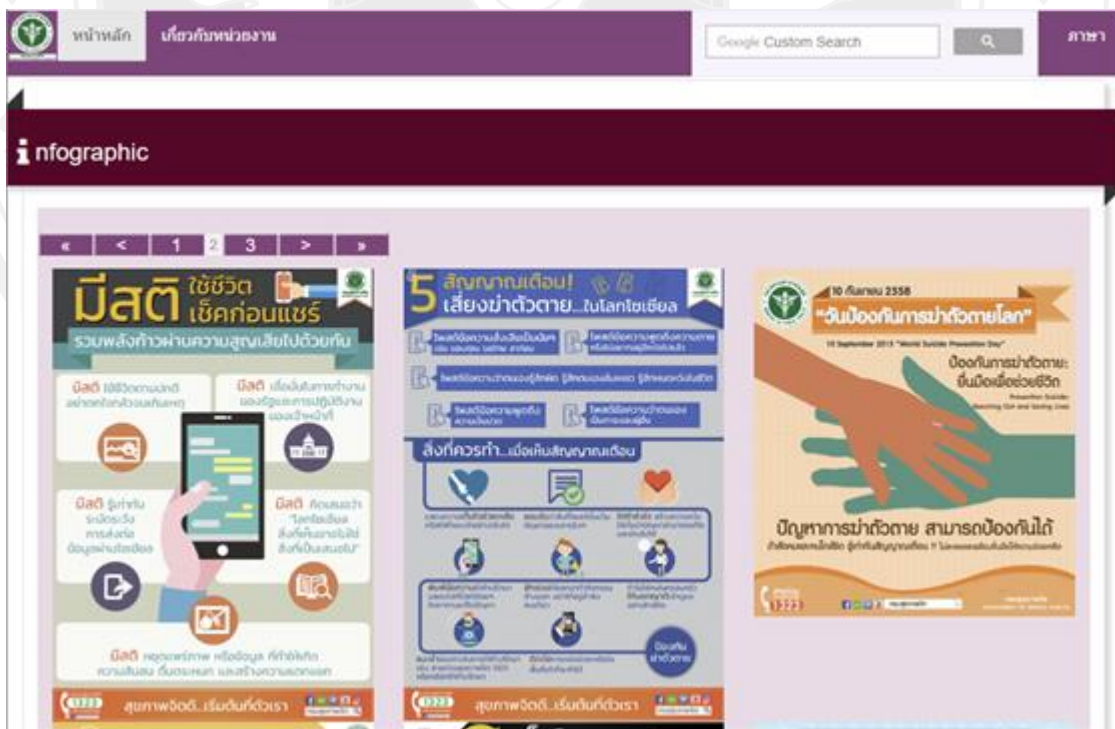


Figure 4.24 Songkhla Rajanagarindra Psychiatric Hospital Website

เกี่ยวกับ- ข่าวประชาสัมพันธ์- ประกาศจัดซื้อ/จัดจ้าง บริการ วิชาการ ศูนย์ปฏิบัติการ ติดต่อ

ค้นหาข้อมูลภายในเว็บไซต์ ค้นหา

ข้อมูลการบริการของสถาบันกัลยาณราชนครินทร์

- ตารางบริการผู้ป่วยนอก ▾
- ขั้นตอนการบริการผู้ป่วยนอก ▾
- ข้อตกลงการรับบริการโรคเรื้อรัง ▾
- การตรวจสภาพจิตใจก่อนรับ(ดูแลเป็น)ดูแล ▾
- คลินิกบำบัดผู้ติดสารเสพติด ▾
- คลินิกวัยเรียน (Smart Kids Clinic) ▾
- คลินิกจิตเวชเฉพาะทางนอกเวลาราชการ (SMC) ▾
- การฝังเข็ม การรักษาในรูปแบบแพทย์แผนจีน ▾

เมนูหลัก	เว็บไซต์ที่เกี่ยวข้อง	เจ้าหน้าที่	ประชาชนทั่วไป
<ul style="list-style-type: none"> หน้าหลัก เกี่ยวกับสถาบัน ศูนย์ปฏิบัติการ ศูนย์ราชการใสสะอาด กลุ่มภารกิจความเป็นเลิศ 	<ul style="list-style-type: none"> กรมสุขภาพจิต กระทรวงสาธารณสุข สำนักงาน กพ. สำนักงานหลักประกันสุขภาพแห่งชาติ 	<ul style="list-style-type: none"> ระบบสารสนเทศทรัพยากรบุคคล : DPIS ระบบเงินเดือนข้าราชการและลูกจ้างประจำ ปฏิทินกิจกรรม 	<ul style="list-style-type: none"> คำประกาศสิทธิของผู้ป่วย แบบประเมินสุขภาพจิต คลังความรู้ด้านวิจัย

Figure 4.25 The Website of the Kalaya Rajanagarindra Institute

Psychiatric Hospital websites such as Somdet Chaopraya Institute of Psychiatry website, Khon Kaen Rajanagarindra Psychiatric Hospital website, Suanprung Hospital website, Songkhla Rajanagarindra Psychiatric Hospital website, Kalaya Rajanagarindra Institute website, Thanyarak Institute website, and Srithanya Hospital website. All of them are Thai websites. It is an agency under the Department of Mental Health. The aim is to create websites for public relations of the institute in particular and focuses on recommending the form of treatment services for psychiatric patients, neurology, neurosurgery neuropsychiatry. Because it is a training institute in psychiatry and mental health for doctors and psychologists. Within the website, also acts as an archive for research results, academic articles on psychiatry, mental health, neurology, neurosurgery, and neuropsychiatry, in addition to promoting knowledge to help encourage the prevention of drug problems, treatment, and rehabilitation including providing mental health services to patients. And to those with general mental health problems. The target group is the general people who are interested in both physical and mental health. At the header of the page, there is a main menu that

consists of topics such as training courses, research, and development. The library contains articles in a medical journal, service Introduction, information center, suggestions for contact for treatment, etc.

The study of communication patterns on the psychiatric hospital website

Most of the web pages have a simple, uncomplicated layout. And contain menu layouts that make it easy to use. Some pictures help convey the meaning of the content. The color of the page and text are neutral colors. The menu layout has a proper navigation system that helps users find the information they need quickly. They used the organized by content-based structure. And the top left-hand corner of the website is the name and logo of the website, and next to it is a space for a typing search query. Followed by a menu layout that has a simple layout that is commonly seen which is easy to choose to access various information. Suitable for websites where the content is not complicated. The main menu layout contains similar topics: Homepage, About, Press Releases, Academic Affairs, Services, Contact Us, chronologically. These topics will link to other pages of content. Within each topic, there are content formats as follows:

- 1) Home Page is a menu that presents an overview of the website by showing the various elements it contains.
- 2) About us is a menu for introducing the history and information of the organization.
- 3) Press Release is a menu to help get to know the website better.
- 4) Academic work is a menu for presenting articles, researches, medical journals about mental health disorders, and general mental health tips.
- 5) Service is a menu for introducing various services that the website provides such as consultation, treatment, care, assistance, etc.
- 6) Contact us is a menu for introducing contact channels, travel information, contact numbers, etc.

The study of information regarding depression prevention on the psychiatric hospital website

Content is divided as follows:

1) The content of the situation report on the prevalence of depression the purpose of presenting content is divided as follows:

(1) To present the situation of depression, such as the amount of depression prevalence, number of patients, number of people at risk. and suicide rates, etc.

(2) To report the number of access to mental health services in Thailand, for example reporting the number of people receiving treatment, number of people who have not received treatment by having the Department of Mental Health surveying the data to create the database to develop the mental health service system of Thailand to reach the people as much as possible

2) The content of the meaning of depression the purpose of presenting content is divided as follows:

(1) To provide definitions of depression, such as explaining in detail what depression is, what malfunction was it caused from, what are the severity levels and how many can it be divided into. This is to aim for readers to understand the meaning of depression correctly.

(2) To report the types of depression, such as how many types of depression there are, what are the symptoms of each type, what behaviors become noticeable, and what can you observe from

(3) To describe the symptoms, what the changes are like, for example; crying often, not clear-headed, not refreshed, relationship with people around you has changed, looking lethargic, not cheerful, introverted, does not talk to anyone, sensitive, feels bad, feels discouraged, hopeless for life, feels worthless, has difficulty sleeping, loss of appetite, etc.

3) Content on factors and causes of depression It is a presentation of content that explains various factors that affect the prevalence of depression and determines the cause of depression, such as genetic factors, biological factors. And the cause of depression was found to be related to many aspects.

4) Awareness-raising content and provide methods for health care and prevention of depression. The purpose of presenting content is divided as follows:

(1) To provide information for surveillance of depression problems such as stress surveys, tests to screen for depression, suicide risk tests, to explore whether there is a risk of depression or not. If so, what is the risk level, and is there a tendency to commit suicide, to find solutions to meet the problems that may arise and to prevent suicide

(2) To provide information on techniques for preventing depression, such as providing content that provides prevention techniques including avoiding the risk of causing depression. As well as knowing the coping methods that ultimately lead to the prevention of depression.

5) Content on the treatment of depression. The purposes of presenting content are divided as follows:

(1) To provide information about treatment such as treatment methods, therapeutic model, recommendations of treatment facilities, recommendation of hospitals and institutions that provide treatment for depression, the recommendation for channels to see a doctor, recommendations for a doctor, a psychologist with expertise in treatment, information on contact number. And it also provides information about medications used to treat depression, for example.

To summarize, throughout the website it is mainly information on hospitals and institutions' recommendation that provide treatment for depression. The aim is to create a website to introduce hospitals, recommend service centers, recommend a treatment location, also recommend psychiatric service providers in both the public and private sectors that offer psychiatric treatment services, mental health screenings to help prevent psychiatric problems, the focus is on the modern treatment of psychiatric disorders, focusing on mental health, creating a quality life, and the website also provides academic information, articles, research related to depression. The overall content of the website consists of information that focuses on the recommendation of hospitals, service centers, treatment locations for the users to contact or consult a doctor. Including advice on how to get treatment at the institute or the hospital as well

4.1.2 Format and Content of Communication via YouTube

It is a famous video exchange platform that users can upload videos to it, view an existing video, and split videos. These are available for people to view at no cost. YouTube has content information including short movie clips and clips from TV shows, music videos, and video blogging. (which is to create a blog with the visual content of a video. Sometimes, it is a video created by amateurs filming themselves). Most of the videos published on YouTube are short clips, about 1-10 minutes, filmed by the general public. Clips are categorized and ranked, such as the latest files, the most viewed files, the most voted files, etc.

As for the format and content of communication via YouTube, both domestically and internationally, it was found that the content presented also includes weight loss reviews, exercise video clips, health care plans, and many more. Most of the group of users are young people who are health-conscious and interested in participating in sharing health care techniques and taking care of their bodies. And more importantly, YouTube provides content about depression in various fields, such as the definition of the disease, the cause of the disease to the symptoms, to the treatment and most of the information presented is positive content that is useful for lifestyle and mental health care, often with a specialist or a psychiatrist to give advice. And the practice of adjusting the mood and adjusting the mind, to be more positive. Often presented in the form of dissemination of information sharing with an attractive presentation style with color, sound, video motion. YouTube is a free online video streaming service that allows users to view and share videos to share information. YouTube also contains short clips that educate about depression, an interview with a specialist of depressive disorders, a list of interviews with people who have experienced depression, shows that offer treatments and remedies about depression show about how to overcome depression. Providing the best ideas to help improve one's life to becoming happier. This is the communication channel that the Thai Ministry of Public Health often chooses as a new health communication channel to promote health-viewing behaviors and provide positive information in health care to reach more recipients.

From the results of a research study on the format and content of preventive depressive disorder communication via YouTube. In conclusion, the results of the

study of communication via YouTube are available domestically and internationally as follows:

Format and content of communication for depression prevention via YouTube internationally

Based on the study of patterns and content regarding depression prevention communication on YouTube in Thailand, there are 4 popular YouTube international channels for health care, namely Mental Elf Channel, Mental Health Channel, Depression to Expression, and The Best Mental Health and Therapist YouTube Channels are as follows:

Mental Elf YouTube Channel Page

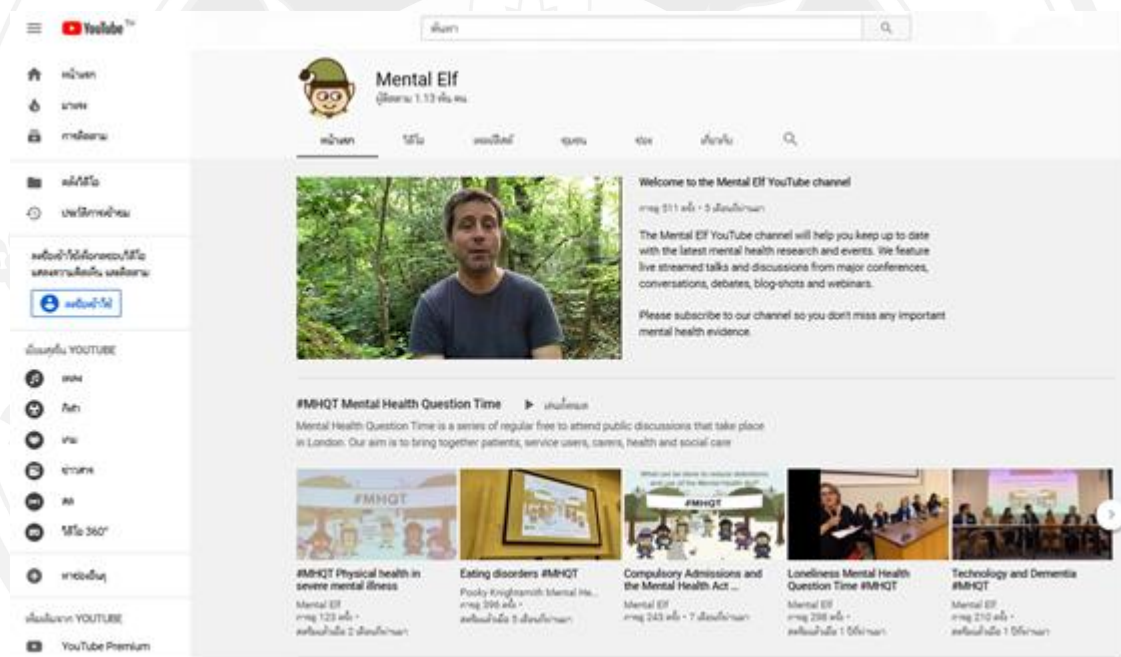


Figure 4.26 Example of Mental Elf YouTube Channel

Mental Elf Channel is a channel focused on content to help you stay up to date with the latest mental health research, mental health activities and have skilled psychologists to answer mental health questions. Also to introduce self-care tips such as managing depression, prevention, and ways to adjust your thinking and eliminate stress. The goal is to provide knowledge, create better understanding, provide

guidelines for self-care and to help improve people with mental health problem's life and give guidance on living happily in the society

The study of communication patterns on the Mental Elf channel

The most common form of communication seen is sharing video clips from live broadcasts from conferences discussing mental health issues from doctors. Including interviews from well-known psychologists who answer questions about mental health and can be viewed later at your convenience. Within the channel, it uses the content-based structure, which is easy to choose to access clips. The site is mostly about the presentation of information about depression, recommendations for dealing with depression, the recommendation for protection methods, applying techniques to adjust the way of thinking and the methods of eliminating stress, etc.

The study of information regarding depression prevention on the Mental Elf channel

Content is divided as follows:

1) Content on the meaning of depression It presents the content about the meaning of depression, explains what depression is, what the symptoms are. For readers to understand the meaning of depression correctly and gain more knowledge about depression, to describe the symptoms of depression, how is it shown in behavior, how should you observe yourself and your family? For readers to have knowledge and understanding of the symptoms of depression. And know of the ways to observe yourself and those around you for the risk of depression.

2) Awareness-raising content and providing methods for health care and prevention of depression. It presents content that focuses on how to prevent depression, such as providing knowledgeable content, providing methods for prevention, methods of mental health care for themselves and their family members as a solution to save people from depression. How to practice self-exploration, how to adjust thinking and eliminate stress, and how to let go of sadness, anger, disappointment, or regret, etc.

Mental Health YouTube Channel Page

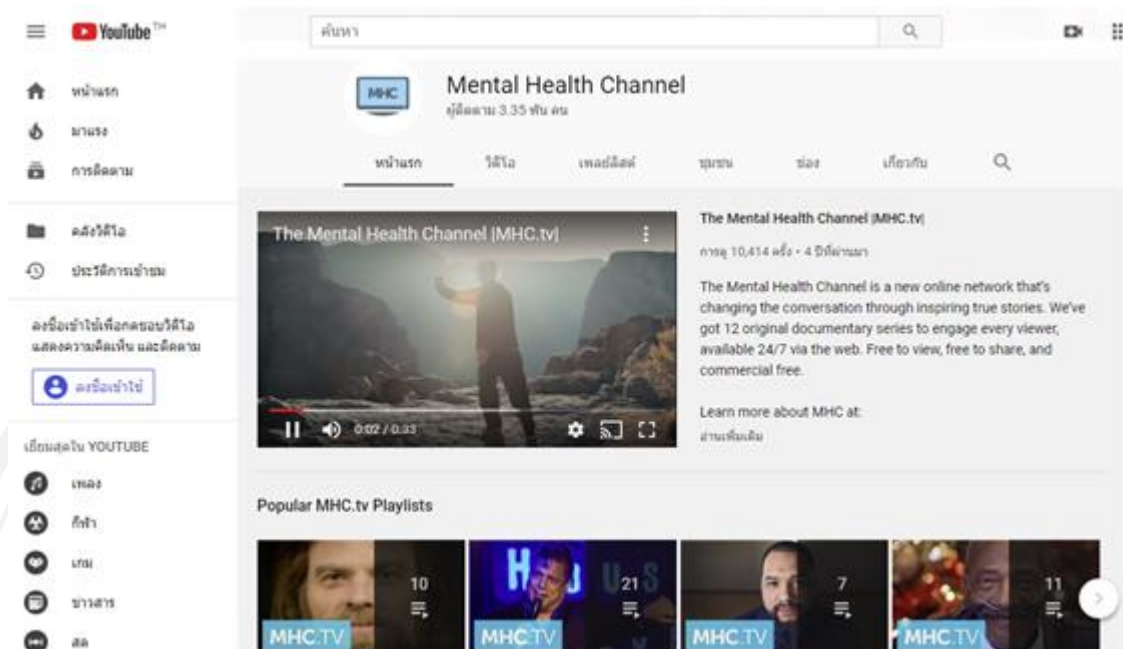


Figure 4.27 Example of Mental Health Channel Page

Mental Health Channel is a channel that focuses on presenting content about mental health that is a new online network. It consists of conversations from people with real experiences to help inspire and encourage. Anyone who comes to watch can share it for the benefit of self-care, family members, to encourage, provide insights and suitable solutions for people with mental health problems such as depression at anytime

The study of communication patterns on the Mental Health Channel

Most of the communication style is sharing video clips based on interviews, conversations, stories from real people who help inspire. To encourage support and introduces alternatives for suicidal tendencies to see the brighter side of things. Within the channel, the content is organized by content-based structure, which is easy to choose to access various clips. Mostly, it is about providing knowledge about encouragement, giving ideas, and providing suitable solutions to problems of depression patients, etc.

The study of content regarding depression prevention on the Mental Health Channel

Content is divided as follows:

1) Awareness-raising content for health care and prevention of depression It presents information on how to deal with stressful and anxious situations, provides information on techniques for preventing depression, provides information that encourages people with mental health issues, provides appropriate ideas for the benefit of taking care of the health of self and family. Its purpose is to provide information on how to take care of one's mental health, including how to manage stress, how to control emotions, as a guideline for dealing with depression, such as introducing techniques and tips for self-care. Avoiding the risks that cause depression, self-help in getting out of stress that can lead to depression, etc.

Depression to Expression YouTube Channel Page

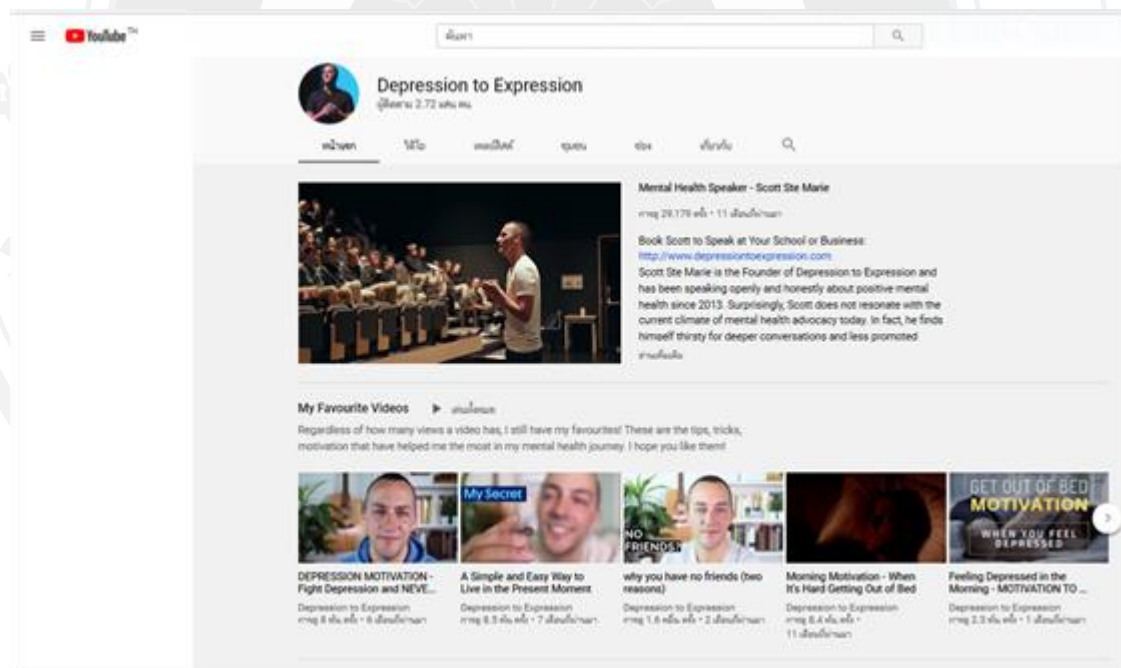


Figure 4.28 Example of The Depression to Expression YouTube Channel Page

Depression to Expression channel, featuring YouTuber Scott, who shares details about depression and anxiety; what depression means, causes and factors, recovery, prevention, emotional regulation, and conversations about the impact on his

life. He focuses on giving advice on how to deal with these problems at the same time explaining the importance of being mindful. He also shares meditation and other common coping techniques, focusing on making everyone aware of the negative tendencies. And encourage everyone to learn how to control their consciousness when depression occurs. He wants everyone to know how to fight depression and overcome it. He, therefore, wants this channel to be a medium for passing on knowledge and sharing his own experiences to create encouragement and help relieve tension and anxiety for those who have problems their facing.

The study of communication patterns on the Depression to Expression channel

Most of the communication forms are video clips on the YouTuber Scott's discussion, who uses this channel as a medium to pass on his knowledge and share his experiences to inspire people and help alleviate tension for those who are struggling. Within the channel, it is organized by content-based structure, which is easy to choose to get access the variety of clips. It mainly focuses on educating people about depression, causes, and factors, as well as introducing techniques for recovery and prevention, etc.

The study of information regarding depression prevention on the Depression to Expression channel

Content is divided as follows:

- 1) Awareness-raising content and providing methods for health care and prevention of depression. It presents content that presents information on how to deal with problems in the onset of stress, anxiety, and provides information on techniques for preventing depression. The purpose is to present content to encourage and help relieve stress and lessen the severity of anxiety, such as providing prevention content, propose a solution to the problem and exhibit how to cope with depression, introducing techniques and tips for self-care. Avoiding the risks that can cause depression, self-help tips to relieve stress that leads to depression, etc.

The Best Mental Health and Therapist YouTube Channels

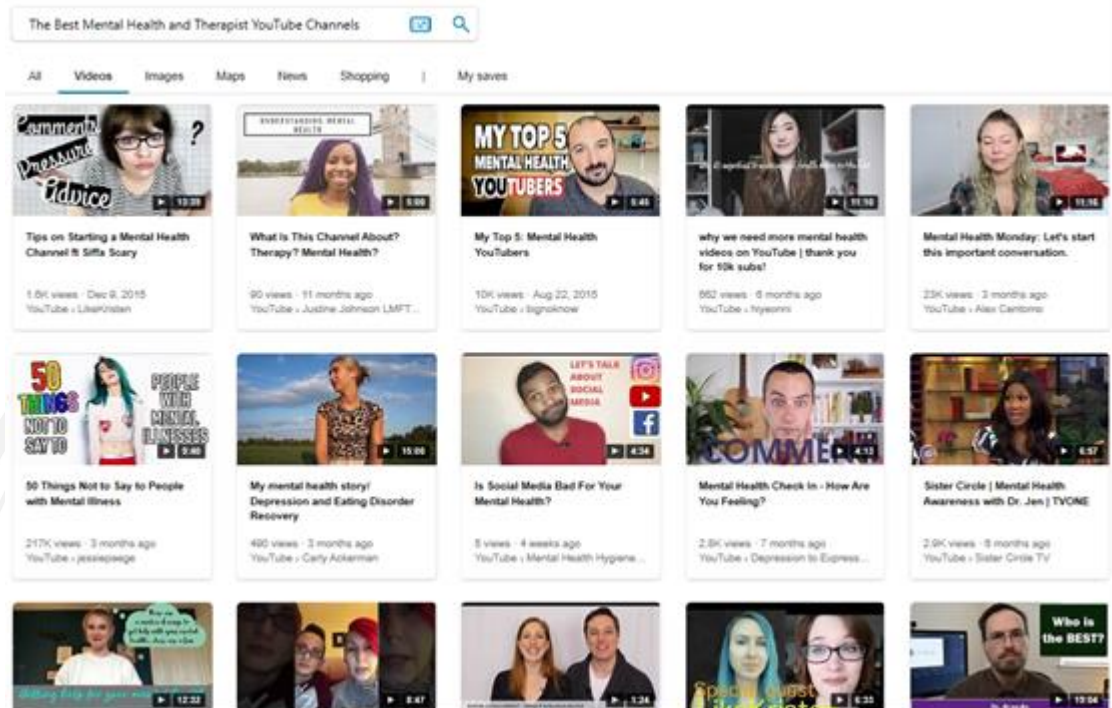


Figure 4.29 Example of the Mental Health and Therapist YouTube Channel

The Best Mental Health and Therapist YouTube Channels are the best mental health programs with therapists to help inspire, create ideas, adjust thinking methods, adjust moods, adjust lifestyle as well as providing knowledge to take care of one's mental health for the better by presenting various content about mental health through videos that convey stories more interestingly and easily to remember

The study of communication patterns of depression on The Best Mental Health and Therapist YouTube Channels

There is a communication pattern with therapists to help inspire and encourage in the form of mental health programs. Within the channel, it is an organized content-based structure which makes it easy to choose to access the variety of clips. And mainly focusing on educating yourself about taking better care of your mental health, etc.

The study of communication content about depression on The Best Mental Health and Therapist YouTube Channels

Content is divided as follows:

1) Awareness-raising content and providing methods for health care and prevention of depression. Emphasis is placed on information for the surveillance of depression, provide knowledge for better mental health care, such as giving ideas, changing thinking methods, how to manage stress, how to control emotions as well as providing guidelines for solving problems when entering a stressful state on their own. It is intended to help provide health care tips, prevention and to know how to deal with it that will eventually lead to the prevention of depression

Format and content of communication on depression prevention and surveillance via YouTube in Thailand.

Based on the study of patterns and content of preventive depressive disorder communication on YouTube in Thailand. There are 3 popular YouTube channels for healthcare in the country, namely, Dr.Amp Channel, Answers from Khunkhao Channel, and RUOK Channel as follows:

Dr.Amp Channel Page

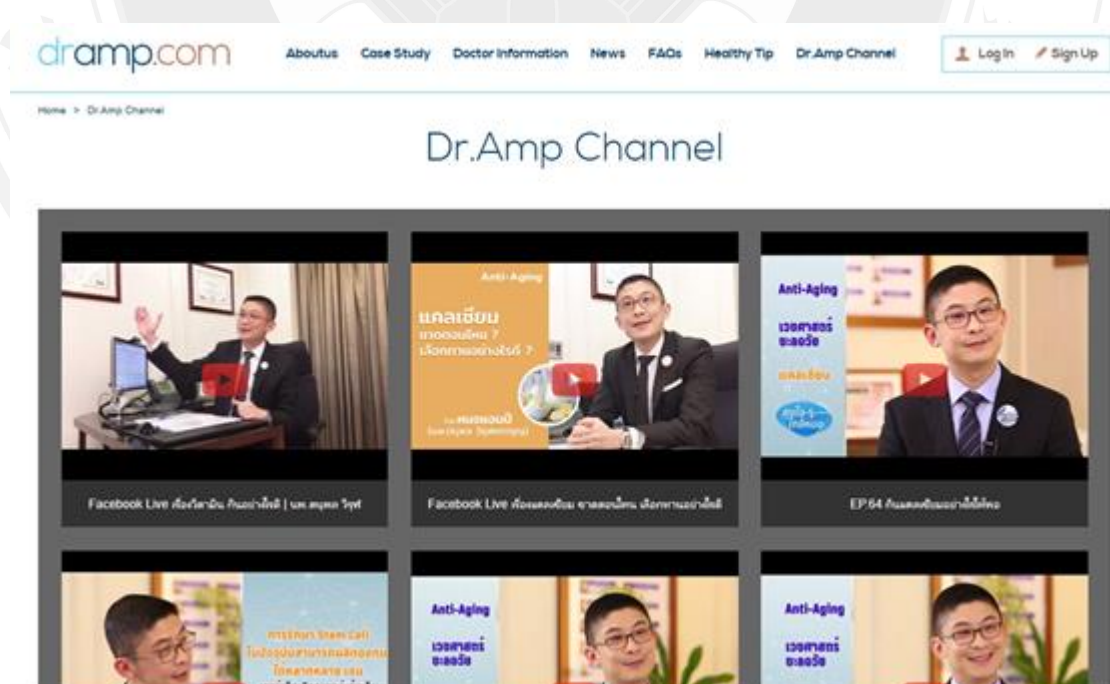


Figure 4.30 Examples of The Dr.Amp Channel Page

The Dr.Amp Channel has a list of 'happiness near the doctor' within the popular channel, it is the center of knowledge about health arising from the cooperation of medical teams specialized in anti-aging and rehabilitation. Who recognizes the importance of prevention before the disease (Preventive Medicine) and proper health rehabilitation (Regenerative Medicine) It has an important goal, which is to provide accurate and complete knowledge in health care and rehabilitation to the general public, patients, caregivers, and medical personnel. By providing information and knowledge on the website from the collection of medical research that will be presented in a variety of formats such as articles, case samples, Q&A, and videos. Which covers various aspects of health care, such as psychiatric disorders, depression, obesity, diabetes, high blood pressure, hyperlipidemia, insomnia, correct exercise methods, stress, sexual health, menopause, how to take vitamins, etc. This YouTube channel will be a medium for knowledge and academic information so that people can have good health and acknowledge the risks of various depressive disorders. Also to prevent and rehabilitate depression and illnesses correctly and in the most beneficial way so that the general public knows how to properly take care of health under the current society and environment

The study of communication patterns on the Dr.Amp Channel

Throughout the Channel, a communication style is the presentation of clips from medical personnel to provide information and knowledge of health, with sample cases, Q&A, presentations in the list format. The simple language was used, it's easy to understand and the channel has a way of organizing by content-based structure, which makes it easy to choose to access from a variety of clips. This YouTube channel act as a medium for knowledge and academic information for people to have good health and know the risk of depression, and acknowledged about prevention and rehabilitation of depression correctly, etc.

The study of information regarding depression prevention on the Dr.Amp Channel

Content is divided as follows:

1) Awareness-raising content Provide methods for health care and prevention of depression. The purpose of presenting content can be divided as follows:

(1) To provide information on how to take care of one's mental health, including how to deal with stress, how to control emotions, how to relieve stress as a guideline to take care of one's mental health and be able to cope with health problems that may arise

(2) To provide information about techniques to prevent depression, such as providing content that raises awareness, educate on prevention tips, propose guidelines for health care and rehabilitation, provide methods for mental health care for oneself and family members including to avoid the risk of causing depression, etc.

2) Content on the treatment of depression It presents content to provide information about therapies such as treatment methods, therapeutic model, recommendation of treatment facilities, to recommend hospitals and institutions that provide treatment for depression and recommending channels to see a doctor, recommending a doctor, a psychologist with expertise in treatment, etc.

'Answers from Khungkhaio' YouTube Channel Page



Figure 4.31 Example of 'Answers from Khungkhaio' YouTube Channel Page

Answers from Khun Khao Channel, a channel of "Khun Khao Sinthusen Khejornbutr" who is a brain development psychologist. The channel emphasizes presenting content about ideas regarding mental health knowledge, how to treat depression, insights about depression, suggestions for ways to relieve suffering, female psychology, male psychology, developing the brain and mind, how to create happiness through psychology, how to take care of one's health, information on the elderly, children, adolescents, general health issues, etc.

The study on communication patterns on the Answers by Khunkhao Channel

The communication style is presenting clips of knowledge sharing about depression conducted by Khunkhao Sinthusen Khejornbutr, a brain-development psychologist, conducting a show that has a conversational interview format with real people. Easy to listen to and interesting presentation style with inviting guests that are stars, singers, and celebrities to add color to the channel. Within the channel, it is organized by a content-based structure which is easy to choose to access the variety of clips. Most of them focus on giving ideas, insights on depression, suggest ways to relieve suffering, etc.

The study of information regarding depression prevention on the Answers with Khunkhao Channel

Content is divided as follows:

1) Content on the treatment of depression the purposes of presenting content are divided as follows:

(1) To provide information about treatment, such as how to treat depression, insights on depression, suggest ways to relieve suffering, therapeutic model, recommendation of a place to receive treatment, etc.

(2) To recommend hospitals and institutions that provide treatment for depression, such as recommending hospitals and clinics, suggest ways to see a doctor as well as suggesting contact numbers, etc.

(3) To provide information on medications used to treat depression. And provides additional knowledge about the side effects of antidepressant medications.

RUOK YouTube Channel Page



Figure 4.32 Example of RUOK YouTube Channel Page

RUOK channel is a channel that focuses on presenting psychological knowledge, describing the phenomena occurring in the human state of mind by psychologists from the Center of Counseling for Psychology and Health Promotion explaining the consistency of the principles of psychology and Buddhism, and focusing on the subject of the 'suffering' that can arise in everyone's mind. The aim is to create awareness and induce education about mental health, to encourage people to understand the disease that occurs, to consider themselves, to know how to prevent and can manage suffering stress in the mind. It also teaches people to explore their mental health that will make them conscious of behaviors in everyday life that other people are being. Or needing to seek help from a doctor or specialist, if you are ill, it will be treated promptly. And to finally understand yourself, understand others and live together in a society happily

The study of communication patterns about depression prevention on the RUOK channel

The communication style is having a psychologist from the Psychological Counselling and Wellness Center explain the alignment of the principles of

psychology and Buddhism. It also presents a clip that portrays a survey visit to observe interesting behavior in daily life. And if someone needs help from a doctor, the program will help them to get further treatment. Moderated by Pound Jacobsen and Dujdao Wattanapakorn, well-known psychotherapists.

The study of communication content about depression prevention on the RUOK channel

Content is divided as follows:

1) Awareness-raising content and providing of methods for health care and prevention of depression. The purpose of presenting content is divided as follows:

(1) To provide information for surveillance of depression problems such as depression surveys as a preliminary assessment of whether there is stress present or not. And to explore whether there is a risk of depression or not. And if there is a likelihood for suicide, to know the severity of depression and find solutions to meet the problems that may arise

(2) To provide techniques for the prevention of depression, such as providing content that raises awareness, educating on prevention, provide techniques for preventing, ways to take care of mental health for yourself and your family, and know how to deal with it which eventually will lead to the prevention of depression

4.1.3 Format and Content of Communication via Applications

The form and content of depression prevention communication and surveillance through the application. There are applications for communication in a variety of formats, both as a tool to store data, a tool for disseminating and sharing information/as a tool for communication between government agencies and the public/as a tool to help reduce depression including in the form of educational media to relay information about depression and finding treatment. Based on the study of patterns and content of preventive depressive disorder communication through surveillance, it was found that there were applications that are used for communication with depression and are popular, which in foreign countries has 10 applications and in the country, there are 5 applications, details are as follows.

The format and content of communication about depression prevention via applications in foreign countries. There are 10 popular applications in foreign countries as follows:

1) Calm Application



Figure 4.33 Calm Application

The communication format and content are designed to alleviate anxiety to improve sleep quality and make users feel happier. It provides content that helps users release their emotions and practice mindful breathing by using music and nature-like sounds to stimulate relaxation for both body and mind, resulting in better sleep quality each night.

2) Headspace Application



Figure 4.34 Headspace Application

The communication format and content are intended to serve as a tool to help users in living a happier and healthier life. This application will assist users in finding places for relaxing activities, whether they want to calm down or relieve stress. Moreover, it provides content that assists users in their meditation practice,

allowing them to gain mindfulness, self-control, and optimism. As a result, users will eventually feel more at ease and lifted.

3) Moodnotes Application



Figure 4.35 Moodnotes Application

The communication format and content are aimed at helping users adjust new ways of thinking to achieve new and useful perspectives for stress reduction and improved quality of life. This application serves as a daily mood and idea journal for users to use to improve their ways of thinking and to become more optimistic by practicing positive thinking psychology. In addition, besides being a journal, this application helps track moods and increase self-awareness, which can assist users in becoming aware of a depressive disorder. It is also helpful for stress reduction and improves users' well-being.

4) Moodpaths Application



Figure 4.36 Moodpaths Application

The communication format and content are compared to a pocket-sized mental health counselor friend. This application aims to assist users in navigating

life's challenges while guiding them in understanding their emotions to avoid anxiety and distress. The communication style of this application is to provide daily quizzes to assess the well-being of each user and to help screen symptoms of a depressive disorder and report the progress of the day-to-day symptoms. The screening aims to raise users' awareness of their thoughts and feelings. After two weeks, the application will generate an E-file that users can bring to consult with health professionals.

5) Pacifica Application



Figure 4.37 Pacifica Application

The communication format and content are intended to serve as a tool that helps users with managing anxiety and stress in their daily lives. In addition, this application includes stress-relieving lessons and activities in a form of sounds, allowing users to relax, relieve anxiety, and stop overthinking, without becoming overwhelmed by distress. It provides a variety of tips to help users cope with stress and depression.

6) SuperBetter Application



Figure 4.38 SuperBetter Application

The communication format and content are intended to provide a mobile device consultation service in the form of games. It provides content that assists users in developing skills to cope with emotion management and strengthening the mind, leading to personality and thought adjustment. This application also assists in the treatment of a depressive disorder by providing various advice. According to the research, after using this application for 30 days, users' mood improved, their anxiety symptoms and depression decreased, whereas their self-confidence has risen.

7) 7 Cups Application



Figure 4.39 7 Cups Application

The communication format and content are aimed to provide in-depth private discussions with therapists, which can incur costs. It provides users with more than 160,000 trained, licensed, and credentialed online therapists who provide online therapy sessions to help users improve their moods. Users can chat with them 24/7, meaning that they are available 24 hours a day, seven days a week.

8) Anxiety Relief Hypnosis Application



Figure 4.40 Anxiety Relief Hypnosis Application

The communication format and content are aimed to provide advice that helps relax and relieve anxiety in the form of audio recorded by hypnotists, together with music and nature-like sounds that can help relieve anxiety and soothe users' moods. The highlight of this application is that it helps reset users' behavior and improve stress response.

9) Happify Application



Figure 4.41 Happify Application

The communication format and content are intended to provide consultation services through a mobile device. This application functions as a space to overcome negativity and stress, allowing users to control their thoughts and feelings. It helps users to overcome stress, anxiety, or depression by acting as a tool to guide users with techniques to control thoughts and feelings. According to the research, 86 percent of all users are happier with their lives after using this application for 2 months.

10) Talkspace Application



Figure 4.42 Talkspace Application

The communication format and content are centered on providing consultation services. This application functions as an online therapist who can be easily connected with users, making it convenient and cheap. It ensures that all information is kept confidential. This application helps manage anxiety, stress, as well as a chronic depressive disorder. Moreover, this application acts as an online therapist, offering both free and paid therapists. However, the cost incurred depends on a variety of factors if users require the services of a specific therapist. For example, it depends on each therapist, the information sought, and the process of the therapy. Within the application, there are over 1,000 licensed therapists who specialize in anxiety, phobias, and depressive disorders with whom users can openly communicate. According to the contract, it ensures that all information is kept confidential for medical purposes.

The format and content of communication in terms of depression prevention through applications in Thailand.

There are 4 popular applications in Thailand as follows:

1) Ooca Application



Figure 4.43 Ooca Application

The communication format and content are intended to serve as a mental issues counselor where users can seek both physical and mental consultation services from experts in each field and can choose their preferred consultant that fits their preferred time since this application can automatically manage and reserve appointment queues for users. The content of this application focuses on psychotherapy. If the psychologist deems it necessary that users require medication, he or she will recommend the nearest hospitals to users. As for the cost, it charges

users for a unit of 15 minutes and 30 minutes. In addition, the cost range may vary depending on each therapist. The advantage of this application is that it's convenient for the users as it assists them with time and appointment management without requiring them to physically be at the hospital. On the other hand, the disadvantage is that the service fee can be quite high.

2) Mindfit Application



Figure 4.44 Mindfit Application

The communication format and content are intended to help to fix a depressive disorder in teenagers by presenting content that provides the self-evaluation form of the depressive disorder called the 9-question Palungjai evaluation form. 6 activities can help alleviate sadness and many more. There is also a cartoon character called “Mind” who is a teenager that has recovered from depressive disorder who is now acting as a friend to accompany said activities. The number of activities is determined by the level of Palungjai point assessed at the beginning. Activities may take the following forms:

- (1) Improve awareness, including self-awareness, negative thinking awareness, and how to deal with it
- (2) Improve problem-solving skills, including activities that help promote happiness and activities that involve social interaction
- (3) Improve appropriate behavior, including self-development and life adjustment
- (4) Improve positive thinking, including mindfulness practice and the sharing of good stories.

(5) Improve oneself, including sharing what one likes and dislikes, practicing social skills, and undergoing adaptation training.

(6) Improve life goals, including trying new foods and exploring new places.

The aforementioned activities must be completed at least 3 times in 3 weeks, consecutively. However, if the user's mental health has not improved, Mind will advise them to consult with the hotline 1323 or nearby hospitals.

3) Sabaijai Application



Figure 4.45 Sabaijai Application that Helps to Reduce the Risk of Suicide

The communication format and content are designed to present a mental health quiz that will help prevent suicidal thoughts and reduce suicide risk, which is established by Khon Kaen Psychiatry Hospital. It is designed from a psychiatrist's point of view and developed by the Department of Mental Health to create a suicide prevention system built with a database system that aims to help screen risk groups as well as surveillance systems. This application provides free access to a suicide risk evaluation form which consists of 9 questions. If users encounter difficulties, they can contact hotline 1323. This application will help stop suicidal thoughts and untangle confusion for them to find someone to talk to via mental health hotline. The content of this application also focuses on empowerment by demonstrating the harmful effects of suicide and helps improve users' moods until they eventually feel more lifted.

4) SmileHub Application



Figure 4.46 SmileHub Application

The communication format and content are intended to promote everyone's mental health. It serves as a source of mental health knowledge for users, resulting in happiness, smiles, and encouragement. There is an electronic mental health evaluation form within the application that fits the lifestyle of people in modern society and is easier and faster to access. It aims to assist users in self-evaluating their initial mental health, which is one way of dealing with and preventing mental health issues that may arise shortly.

4.1.4 The Format and Content of Communication via Facebook

According to the research, Facebook has become a popular tool for communicating depressive disorder, which can be done in a variety of forms. There are 28 pages worldwide and 93 pages in Thailand, which are as follows:

The format and content of the communication in terms of depression prevention through a Facebook page in foreign countries.

28 popular Facebook pages communicate about the depressive disorder (Retrieved on 18 June 2020)

According to the research, the majority of Facebook pages contain content that provides advice to encourage people with issues. Some pages provide information about depressive disorder in terms of definition, causes, factors, as well as clinical practice guidelines in the form of text, audio, and video. They also provide communication spaces for each poster and receiver to exchange information. Research also found that health articles shared on various Facebook pages may

contain unreliable information that must be taken with more caution and carefully checked before sharing.

A study conducted by Health Feedback in collaboration with the Credibility Coalition verified the top 100 hit health news stories in 2019 from popular pages around the world, such as Time, NPR, the Huffington Post, Daily Mail, CNN, etc. It discovered that 3/4 out of 10 most shared articles have provided information that leads to misunderstanding. As a result, it can be concluded that the format and content of communication in terms of preventive depressive disorder shared on Facebook is not a space that truly promotes mental health. On the other hand, it may cause users to become overly anxious, which can lead to stress and subsequent mental health problems, potentially increasing the risk of depressive disorder.

As for the Facebook content in foreign countries, it can be divided based on its form of content as follows:

- 1) Facebook pages that have the format and content of the communication that aims to provide knowledge, raise awareness, and provide health care guidance. (13 pages)

They primarily provide content about depressive disorder in terms of definition, causes, factors, clinical practice guidelines, and self-evaluation systems to keep users from becoming stuck in depression, in the form of text, audio, and video. It also provides spaces for communication and information exchange to bring depressed people together. The highlight of these Facebook pages is the status post, which allows people to express their feelings and sometimes post questions for others to comment on. The fact that these Facebook pages are created by general users to express and exchange information, can result in both useful information and information that can cause adverse effects since those users are not real psychiatrists. Instead, they are simply general users that want to participate but lack sufficient knowledge of the depressive disorder. By studying the content about depressive disorder within the pages, it can be construed that they focus on raising awareness, giving health care advice, and preventing depressive disorder, which can be described as follows:

(1) Content that raises awareness, provides health care advice and helps prevent depressive disorder.

It offers information on mental health self-care and guidance on how to handle issues when stepping into stress, such as stress relief methods, emotion control methods, and physical and mental health care guidance to help cope with future health issues.

2) Facebook pages that have format and content of the communication that aims to advise and listen to problems. (15 pages) They primarily provide content that aims to give advice and encouragement. The highlight is that they aim to encourage people with the depressive disorder by providing positive information to encourage, give hope, help recover from mental illness, and relieve stress. They serve as spaces for exchanging comments by sharing knowledge and stories in the form of text, audio, and video while also being spaces to share direct experiences and express depressive and stressful feelings. What can be taken from these pages is a chance to connect and exchange ideas with companions who suffer from the same depressive disorder. As a result, they are spaces where people can go for advice and solutions to health issues that have arisen. By studying the content about depressive disorder within these pages, the content about the treatment of depressive disorder can be described as follows:

(1) The content about the treatment of the depressive disorder.

The overall content is to recommend hospitals and institutions that treat the depressive disorder, such as recommending hospitals, psychiatric institutions, rehabs, clinics that offer treatment, as well as ways to meet doctors and psychiatrists who are experts in treatment, including ways to access the consultation.

The format and content of the communication in terms of depression prevention through the Facebook page in Thailand. 93 popular Facebook pages communicate about the depressive disorder (Retrieved on 7 December 2020)

According to the research, the majority of the pages provide knowledge about depressive disorder in terms of definition, causes, disorder factors, clinical practice guidance, methods for self-prevention of depression in the form of text, audio, and video. They also serve as spaces for users to communicate and exchange information, as well as spaces to recommend institutions or hospitals that provide treatment. The

aim of Facebook page creation in Thailand can be differentiated into 2 types which are 73 Facebook pages that are created for community use and 20 pages created for private use. Their contents can be differentiated as follows:

1) Facebook pages that have format and content that aim to communicate knowledge, raise awareness and provide health care guidance. (22 pages)

They primarily provide content about depressive disorder in terms of definition, causes, disorder factors, clinical practice guidelines, disorder prevention in the form of text, audio, and video. They also provide articles and questions for people to answer. The fact that these Facebook pages are created by general users to express and exchange information, can result in both useful information and information that can cause adverse effects since those users are not real psychiatrists. Instead, they are simply general users who want to participate but lack sufficient knowledge of the depressive disorder. By studying the content about depressive disorder within the pages, the contents can be differentiated as follows:

(1) Content about the definition of depressive disorder the content defines depressive disorder in terms of its meaning and symptoms. The purpose can be divided as follows:

(1.1) To provide the meaning of depressive disorder by demonstrating the meaning, causes of the disorder, levels, and degree of severity, etc.

(1.2) To report various types of depressive disorders, such as identifying existing types of disorders and their symptoms and characteristics.

(1.3) To demonstrate the symptoms of the depressive disorder by presenting the content describing the symptoms, how to recognize oneself and family members who might have the disorder so that the readers can apply to observe oneself and people near them to see if they are at high risk of depressive disorder.

(2) Content about factors and causes of depressive disorder The purpose can be divided as follows:

(2.1) To explain various factors and convey causes that lead to depressive disorder, such as identifying the crucial factors in relation to the causes of depressive disorder. In terms of the causes of the disorder, it was found that they

interact with various aspects, such as personality and environment. However, these pages aim for readers to recognize what triggers depressive disorder so that they are aware of the disease and to prevent the risk.

(3) Content about how to raise awareness about health care and depressive disorder prevention The goals can be divided as follows:

(3.1) To provide self-care information, such as how to handle stress and how to control emotions in order to use it to care for one's mental health and cope with potential future health issues.

(3.2) To provide information on how to handle depressive disorder, such as suggesting on techniques about self-care, how to avoid the risk of depressive disorder, how to pull oneself out of stress, which is the cause of depressive disorder, etc.

(3.3) To provide techniques for preventing depressive disorder, such as the content that raises awareness, provides knowledge about prevention, suggests various ways to help prevent depression, provides techniques for preventing the occurrence of depression, etc.

2) Facebook pages that have format and content of the communication that aims to provide health care advice and listen to problems to cure and reduce depression.

The majority of the contents consist of advice, encouragement, as well as spaces to exchange opinions. There are in total of 53 pages that provide positive information, boost encouragement, give hope and happiness by way of sharing experiences and knowledge in the form of text, audio, and video. The music will help relax and calm the mind. Moreover, they provide spaces for posters and receivers to communicate and exchange information. The majority of the contents shared are personal stories, direct experiences, storytelling, and expressions of feelings of depressed individuals. What can be taken from these pages is the chance to connect and exchange ideas with companions that suffer from the same depressive disorder. According to the study on depressive disorder contained within these pages, it was found that they focus on the definition of depressive disorder, factors, and causes of the disorder as follows:

(1) Content about the definition of depressive disorder the content is to define depressive disorder by explaining its meaning, types, symptoms, and severity levels to convey the character of each symptom. The aim is to educate the readers so that they can understand the correct definition of a depressive disorder.

(2) Content about factors and causes of depressive disorder to explain various factors and convey causes that lead to depressive disorder, such as identifying the crucial factors concerning the causes of depressive disorder. In terms of the causes of the disorder, it was found that they interact with various aspects such as personality and environment. However, these pages aim for readers to recognize what triggers depressive disorder so that they are aware of the disease and to prevent that risk.

3) Facebook pages that have format and content of the communication that aim to suggest hospitals and institutions which offer treatment for depressive disorder. (17 pages)

They aim to suggest hospitals and institutions that provide treatment for depressive disorder, as well as public and private psychiatric services available. They also aim to suggest the best way to get to the location and include content that provides academic knowledge, preventive methods, mental health recovery guidelines, self-stress relief methods in the form of text, audio, and video. This covers sharing articles about the depressive disorder and providing a space for Q&A between posters and readers. According to the study about depressive disorder found on these pages, they focus on raising awareness about health care and depressive disorder prevention, which can be explained as follows:

(1) Content that raises awareness about health care and depressive disorder prevention The content focuses on providing information about mental health care methods by oneself as well as guidelines on how to cope with the first stage of stress and anxiety. The purpose is to provide information about how to care for one's mental health, such as stress management methods, for users to use as guidelines for self-care and dealing with potential health issues. It also provides information on how to deal with depressive disorder, such as health care tips and techniques, how to avoid the risk of depressive disorder, and how to get out of stress which is the cause of the depressive disorder.

4.1.5 Format and Content of Communication in Terms of Depression Prevention via Twitter

According to the study of format and content of communication in terms of depression prevention through Twitter in Thailand and foreign countries, there are 176 pages in Thailand. The majority of the pages contain negative messages that reflect unfortunate life events, harmful thoughts, or suicidal thoughts. Following that are posts that express feelings, self-harm, wrist cutting, arm cutting pictures in the form of comics, video clips, and occasionally true event images which can make Twitter a supporter for suicidal attempts, potentially leading to imitative behavior. Lastly, it was found that there are very few messages that promote useful knowledge about depressive disorder in Thailand. However, in foreign countries, there are 1,412 pages where the most seen content is the post that provides useful information about the depressive disorder. Following that are expressive posts and negative messages that reflect unfortunate life events, harmful thoughts, or suicidal thoughts, respectively. Therefore, in contrast to Thailand, it can be seen that Twitter usage in foreign countries is more focused on positive content to prevent, maintain, and encouraging rather than supporting suicidal thoughts.

The Format and content of communication in terms of depression prevention through Twitter in foreign countries.

This study only selected 1,412 pages with a large number of followers. (Retrieved on 7 December 2020) The most common types of content in this platform are positive posts, which are messages of support, knowledge, and encouragement, as well as self-care guidelines. They also provide a significant amount of useful guidance on how to prevent depressive disorder compared to the overall amount of content. Following that are expressive posts that convey private daily stories, posts conveying self-harm or suicidal thoughts, and finally, posts depicting self-harm pictures such as blood, a parody of suicide by hanging, only in the form of comics. The wrist cutting and arm cutting pictures are scarce. By presenting useful content, Twitter communicates empowering messages rather than ones of sorrow and grief. As a result, Twitter has become an integral part of the support system for raising awareness about mental health care and has developed into another channel for preventing depressive disorder, accompanied by medical teams who are also available

to provide advice. Therefore, the communication of depressive disorder through Twitter in foreign countries is suitable to use in communicating depression prevention, which can be differentiated into four groups as follows:

1) Twitter pages that contain posts that convey feelings, and private stories (376 pages)

The content conveys the feelings that the posters wished to convey to the world to know. They wish to express their current feelings at that time. Following are some examples of content that appeared on Twitter:

Depression for me feels like your crawling out of a muddy hole constantly it's dark your existing not living your body is so heavy u just want some light to feel like your living.

Depression is experiencing life being lifeless. It is not the opposite of happiness, it's the opposite of life and a side effect of death.

This is kind of how I feel when I meet new people, I'm just the type of girl people leave after a while and replace with someone who is gonna always be better than me.

What better way to release your hatred, sorrow, anger, and hurt, than to paint a red town.

Some days you wake up feeling you can conquer the World. Yet some days you wake up feeling defeated, and you just want to lie in bed feeling sorry for yourself.

In conclusion, all messages are intended to convey the posters' sorrow, boredom, tiredness, and discouragement. They want to make the readers feel their sadness, which has been disguised with smiles as if they are happy to hide their true feelings. People close to them may be unaware that they already suffer from a depressive disorder.

2) Twitter pages that contain negative posts that reflect unfortunate life events/harmful or suicidal thoughts. (187 pages)

The content conveys the poster's unfortunate life events, as well as their thoughts, needs, and need to self-injure. The posters were attempting to communicate to the world that they needed to die and commit suicide by mentioning

various forms of self-harm, torturing methods, including suicide methods. All of the contents expressed thoughts and wishes that the brain was instructed to think as a result of sad emotion being experienced at that moment. Following are examples of content that appeared in the post that conveys negative messages reflecting unfortunate life events/harmful or suicidal thoughts on Twitter:

I just hope my death makes more cents than my life.

I don't believe that there's any way out. there's nothing left for me. I'm worthless and a waste of space. I don't deserve to be here.

Depression is killing me:

This is me, feel so unworthy and sad. Generally, I feel like want to commit suicide but it's haram, I'm stuck. Ya Allah, please give me the strength to live in this world and pray to you every day. I can't hold it anymore I'm so tired.

People who die by suicide don't want to end their life, they just want to end their pain.

In conclusion, all messages are intended to convey the posters' true feelings, despair, and non-existence. They wanted to let the readers know that they wished to hurt themselves and that they wanted to die. They needed someone who could relate to them. Rather than drawing attention, the posters sought to express their thoughts and inform those close to them about their current needs, pains, and sorrows. They required understanding, not encouragement.

3) Twitter pages that contain pictures of self-harm, wrist cutting, arm cutting, blood, and a pile of blood. (61 pages)

The content presents pictures of self-harming behaviors, such as wrist cutting, blood on the wrist, cuts, wounds, and blood-soaked wounds that are meant for others to be seen. They are utmost shocking, depressing, terrifying, and frightening. The pictures are accompanied by sarcastic captions, death challenges, satisfaction with self-torture, and satisfaction with physical pain. They elicit feelings of joy when they see blood constantly flowing and dripping without realizing that the person was injured or suffered. They were unconcerned about the possibility of death.

4) Twitter pages that contain posts that provide useful knowledge about the depressive disorder. (787 pages)

The content provides useful information about depressive disorder, including content that encourages, advice on how to observe oneself and those close to them to reduce loss in society. It also discusses the common causes of suicide attempts and the warning signs of suicide ideation, including guidelines for preventing depressive disorder and suicide. The following are some examples of content that appeared in the post that convey positive messages to provide useful knowledge about depressive disorder:

We must ALL continue to fight the good fight where there is life there still is #HOPE! #Depression #Prayer

Know someone suffering from #depression?

Depression is #real and so is a mental illness we need to come together and help lift each other! "Leave Your Demons" is out now.

Evidence that gardening is beneficial for #depression and methods to support engagement, through #OccupationalTherapy!

Families for Depression Awareness helps families recognize and cope with depression and bipolar disorder to get people well and prevent suicides.

The format and content of communication in terms of depression prevention through Twitter in Thailand.

Given the abundance of Twitter pages dedicated to depressive disorder, this study selected only 176 pages with a large number of. (Retrieved on 7 December 2020) The majority of content found is negative messages that reflect current unfortunate life events, as well as posts expressing self-harm or suicidal thoughts. Following that are the posts revealing daily private stories and pictures of self-harm, such as wrist slitting and arm slitting in the form of comic and actual events. This includes videos created to imitate wrist slitting and hanging. On this page, pictures and videos from actual events are occasionally shared. By presenting content that is tragic, terrifying, and sorrowful, Twitter has evolved into a space that encourages imitation of various forms of self-harm through content sharing, method sharing, and message sharing that arouse the need to commit suicide. The unexpected outcome is

that Twitter may be a social media platform that is ripe for suicide, as it can lead to imitative behavior, which can eventually serve as a motivation for suicide. Simultaneously, it was found that, in comparison to the majority of all content, Thai Twitter contains very few posts promoting useful knowledge about the depressive disorder. Therefore, the central platform, like Twitter in Thailand, is unsuitable for communicating about the preventive depressive disorder, as it conveys negative rather than positive content. This study classified the posts based on their message type, which can be differentiated into 4 groups as follows:

1) Pages on Twitter that contain messages that express feelings and reveal personal stories. (376 pages) These pages present the content that aims to reveal thoughts and feelings that the posters have faced in daily life and to express their feelings at the time. The following are some examples of content that expresses feelings and reveals private stories on Twitter:

I have to fake my smile and laughter to avoid being called a freak. Somebody might think that I seek attention. They assumed I was fine just because I smiled, but the person who smiles has scars all over her wrists and arms. Not all people who laugh are happy.

I'm sorry I'm still alive. Don't call me an attention seeker. On the day that I've tried and failed, you blamed me for wanting attention. If one day I try and succeed, don't you dare care about me because it's too late.

I want to escape reality. I want to go see people in heaven. Do they still wait for me? Every day is excruciatingly painful for me. I was physically and mentally bullied. No one truly loves me. Everyone is a hypocrite. How much longer can I put up with this?

In conclusion, all the posts are messages that posters intended to convey to readers their sorrow, boredom, tiredness, discouragement, and sadness. The true feelings are masked by fake smiles and happiness when in public. Friends and people close to them may fail to notice and acknowledge that they are suffering from a depressive disorder.

2) Pages on Twitter that contain negative messages that reflect unfortunate life events/self-harm or suicidal thoughts. (97 pages) Pages present content that is aimed to convey feelings that reflect unfortunate life events, including thoughts and the need to harm oneself. The posters wish to let others know their need to die and commit suicide by mentioning ways of self-harm, ways of self-torture, including ways to commit suicide. The entire content is the expression of thoughts and needs that the brain was instructed to think as a result of the sad emotion at the time. The following are some examples of content that expresses negative messages that reflect unfortunate life events/self-harm or suicidal thoughts on Twitter:

Today is the day that I cried a lot and choked myself. How much longer do I have to endure?

The world is not any less worth living in, I'm the one who no longer wishes to live. #depressivedisorder

How come I didn't die at that time mom fell in the toilet? Why did I try so hard to be born?

My dream is to die. My dream is to be oblivious to what's going on in this world.

I found myself wanting to cry all of a sudden. If I cry too much, I may reach for a cutter rather than tissue paper.

How many pills do I need to take to die?

I must die for anyone to love me. I have to die for someone to miss me. I have to die so that everyone can understand me. I have to die because of everyone.

In conclusion, all of the posts are messages that the posters wanted to convey to the readers their despair, non-existence, self-harming and suicidal thoughts, and needs to be understood. The posters aim to release their thoughts and to let people close to them know their needs, pains, and sufferings that they were facing rather than just drawing attention. They simply want to understand, not just an encouragement.

3) Twitter that contains pictures of self-harm, wrist cutting, arm cutting, blood, and a pile of blood. (22 pages) The content presents pictures of self-harm, such as wrist cutting, blood on the wrist, cuts, wounds, and blood-soaked

wounds that are meant for others to see. They are utmost shocking, depressing, terrifying, and scary. The pictures are accompanied by sarcastic words, death challenges, self-torture satisfaction, and the pleasure of physical pain. They convey feelings of joy when they see blood constantly flowing and dripping without realizing that that person was injured or suffered. They were unconcerned about the possibility of death.

4.2 Methods of Communicating Health Issues in Terms of Depression Prevention through Social Media Platforms

According to the study and survey of the methods of depression prevention through social media platforms in Thailand and foreign countries, they can be classified into 5 categories as follows

- 1) Methods of communicating depression prevention through websites
- 2) Methods of communicating depression prevention through Youtube
- 3) Methods of communicating depression prevention through applications
- 4) Methods of communicating depression prevention through Facebook
- 5) Methods of communicating depression prevention through Twitter

Methods of communicating health issues in terms of depression prevention through social media platforms in Thailand and foreign countries can be described as follows:

4.2.1 Methods of Communicating Depression Prevention through Websites

By studying the method of communicating depression prevention through websites in both Thailand and foreign countries, it was found that most websites present information in aspects of reporting depression incidence statistics, such as providing knowledge about causes and factors that lead to depressive disorder, and definition of depressive disorder, to raise awareness among readers so that they acknowledge the various impacts of depressive disorder. It also guides how to prevent and how to care for oneself by using evaluation forms to measure the level of stress and depression. It includes information about institutions and hospitals that offer

treatment to readers. Methods of communicating depression prevention through websites can be differentiated into 5 types based on their ways of communication which are as follows:

Methods of communicating depression prevention through websites in foreign countries

According to the study of methods of communicating depression prevention through websites in Thailand, they can be divided based on their purposes as follows:

1) A method of communication through websites for reporting on the incidence of major depressive disorders, which are websites for medical purposes in foreign countries, such as mental health organization websites, national mental health institutions, etc.

Mostly, it can be both one-way communication and two-way communication, which can be differentiated into broad categories, such as journals and articles about mental health, researches, statistics, research database publications, leaflets, information sheets, press releases and activities, Q&A, and so on to allow readers to access according to their preferences. It also provides access to professional doctors to request more details through websites. However, the key point is that there are explicit and specific main sections divided within the websites, for instance, sections about mental health issues on the front page or "Talk to doctor" section and "Search for information about depressive disorder" section. It can be seen that with psychiatric institutions providing clear and precise information, users can quickly and easily search for what they need.

2) A method of communication through websites for providing knowledge that aims to raise awareness and health care guidelines, such as Health website and Psychiatric Times, etc.

A method of communicating depression prevention through websites for providing knowledge that aims to raise awareness and health care guidelines can primarily be one-way communication and two-way communication with clear organized content. It is the method of communication that is presented in the form of articles, researches, video clips, data blogs, slideshows, including infographics. It is the medium through which health knowledge is established, which is information that helps raise awareness and importance on health care, disease prevention, self-

observation, including disease definition and the causes of the disease. The content has been organized categorized broadly, including daily mental health news and articles. The websites have been classified into various mental health groups, such as health, news, food, weight loss, beauty, fitness, lifestyle, magazine, video, top 10 events, hospitals, technology, special report, questionnaires on mental health issues, data blogs, slideshows, newsletters, etc. Although there are sections within each website, they are quite broad and generic, with no particular emphasis on the mental health section, depressive disorder section, or information about the disorder. As a result, users must click into those sections to find what they need or select the function “Search” and type what they’re looking for quickly and easily, rather than randomly enter each section.

3) A method of communication through websites for providing advice on health care and problems discussions, such as Richardson Psychiatric Associates and Net Doctor websites.

A method of communicating depression prevention through websites for providing advice on health care and problems discussions to cure and reduce depression can primarily be two-way communication which aims to provide consultation and online companionship. Users can seek consultation with psychiatrists, psychologists, or volunteers who are trained to help users with their problems and provide treatment to alleviate depression. Users can communicate with the counselors instantly and privately at any time and from anywhere. The websites are organized into specific categories which are mainly about mental health, depression, and stress consultation, including patient and visitor handbooks, online service for patients, doctors and medical personnel, medical department, international service center, research institutions, clinical experiment search, treatment program, self-examination, depression test, anxiety test, self-help, problem-solving, how to cure depression, and how to reduce anxiety, etc. However, the highlight is that because they are specialized websites, the sections that appeared on the websites are so clear that users can easily see which sections they want to access. Therefore, they can choose to access the source of information about depression quickly and easily based on their preferences.

4) A method of communication through websites for recommending hospitals and institutions that provide treatment for depressive disorder, such as Infinity Hope Center and Health care global websites, etc.

A method of communicating depression prevention through websites for recommending hospitals and institutions that provide treatment for depressive disorder can primarily be both one-way communication and two-way communication in which there are lists of clinics and hospitals with contact information, how to get there, price, doctor recommendations, famous therapist recommendations, and so on for users to choose from. In addition, users can inquire about treatment directly via an online system on the websites, where each website has broad organized categories, including a hospitals finder, a clinic finder, hospital schedule reservation, doctor's appointment, psychiatrist's appointment, etc.

5) A method of communication through websites for providing information about treatment to reduce depression, such as Mayo Clinic, Best Mental Health websites, Mental Health America and Compassion Mental Health websites, etc.

A method of communicating depression prevention through websites for providing information about treatment to reduce depression can primarily be both one-way communication and two-way communication, and they are organized into broad categories, such as information about hospital and service work. Some subsections are common between these websites, such as diseases treated, treatment procedures, treatment methods, treatment forms, treatment locations, treatment costs, psychiatric examination costs, etc.

Methods of communicating depression prevention through websites in Thailand

The study found that methods of communicating depression prevention through websites in Thailand can be differentiated as follows:

1) A method of communication through websites for reporting on the incidence of major depressive disorders

There are mostly medical websites, such as the mental health department's website and Thai Health Promotion Foundation's website.

The most common method of communication through websites for reporting on the incidence of major depressive disorders is one-way communication, which is communication in the form of reporting medical treatment information which includes articles, journals, researches, video clips that ignite the fire in discouraged people to rise again. It includes infographics which are the medium for establishing knowledge about health, health care which raises awareness about taking care of one's health and preventing mental health issues, including organizing mental health services for patients and the general public to report the incidence of major depressive disorder in terms of the number of patients and people who seek treatment, etc. The websites are organized into broad categories, such as daily mental health news, articles about mental health, research databases, questionnaires about mental health, E-Library, academic resource, and technology. Moreover, there are pages for Q&A about the disease, medicine, health issues, and doctors. Although the websites are divided into sections, the sections are quite broad and are not explicitly identified as a mental health section, a depressive disorder, or information about the depressive disorder. Therefore, users must randomly click on each section to find what they are looking for, or choose the function "Search" and type what they want to find quickly and easily, rather than randomly clicking on each section.

2) A method of communication through websites for providing knowledge that aims to raise awareness and health care guidelines, such as good life update website, Health 2 click website and Sanook.com, etc.

The most common methods of communicating depression prevention through websites for providing knowledge that aims to raise awareness and health care guidelines are one-way communication and two-way communication, which provide details about medical information and knowledge by presenting in the form of press releases, articles, books, journals and video presentations to let users access according to their preferences. However, the highlight is that, while the websites are divided into sections, the sections are quite broad, for instance, the road to good health, general health care, women's health, men's health, mental health, food recipe, healthy food, fitness, weight loss and health tips, techniques for reducing risk, professional health care routine, alternative medicine, herbs, supplementary food and vitamin, health check-up, books, publications, reader reviews, articles, and magazines

for health, etc. Especially, publication section usually contains articles that provide knowledge about the depressive disorder, causes, symptoms, and treatments by professional doctors, as well as books that can be retrieved online (E-book) that provide knowledge about depressive disorder in terms of definition, starting with the first stage symptoms, initial evaluation, treatment, and how to handle people close to you who suffer from this disorder with language and pictures that are easy to understand, including practical advice. Although there is a lot of information about the disorder, the aforementioned sections are complicatedly divided, making it difficult for readers to get the big picture of the overall content of the websites and key points. As a result, it can be difficult and time-consuming to search for preferred sections. However, to find information about the disorder, users can choose the function "Search" and type what they want to find instead of randomly selecting each section, which saves time. In addition, users can directly access what they want quickly and access the information easily without wasting time picking each section aimlessly.

3) A method of communication through websites for providing advice on health care and problems discussions, such as Samaritans Thailand, iStrong, and OneMan Counselor websites, etc.

The most common method of communicating depression prevention through websites for providing advice on health care and problems discussions to cure and reduce depression is two-way communication, which aims to provide consultation and companion service through phone and online. Users can seek out psychiatrists, psychologists, and volunteers who are well trained to provide advice and listen to their problems to cure and reduce depression. Users can communicate with advisers right away at any time and from anywhere privately. The websites are organized into clear specific categories in terms of general health, such as mental health for children, mental health for adults, mental health consultation service, meditation for mental health, mental health therapist, consultation service, stress test, cost, adviser, psychology consultation, online appointment, contact information, etc.

4) A method of communication through websites for recommending hospitals and institutions that provide treatment for depressive disorder, such as HonestDocs and Haamor websites, etc.

A method of communicating depression prevention through websites for recommending hospitals and institutions that provide treatment for depressive disorder can primarily be both one-way communication and two-way communication where there are lists of clinics and hospitals with contact information, maps, how to get to the locations for users to search by themselves. Users can choose the link that they are interested in, then they will be linked to other websites automatically. There are a variety of health-related website recommendations that users can chat on and ask questions directly on the websites. The websites are organized into broad categories such as disease, medication, hospital, clinic, and doctor search, as well as hospital appointment, etc.

5) A method of communication through websites for providing information about treatment to reduce depression, such as psychiatric clinic websites, psychiatric hospitals including Somdet Chaopraya Institute of Psychiatry website, Khon Kaen Rajanagarindra Psychiatric Hospital website, Suanprung Hospital website, Songkhla Rajanagarindra Psychiatric Hospital website, Kalaya Rajanagarindra Institute website, Thanyarak Institute website and Srithanya Hospital website, etc.

A method of communicating depression prevention through websites for providing information about treatment to reduce depression can primarily be both one-way communication and two-way communication where they are organized into broad categories, such as information about hospitals and service works. Some subsections are common between these websites, such as diseases treated, treatment procedures, treatment methods, the form of treatment, the treatment of mental diseases, mental health knowledge for the public, etc.

4.2.2 Methods of Communicating Depression Prevention through YouTube

The study found that methods of communicating depression prevention through YouTube are used in both Thailand and foreign countries as a popular social media tool where users can upload and download videos. In addition, there is no additional cost for video service. There are both videos created by amateur as well as professionals, thus it can be considered as another form of new media. The methods of communication through YouTube focus on publishing knowledge and

disseminating news in the format that everyone of any age, whether healthy or blind, can access by listening to the audio rather than looking at the pictures. Moreover, the deaf can use this channel to access and learn through this channel. YouTube is widely regarded as the most important video-based learning platform, and it is the first platform that comes to mind of most people. Nowadays, academics find it important to push this network into a powerful tool of education. YouTube has its way of presenting and communicating that is interesting with its color, sound, and video system.

Users can watch and share videos, including leave comments in the form of conversation, which is becoming increasingly popular nowadays. Users or general members can upload a video to share their stories, short films, realities, video clips that are short movies, interviews of professional doctors, interviews with experienced individuals, special shows that present the way of treatment and remedy, as well as shows that present how to cope with depression. It also contains helpful tips to live a happier life, self-depression quizzes, animations about depressive disorder, including interesting infographics. This is the channel that is widely used among ministries of health all over the world. They choose this platform as a new and innovative health communication to provide knowledge and encourage health care behavior. They are positive health care information that is simple to comprehend and appealing, as they incorporate both visual and audio elements to reach a wider range of user age groups. More importantly, the contents communicated are about various aspects of depressive disorder, such as the definition of the disorder, causes of the disorder, and treatment, accompanied by psychiatrists offering advice and caretaking, including how to redirect emotions and thoughts towards a more positive direction.

1) A method of communication through YouTube for reporting the definition of depressive disorder

It primarily describes what depression is, the causes of the disorder, the level of severity, the types of disorder, its characteristics and symptoms, how to recognize them, factors, and causes of the disorder. The majority of the communication is one-way communication in the form of a program that presents mental and physical health, elderly health, general knowledge which includes medication, food, fitness, health news. This platform features highly qualified doctors

who provide advice. It can be considered an additional platform for health care that should not be overlooked. The program's format is found to use informal language which is simple to understand. The presentation format is interesting, with celebrity guests, singers, famous people to liven up the show. This includes videos that arouse and reignite people who are discouraged. The infographic is included as a media that generates knowledge about health, health care while raising awareness on healthy self-care.

2) A method of communication through YouTube for providing knowledge, raising awareness, and health care guidelines

The most common method of communication through YouTube for providing knowledge, raising awareness, and health care guidelines are one-way communication that gives useful details by presenting in the form of video, interviews for the use of self-care, such as how to handle stress, how to control emotions, how to relieve stress, how to take care of mental and physical health, and so on for mental care and to cope with health issues that may arise, and to provide depression prevention tips, such as knowledge about prevention, practice guidelines, and health recovery, as well as guidelines on how to care for one's own and family members' mental health.

3) A method of communication through YouTube for providing advice to cure depressive disorder

The method describes how to cure the depressive disorder, such as how to cure, the form of treatment, recommended treatment locations to recommend hospitals and institutions for depression treatment, etc.

The most common method of communication is one-way communication, which provides advice to help cure and reduce depression, such as mental health for children, mental for adults, mental health consultations, etc.

4.2.3 Methods of Communicating Depression Prevention through Applications

Mostly, the methods of communication through applications are adapted into various forms, such as being a tool for data storage, a tool for publishing and sharing news and information, a tool for communicating between the government and private

sectors, and a tool for reducing depression in the form of the platform to provide knowledge about the disorder and finding the way for treatment.

According to the study, there are four popular applications in Thailand and ten applications in foreign countries that are used to communicate depression which can be described as follows:

Methods of communicating depression prevention through applications in foreign countries

There are 10 popular applications in foreign countries as follows:

1) Calm Application

It is a free 2017-era application that provides advice via smartphone on both iOS and Android, which has become very popular. This application is designed to reduce anxiety, improve sleep quality, and make users happier.

2) Headspace Application

It is a free application that serves as a tool to help users practice mindfulness and meditation to calm the mind.

3) Moodnotes Application

It's a paid application with a price of \$3.99 (179 in Thai Baht). It provides advice via smartphone on both iOS and Android. This application functions as a thoughts and moods journal, reporting the progress of users and providing them with in-depth useful information to help them adjust their mood and their ways of thinking.

4) Moodpath Application

It is a free application that provides advice via smartphone on both iOS and Android. It serves as a pocket-sized companion for mental health. This application aims to help users get through tough times by providing a daily quiz that measures users' quality of life and helps screen for depressive disorders.

5) Pacifica Application

It is a free application that provides advice through a smartphone on both iOS and Android. It serves as a tool to help manage anxiety and stress in users' daily life.

6) SuperBetter Application

It is a free application that provides advice through a smartphone on both iOS and Android. This application functions as a game that improves users' skills and strengthens the mind, which can lead to changes in personality, moods, and thoughts. This application also helps with depressive disorder.

7) Cups Application

It is a free application that provides advice through a smartphone on both iOS and Android. However, if users require an in-depth private session with the therapist, it might incur extra costs. This application functions as an online therapist, assisting in the improvement of one's mood. Users can communicate with the therapist 24/7, meaning that it provides 24-hour service, seven days a week.

8) Anxiety Relief Hypnosis Application

It is a free application that provides advice through a smartphone on both iOS and Android. This application qualifies to advise users, help them relax, and reduce anxiety through the use of audio recorded by hypnotists accompanied by music and nature-like sound to help calm the mood and improve sleep quality.

9) Happify Application

It is a free application that provides advice through a smartphone on both iOS and Android. This application serves as a space to overcome negative thinking and stress, which can help users control their thoughts and feelings.

10) Talkspace Application

It is a free application that provides advice through a smartphone on both iOS and Android. However, if users want to access more in-depth information, there can be an extra cost. This application provides therapy in which users can easily and conveniently connect at a low cost. Also, it assures that all information is kept confidential. This application functions to help manage anxiety, stress, including depressive disorder with the help of therapists.

Methods of communicating depression prevention through applications in Thailand

1) Ooca Application

It is a free application that provides advice through a smartphone on both iOS and Android. However, this application is suitable solely for advice seeking.

This application is limited to providing mental therapy under the supervision of doctors and psychiatrists. The application's advantage is that it saves users time and effort by eliminating the need to leave the house and wait in line. However, there are a few minor flaws in the system that can be easily addressed, and the cost may be quite high for low-income users.

2) Mindfit Application

It is an application that helps teenagers in overcoming depressive disorder by creating the cartoon character called “Mind”, who is also a teenager who has overcome depression, to help encourage users to participate in activities resembling games. When users finished one activity, they will be rewarded with a star. After completing the number of times required for each activity, they will receive a proud hat. Finally, after completing all activities, they will become the winner of their mind. However, if they do not improve within 2 weeks, Mind will advise them to contact hotline 1323 or the nearest hospital.

3) Sabaijai Application

It is an application developed by Khon Kaen Psychiatry Hospital that analyzes and establishes the application from the psychiatrist and professional's perspectives. It can be downloaded for both iOS and Android. The qualification is that it's an application that helps prevent suicidal thoughts and reduce the risk of suicide. It is developed by the Ministry of Mental Health to identify a way to prevent suicide. Everyone can download it for free, install it on their phone, and use it 24 hours a day. In case there is trouble, users can contact hotline 1323. This application has main sections to release a doubt about the screening form and to find someone to help to talk instantly in the mental health hotline.

4) SmileHub Application

It is a free application that aims to improve mental health for everyone, regardless of age or gender. It can be downloaded for free for both Android and iOS. This application was established out of a need to provide everyone with knowledge about mental health, happiness, smiles, and encouragement. It converted a mental health evaluation form, in the form of a document into a form that is more simple and quick to use, and fits the lifestyle of people in today's modern society. It allows users to assess their initial state of mind on their own.

4.2.4 Methods of Communicating Depression Prevention through Facebook

According to the research conducted in both Thailand and overseas, Facebook is used in a variety of ways to communicate depressive disorder. In Thailand, there are over 93 pages that communicate about the depressive disorder (Retrieved on 7 December 2020) which can be differentiated according to its presentation method as follows:

- 1) A method of communication for providing knowledge about depressive disorder
- 2) A method of communication used to encourage people suffering from depressive disorder
- 3) A method of communication that allows for the exchange of ideas
- 4) A method of communication for providing advice and treatment guidelines

In foreign countries, there are over 28 pages that communicate about the depressive disorder (Retrieved on 7 December 2020) which are categorized by its presentation method as follows:

- 1) A method of communication for providing knowledge, raising awareness, and providing health care guidance
- 2) A method of communication for providing advice and problem discussion

Methods of communicating depression prevention through Facebook in foreign countries

According to the study, many Facebook pages are used to communicate depressive disorder in various ways where there are over popular 28 pages that communicate about depressive disorder in foreign countries. (Retrieved on 7 December 2020) Methods can be summarized as follows:

- 1) A method of communication for providing knowledge, raising awareness, and providing health care guidance (13 pages) It was designed to foster community. The method of communication focuses on sharing knowledge and experience, including presenting self-care guidelines to avoid depression in the form of text, audio, video. It also serves as a space to communicate between the posters and

receivers to exchange information or connect. It is a gathering place for people with a major depressive disorder to get to know one another. The method of communication within the page is two-way communication, in which each poster and receiver can exchange information with each other.

2) A method of communication for providing advice and problem discussion (15 pages) These pages aim to encourage and motivate depressed patients by providing positive information that can help encourage, give hope and happiness, recover the mind, and reduce anxiety. It is also a place to exchange ideas by sharing knowledge, stories in the form of text, audio, and video, together with music that both soothe and lift the mind. It is also a place where patients can share their private stories, direct experiences, occurred stories, and expressions. Mostly, these pages are established by communities, organizations, medical institutions, or hospitals to provide service to the community and public who are looking for advice and solutions to their health issues. It also recommends ways to recover the mind, relax and release stress on one's own in the form of text, audio, and video. The method of communication is two-way communication, which allows each poster and receiver to ask questions and exchange information.

Methods of communicating depression prevention through Facebook in Thailand

According to the findings, there are various types of Facebook pages that are used to communicate depressive disorder. In Thailand, there are over 93 pages that communicate about the depressive disorder. (Retrieved on 7 December 2020) The purpose of these pages can be divided into main two types which are for community use which consists of 73 pages and for private use which consists of 20 pages. The pages can be categorized into four groups based on their presentation style which are as follows: 1) A method of communication for providing knowledge about depressive disorder 2) A method of communication used to encourage people suffering from depressive disorder 3) A method of communication that allows for the exchange of ideas 4) A method of communication for providing advice and treatment guidelines

1) A method of communication for providing knowledge about the depressive disorder (22 pages) It concentrates on providing knowledge about the depressive disorder by sharing personal experiences, including self-care guidelines to

avoid depression, in the form of text, audio, and video. The method of communication is two-way communication, in which each poster and receiver can exchange information back and forth.

2) A method of communication used to encourage people suffering from depressive disorder (25 pages) It focuses on encouraging depressed patients by giving positive information, encouraging, giving hope, and happiness to readers by sharing their experiences in the form of text, audio, and video, which will help entertain the readers. The method of communication is two-way communication, in which each poster and receiver can exchange information back and forth.

3) A method of communication that allows for the exchange of ideas (28 pages) focuses on sharing private stories of patients and stressed people. These pages are places where people can express their feelings. They can sometimes bring them friendships by bringing people with the same disorder together to share their experiences. Therefore, Facebook has become a platform for people to share their feelings.

4) A method of communication for providing advice and treatment guidelines (17 pages) It focuses on providing reliable academic knowledge from experts who provide knowledge and treatment guidance, proper preventive guidance, including how to recover the mind, relax and release one's stress in the form of text, audio, and video. The method of communication is two-way communication, which allows each poster and receiver to exchange information back and forth.

4.2.5 Methods of Communicating Depression Prevention through Twitter

According to the study conducted in both Thailand and overseas, methods of communicating depression prevention through Twitter in both Thailand and overseas are similar. Mostly, communication is used in the way of expressing feelings to convey private stories of patients and stressed people on this platform. Many people enjoy writing negative messages that reflect unfortunate life events that they have experienced in life. In Thailand, the most common method of communication is the posting of pictures of wrist cutting, arm cutting, blood, a pile of blood, and suicide by hanging, in the form of comic and video clip that is meant to be imitated. Sometimes,

there are pictures and video recordings of the actual events. Therefore, Twitter can become a space that supports imitative behavior in self-harm through various torturing methods. The posters have shared content, methods, and verbal messages that trigger a need to die. The unexpected consequence is that Twitter can eventually be used as motivation for suicide, which is in contrast to the method of communication used in foreign countries, which focuses on providing positive messages. Some messages offer support, knowledge, and encouragement, including guidance on how to care for oneself. In comparison to the overall content, it also provides a good deal of advice on how to prevent depressive disorder. It strengthens the mind rather than communicating sadness and grief. Therefore, Twitter has evolved into a space that raises awareness about mental health care and serves as an additional channel for comprehensively preventing depressive disorder. As a result, the communication of depressive disorder through Twitter in foreign countries is suitable for use as depression prevention communication.

For the method of communicating depression prevention through Twitter in Thailand, it was found that there are a lot of pages that communicate about the depressive disorder. As a result, only 176 pages with a large number of followers were chosen for this study. (Retrieved on 7 December 2020)

For foreign countries, it was found that there are a lot of pages that communicate about the depressive disorder. As a result, 1,412 pages with a large number of followers were chosen for this study. (Retrieved on 7 December 2020)

According to the findings of the study, both methods are similar. The method of communication can be categorized into four groups by how it is presented as follows:

- 1) A method of communicating in which feelings are expressed through posts and private stories are revealed.

The posters aim to express their feelings and thoughts. They want to express their daily thoughts and feelings for others to know, and to express the feelings at that time by typing messages, sharing cartoon characters crying, lying down crying, arms over knees sitting position, tears falling, etc. They also share pictures of empty fields, cloudy skies, rainy days, grey skies, withered flowers, messy bedrooms as well as motion videos depicting loneliness, sadness, sorrow, grief, and

despair, among other emotions. The method of communication within the pages is two-way communication, in which each poster and receiver can communicate to ask questions and exchange information back and forth.

2) A method of communicating by posting negative messages that reflect unfortunate life events/self-harm or suicidal thoughts

The posters aim to express their feelings that reflect unfortunate events, the need to die, self-injury, and the need to inform others about their need to die and commit suicide by communicating ways of hurting themselves, self-torturing, and suicide. All contents are the expression of thoughts that the brain is compelled to think as a result of sadness at that time. In addition, they share pictures of cartoon characters being hanged, suicide by hanging, blood-soaked bodies, wounded bodies, etc. The method of communication is two-way communication, which allows each poster and receiver to ask questions and exchange information back and forth.

3) A method of communicating by posting pictures of self-harm, wrist cutting, arm cutting, blood, and a pile of blood

The poster aims to reveal the pictures of self-harm by cutting their wrists, blood on their wrists, cutting, wounds, blood-soaked wounds, and bleeding for others to see, as well as posting captions with sarcastic words, death challenge, the satisfaction of seeing oneself hurt, the satisfaction of physical pain, among other things. The method of communication is two-way communication, which allows each poster and receiver to ask questions and exchange information back and forth.

4) A method of communicating by posting messages that provide useful knowledge about the depressive disorder. (14 pages)

The posters aim to provide knowledge about the depressive disorder, including the communication to encourage, motivate, give hope, give love, understanding, compassion, chance, importance, etc. The method of communication is two-way communication, which allows each poster and receiver to ask questions and exchange information back and forth.

In conclusion, the study found that the most common method of communication for communicating depressive disorder through Twitter in Thailand is the method of posting negative messages that reflect unfortunate events in life that have occurred, including posts that express the need of self-harm or suicidal thoughts,

followed by the posts revealing private stories about daily life, followed by pictures of self-hurt such as wrist cutting, arm cutting, blood, a pile of blood, both in comic and true events, including videos that are created to imitate wrist cutting and suicide by hanging. Sometimes, there are pictures and videos of true events. They also share how to hurt oneself through various forms of torture, and how to arouse the need to kill oneself. The method of communication is two-way communication, which allows each poster and receiver to ask questions and exchange information back and forth.

The most found method of communication in foreign countries are posts that promote knowledge, encourage, motivate, give hope, give love and understanding, compassion, and self-care guidance. The amount of useful advice on how to prevent disorder is high in comparison to the overall content. Therefore, Twitter has become yet another channel for comprehensively preventing depressive disorder. As a result, the communication of depressive disorder through Twitter in foreign countries is suitable for use as depression prevention communication, as it contains more positive and creative content about the depressive disorder than negative.

4.3 The Users' Needs in Using the LINE Official Account Application for Communicating Health Issues in Terms of Depression Prevention

The purpose of this study is to determine users' needs to use the LINE Official Account application as a platform for communicating health-related issues in the context of depression prevention. The need to use application refers to the nature or form of a user's need to use LINE application as a tool to communicate health issues in terms of depressive disorder, which includes questionnaires about users' interest, majority of reasons of usage, the interesting format and content to meet the user's need for health care news and the prevention of depressive disorder. The purpose of this study is to determine whether the working-age population in Bangkok need to use the LINE application to communicate health issues related to depression prevention.

The study collects data through in-depth interviews with a sample group of 15 people. The interview is conducted using pre-written questionnaires. The study chose specific sample groups consisting of working-age people who are both individuals who do not have mental issues and individuals who do, including those people

concerning or close to the patients or who are at risk of having a depressive disorder. The working-age population is aged 20-65 years can be divided into three sub-groups which are the age group of 20-30 years, 31-40 years, and 41-65 years who live in Bangkok and have previously used LINE Official Account to communicate health issues in terms of depression prevention.

According to the findings of the study, users' needs to use LINE Official Account in communicating health issues in terms of preventive depressive disorder can be described as follows based on its nature and form of the user's needs:

The first Study: By using the LINE Official Account application as a communication channel for preventive health depressive disorder, to what extent do users need?

The second Study: Mostly, why do users need to use the LINE Official Account application as a communication channel for depression prevention health issues?

The Third Study: In what format do users want the content on health information related to depression prevention to be presented through the LINE Official Account application?

The Fourth Study: What content of health information related to depression prevention do users want to be presented through the LINE Official Account application?

The purpose of this study is to discuss the needs of a sample group of working-age people who live in Bangkok in using the LINE Official Account application in communicating depression prevention.

By using the LINE Official Account application as a communication channel for preventive health depressive disorder, to what extent do users need?

It was found that nine people in the sample group have a high level of needs, most of whom can be found in the age group of 20-30 years, followed by six people who have the level of needs in the age group of 41-64 years and 31-40 years, respectively.

4.3.1 The Users' Needs of Using LINE Official Account Application as a Channel to Communicate Depression Prevention

Table 4.1 Illustrates the Number of the Sample Group, which is Categorized by their Needs of Using LINE Official Account Application as a Channel to Communicate Depression Prevention and Surveillance

The level of needs	Age 20-30		Age 31-40		Age41-65		Total	
	People without problems	People with problems	People without problem	People with problem	People without problem	People with problem	People without problem	People with problem
Highest	1	-	1	1	1	2	3	3
High	3	1	2	1	2	-	7	2
Average	-	-	-	-	-	-	-	-
Low	-	-	-	-	-	-	-	-
Lowest	-	-	-	-	-	-	-	-
Total	4	1	3	2	3	2	10	5

According to table 4.1, it was found that nine people in the sample group have high needs in using the LINE Official Account application as a channel to communicate depression prevention, which is prevalent among those aged 20-30 years. It consists of three people who do not have mental problem and one person who does. Following that are the age group of 31-40 years, which consists of two people who do not have mental problems and one person who does, followed by the age group of 41-65 years, consisting of two people who do not have mental problems, respectively.

Following that are six people who have the highest of needs, which can be found in the age group of 41-65 years, consisting of one person that does not have mental problems and two people that do, followed by the age group of 31-40 years, consisting of one person who does not have mental problems and one person who does. Finally, the age group of 20-30 years contains one individual who suffers from mental illness.

4.3.2 Predominant Reasons why Users Need to Use the LINE Official Account Application as a Communication Channel for Depression Prevention Health Issues

Table 4.2 Illustrates the Number of Sample Groups Categorized by the Reasons why Users Need to Use the LINE Official Account Application as a Communication Channel for Depression Prevention and Surveillance

Reasons why users need	Age 20-30		Age 31-40		Age41-65		<u>Total</u>	
	People without problem	People with problem	People without problem	People with problem	People without problem	People with problem	People without problem	People with problem
The form is new and modern	3	1	2	2	2	1	7	4
There's the possibility of establishing social connections	-	-	-	-	-	-	-	-
It's easy to use/access	4	1	3	2	3	2	10	5
It's a two-way communication/ A quick way to interact	4	1	3	1	3	2	10	4
It's an easy way to keep up with the news	-	-	-	-	-	-	-	-
It contains a variety of different types of content	-	-	-	-	-	-	-	-
It is a forum for knowledge exchange	-	-	-	-	-	-	-	-
It's entertaining	-	-	-	-	-	-	-	-

Table 4.2 illustrates the reasons why users need to use the LINE Official Account application as a communication channel for depression prevention. The most

popular reason given by the overall sample group of 15 people is that it's easy to use and access, with 10 people who do not have problems and 5 people who do, followed by the reason that it is a two-way communication/quick way to interact, which consists of 14 people in the age group of 20-30 years, four of whom do not have mental problems and one of whom does. For the age group of 41-65 years, three people do not have problems and two people do, followed by the age group of 31-40 years, which consists of 3 people who do not have problems and one person who does, respectively. Another interesting reason is that it's presented in a new and modern form, where 11 people find interesting which can be found mostly in the age group of 20-30 years old, consisting of three people who do not have problems and one person who does, and the age group of 31-40 years, which consists of two people who do not have problems and two people who do, followed by the age group of 41-65 years, consisting of two people who do not have problems and one person who does, respectively.

4.3.3 The Format in which Users Need Health Information Related to Depression Prevention to be Presented through the LINE Official Account Application

Table 4.3 Illustrates the Number of Sample Groups Categorized by the Format that Users want Health News to be Presented the most on Depression Prevention Issues through the LINE Official Account Application

The format in which users need health information related to depression prevention to be presented through the LINE Official Account application the most	Age			Level of needs for the overall format
	20-30	31-40	41-65	
Form of presentation				
1. Text	highest(5)	high(5)	high(5)	high(5)
2. Pictures	high(5)	high(5)	high(5)	high(5)
3. Infographic	highest(5)	highest(5)	highest(5)	highest(5)
4. Video	highest(5)	highest(5)	highest(5)	highest(5)

The format in which users need health information related to depression prevention to be presented through the LINE Official Account application the most	Age 20-30	Age 31-40	Age 41-65	Level of needs for the overall format
Presentation style				
1. Provides a variety of media to choose from	highest(5)	high(5)	high(5)	high(5)
2. Always provides news updates.	high(5)	highest(5)	high(5)	high(5)
3. People can communicate through this channel	highest(5)	highest(5)	highest(5)	highest(5)
4. Can link to other websites	highest(5)	highest(5)	highest(5)	highest(5)

Table 4.3 illustrates the format in which users need health information related to depression prevention to be presented the most through the LINE Official Account application, which can be presented in the following format: 1) text, 2) picture, 3) infographic, and 4) video. For the presentation style, it can be the following: 1) Provides a variety of media to choose from, 2) Always provides up-to-date news updates., 3) People can communicate through this channel, and 4) Can link to other websites. The findings are summarized as follows:

4.3.3.1 From studying the format in which users want health news on depression prevention issues to be presented the most on the LINE Official Account application, the overall sample group of 15 people consists of ten people who do not have mental problems and five people who do, have the highest interest in the overall presentation format. When determining each aspect of the format in which users want health news on depression prevention issues to be presented the most, it's found that 15 people from the sample group have the highest interest in the infographic and video presentation, which can be described by age group as follows:

1) The age group of 20-30 years has the highest level of needs in the presentation in the form of text, infographic, and video, followed by a picture, respectively.

2) The age group of 31-40 years has the highest level of needs in the presentation in the form of infographics and video, followed by text and picture, respectively.

3) The age group of 41-65 years has the highest level of needs in the presentation in the form of infographics and video, followed by text and picture, respectively.

4.3.3.2 From studying the presentation style that users need health news related to depression prevention to be presented the most through the LINE Official Account application, the overall sample group of 15 people consists of 10 people who do not have mental problems and 5 people who do, have the highest level of needs in the overall presentation style. When classifying each aspect of presentation style, it was found that 15 people from the sample group have the highest level of needs in the style that allows people to communicate through this channel and that can link users to other websites, which can be classified by the age group as follows:

1) The age group of 20-30 years has the highest level of needs in the presentation style that provides a variety of media to choose and that people can communicate through this channel and can link to other websites, followed by the style that always provides news updates, respectively.

2) The age group of 31-40 years has the highest level of needs in the presentation style that always provides news updates, that people can communicate through this channel, and that can link to other websites, followed by the style that provides a variety of media to choose, respectively.

3) The age group of 41-65 years has the highest level of needs in the presentation style that people can communicate through this channel and can link to other websites, followed by the style that provides a variety of media to choose, and that always provides news updates, respectively.

4.3.4 The Health Content Related to Depression Prevention Needed by the Sample Groups through the LINE Official Account Application

Table 4.4 Illustrates the Number of Sample Groups Categorized by the Health Content Related to Depression Prevention Needed by the Sample Groups through the LINE Official Account Application

Types of content	Age20-30	Age 31-40	Age 41-65	The overall level of needs
Screening and Depression Assessment Forms	Highest(5)	Highest(5)	Highest(5)	Highest(15)
The definition of depressive disorder	Average(5)	Average(5)	Average(5)	Average(15)
Causes and factors of depressive disorder	High(5)	High(5)	High(5)	High(15)
Depression symptoms/severity levels	Average(5)	High(5)	Average(5)	Average(15)
Advice on how to take care of mental health by oneself	Highest(5)	Highest(5)	Highest(5)	Highest(15)
Recommendation of preventive methods	Highest(5)	Highest(5)	Highest(5)	Highest(15)
Treatment guidelines	Highest(5)	Highest(5)	High(5)	Highest(15)
Recommendation of psychiatrists and psychologists	Highest(5)	High(5)	Highest(5)	Highest(15)
Recommendation of hospitals/institutions	High(5)	Highest(5)	Highest(5)	Highest(15)

Table 4.4 illustrates the health content related to depression prevention needed by users through the LINE Official Account application. The overall sample group of 15 people consists of 10 people who do not have mental problems and 5 people who do, that have the highest level of needs of the content on screening and depression assessment forms, advice on how to take care of mental health by oneself,

recommendation of preventive methods and recommendation of hospitals/institutions.

It can be described according to the age group as follows:

1) The age group of 20-30 years has the highest level of needs of the content that provides screening and depression assessment forms, advice on how to take care of mental health by oneself, recommendation of preventive methods, recommendation of psychiatrists and psychologists, and recommendation of hospitals/institutions, followed by the high level of need of the content on the causes and factors of depressive disorder and recommendation hospitals/institutions. Lastly, they have an average level of needs of the content that defines depressive disorder, depression symptoms/severity level, respectively.

2) The age group of 31-40 years has the highest level of needs of the content that provides screening and depression assessment forms, advice on how to take care of mental health by oneself, recommendation of preventive methods, treatment guidelines, and recommendation of hospitals/institutions, including the contact details of hospitals/institutions that offer treatment, followed by the high level of needs of the content about causes and factors of depressive disorder and depression symptoms/severity level and recommendation of psychiatrists and psychologists. Lastly, they have the average level of interest in the content that defines depressive disorder, respectively.

3) The age group of 41-65 years has the highest level of needs of the content that provides screening and depression assessment forms, advice on how to take care of mental health by oneself, recommendation of preventive methods, recommendation of psychiatrists and psychologists, and recommendation of hospitals/institutions, including the contact details of hospitals/institutions that offer treatment, followed by the high level of needs of the content of the causes and factors of depressive disorder and treatment guidelines. Lastly, they have the average level of needs of the content that defines depression and depression symptoms/severity levels, respectively.

4.4 The Design of the LINE Official Account Application Tool Used to Communicate Health Issues Related to Depressive Disorder Prevention

The study determined the form of users' needs of the design of the tool from the findings from the interviews, which include users' needs, reasons for needs, content, and style to fulfill the need for health care related to depression prevention. It aims to create a LINE Official Account application tool to help communicate health issues related to depression prevention needed by the targeted group. The following is a summary of the data from the interviews:

1) Based on a study of users' needs of using the LINE Official Account application as a channel for communicating health issues related to depressive disorder prevention, it was found that the sample group of nine people has a high level of needs of using the application as a channel for communicating health issues related to depressive disorder prevention, and six people that have the highest level of needs, respectively.

2) According to the study of the reasons why users need to use the LINE Official Account application as a communication channel for depression prevention, the most chosen reasons of the sample group of 15 people are that it is easy to use and access, followed by that it's a two-way communication/quick way to interact, followed by the reason that it's a new and modern form, respectively.

3) According to the study, the form and style of presentation users want health information related to depression prevention to be presented through the LINE Official Account application, it was found that the overall sample group of 15 people need the presentation in the form of infographic and video at the highest level, followed by the form of text and picture, respectively. Also, the style that lets people communicate through this channel and let people link to other websites are needed at the highest level, followed by the style that always provides news updates and the style that provides a variety of media to choose, respectively.

4) According to the study on the health content related to depression prevention that users need the most through the LINE Official Account application, it was found that the overall sample group of 15 people has the highest level of needs of the content that provides screening and depression assessment forms, advice on how

to take care of mental health by oneself, recommendation of preventive methods, and recommendation of hospitals/institutions, followed by the high level of needs of the content about causes and factors of depressive disorder and recommendation of hospitals/institutions. Lastly, users have the average level of needs of the content that defines depression and depression symptoms/severity levels, respectively.

Based on the information presented above, the researcher intends to use the findings and recommendations to launch a creative innovation in communicating health issues in a modern way that uses social media via smartphone to prevent depressive disorder to improve Thai people's mental health following the SDGs 17 policy. The term "Sustainable goal for sustainability" refers to the ability to sustain the systems and processes in all dimensions. Sustainability management principles are development principles that must be linked in all four areas: ecology, economics, politics, and culture, to assist in the resolution of global problems, such as poverty, inequality, global warming, and peace. The design of this application tool is in line with the theme "Good Health and well-being." The measurement of good health is reflected by how much the average life expectancy of the world's population has increased. Therefore, the purpose of this development is to prevent and reduce the death rate from depression, as well as to provide guidelines for preventing illness and death from depressive disorder efficiently, so that everyone has access to the knowledge they need to properly care for themselves and those around them. It also aims to provide timely guidelines for preventing depressive disorder.

The features of the LINE Official Account application tool used to communicate health issues related to depression prevention.

LINE Official Account, alternatively referred to as LINE OFFICIAL ACCOUNT/LINE OA, is a service provided by LINE through which users or businesses can create their official account and send messages to a large number of their customers via their friend list, as well as post news on their timelines and more. The creator's account will be displayed on the LINE platform, where it will have access to a large number of users. Users can create a LINE account on behalf of their brands or businesses to connect with LINE users throughout Thailand. It is suitable for any level of organization, company, or store, from SMEs to major brands, by simply creating a LINE OFFICIAL ACCOUNT. It is similar to having a LINE

account that you can communicate with friends and family. It can send users information, marketing activity, or promotions. Additionally, brands can manage their messages or pictures through the LINE content management system. The tool is packed with features that will eventually help users recognize the uniqueness of the organization, company, brand, and product. Its form of communication allows creators to send messages to all LINE users who have added LINE Official Account as a friend. Furthermore, creators can chat with other members and set an automatic response. Users can also post something on the account's timeline while the home profile page is where creators can present details and information.

The advantages and disadvantages of this tool

- 1) It can accept an unlimited number of members, including an unlimited number of followers.
- 2) It can send messages for free (Broadcast) depending on the package (normal package or basic pan) It can send up to 2,500 messages for free, while the Pro package or Pro plan allows creators to send up to 10,000 messages.
- 3) In terms of message functionality, creators can send a message simultaneously to all users who are friends with the official account, while users are notified when new messages arrive. Therefore, there's a high rate of message openings. As a result, when creators communicate with their users in a way that benefits them, they receive excellent business feedback.
- 4) In terms of Timeline functionality, creators can post an unlimited number of messages on the timeline, as well as news updates informing users who are on their friend list. Users can interact with creators' posts by liking and commenting. It's deemed to be a place where news and information can be updated quickly.
- 5) With regards to the Rich content function, it can be used in the following manner:

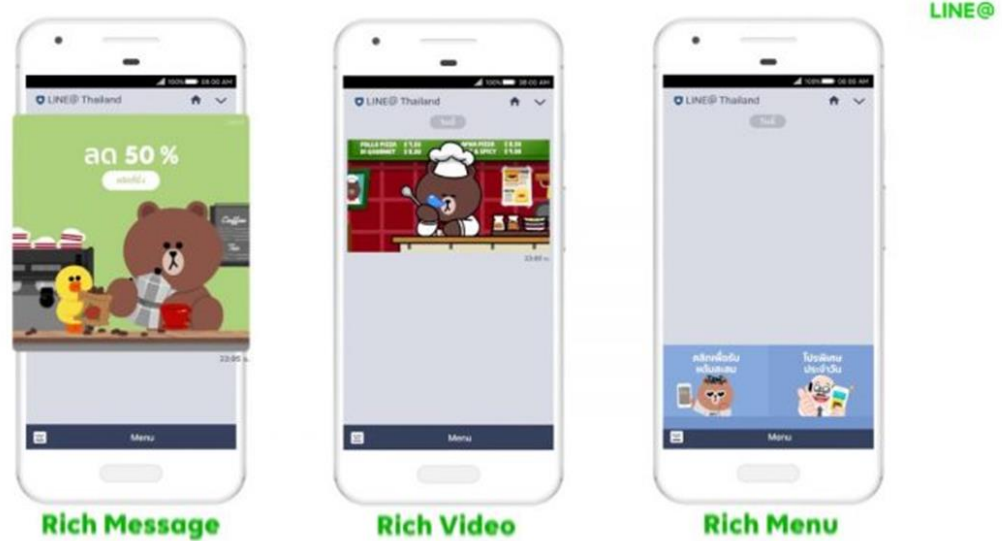


Figure 4.47 Various Functions on LINE Official Account

1) Rich Message: It is a tool that allows creators to collect pictures and messages in one place to draw user's attention with precision, uniqueness in an easy-to-understand manner. It has a greater impact on business performance than standard text.

2) Rich Video or Rich Video message: It is a video that automatically begins playing as soon as users open the chat room. As soon as a follower enters the chat, it will expand the video to full-screen size. The Action button can be assigned a variety of styles according to creators' needs. By customizing the settings, creators can recommend to users that they open the website links they need after watching the video. The difference between Rich video and standard video is that users cannot record, share, share on the timeline with Rich video. Therefore, if creators do not want users to record that video, it is recommended to use the Rich video function.

3) Rich Menu: This is the chat room's shortcut menu, which serves as a keyboard. Creators can customize the working mode when selecting Rich Menu by need. They can customize the specified external links or even responding messages. Additionally, they can view the full-screen sized picture and display banner in the chat room, as well as add Action for a maximum of 6 actions. There are templates to choose from based on creators' preferences. These actions include Adding, Website

linking, Coupon adding, Reward card, etc. Moreover, Creators can use this area to create marketing promotions to boost sales.

Creators can add up to 100 admins or page administrators to increase interaction between users and creators, as 100 people are monitoring the tool.

The design of LINE Official Account application tool for communicating health issues in terms of preventive depressive disorder.

Step 1 Before the design

1) Principles of using colors for the design of the platform LINE Official Account

Initially, psychologists advise against black, white, gray, or red as color tones. Colors that are suitable for psychiatric patients, including depressive disorder patients, are the blue tone which is the tone that aids in illness recovery. Color's healing power also aids in the treatment of illness. Psychology believes that colors relate to body, mind, and mood. Color conveys personality. Warm tone like red, orange, yellow, and purple has a different vibe than cool tone like white, green, blue, and pink, etc. The warm tone or cool tone triggers the pineal gland, which affects hormones, feelings, mind, and mood of each person. Let's take a look at the feelings and moods of each color down below.

(1) Red is the color of power, conveying empowerment and ambition, and can counteract with negative opinions or pessimism. However, this tone falls into the category of rage and frustration. Because red stimulates the nervous system, using it excessively in treatment will make the patient feel tight, uncomfortable, angry, and impatient. It's the most intense color, evoking sensation, excitement, and challenge. Therefore, the color red is prohibited and unsuitable for use with a depressive patient.

(2) In contrast to the color red, pink helps to soothe the mind and feelings while also conveying feelings of kindness, broad-mindedness, warmth, and fragility. Pink will make people feel safe and loved when surrounded by it. Thus, this color is commonly used to treat and cure lonely people who are fragile and unstable. It can be used on a patient with depression.

(3) Orange is associated with happiness and cheerfulness. It's a sense of liberation and release, of letting go of pity and self-pity, selfishness, instead

of the willingness to share and give. It is a feeling that comes from the bottom of one's heart that seeks to brighten one's life. Orange is a color associated with creativity, warmth, cheerfulness, intelligence, ambition, and power. Psychologically, the power of orange can cure depression. If you want to rediscover the power of enthusiasm. Orange is the color that will help you and can be used with patients suffering from depression.

(4) Yellow is typically associated with happiness, cheerfulness, liveliness, and celebration. It's a color of radiance that usually involves inner intelligence, the power of thoughts, and wisdom. It's a color of bright memory and clarity of thought. It's a feeling of novel creativity that triggers positivity. On contrary, the dark yellow color is a sign of fear. It can be used with patients suffering from depression, depending on the level of severity since it can trigger more fear.

(5) Emerald is a combination of dark blue and dark ocean green. It conveys the meaning of coolness and calm, similar to the color green. Emerald is, therefore, a color that suitable for cleansing tiredness and stress from the mind or feelings. Emerald is the color that is said to encourage and bring brightness back to life. It usually makes lonely people feel better, improves communication, and increases creativity. It's sensitive to emotions, making it appropriate for patients with depression.

(6) Blue represents coolness, tranquility, stability, and delicacy. Indigo relates more to the mind than yellow. It refers to the night, which makes us feel more calm and relaxed, allowing us to enter more calm feelings when in contact with it. However, if it is lighter, it will give us a sense of alienation from daily work. Therefore, blue is commonly used to treat people with sleep problems and is the color of the bedroom. Indigo can influence the mind, making it brighter and more creative. Dark indigo, but not as dark as navy, can calm the nervous system and mind. It is a color that taps into our intuition and subconscious mind. However, dark color that enters into a black tone or darker indicates grief or the utmost sadness. Therefore, caution should be exercised in the use of blackish blue for patients with depression.

(7) Light blue is a color that gives a feeling of calm, freedom, relief, safety, coolness, and the ability to reduce anxiety in the mind. The power of light blue can help cure depression, pain, and normalization of the pulse. Light blue

can also control the mind and make it more clear and creative, which is suitable to use with a patient with depression.

(8) White represents utmost purity and is associated with protection, peace, comfortability, which helps reduce panic or anxiety and encouraging a clear and pure mind. It's a color that boosts the power of thought and mind. Moreover, it denotes coolness and isolation. Therefore, caution must be exercised when using it for patients with depression.

(9) Black symbolizes convenience, protection, and mystery. It usually involves silence. It also denotes a long journey. Moreover, it means decreased or exhausted vitality, exhaustion, and mystery. Black is a color that hinders growth and change, which can isolate one from the outside world. Therefore, black is forbidden and unsuitable for use with patients with depression.

(10) Silver is a color of the moon that means a change or fluctuation, corresponding to the mood and basic personality of sensitive women. Caution must be exercised when using it for patients with depression.

(11) Byzantium is the color that helps give us hope and relieves us of our feelings of anger and despair. Byzantium can brighten our minds because of its mixture of red and purple. It usually entails pity, compassion, and support, all of which can help lift people. Byzantium is a purple color that helps us feel safe from harm and horror. It usually means deep relaxation, which can be combined to use as communication for patients with depression.

(12) Gold is a color associated with the sun, such as yellow, and it usually represents power and prosperity, the ultimate goal, the highest wisdom, and understanding. Usually gold means new life, new power that pulls you out of fear and uncertainty, and brings you back to yourself. The shiny gold is very powerful in pulling you out of the depressed state of mind and can be used for patients with depression.

(13) Brown is the color of the ground. Brown gives the feeling of stability and reduces the feeling of being unsafe. However, brown usually relates to the feeling of fulfillment, grief relief, and frustration. This color is usually used to help people who lack self-esteem and can also be used for patients with depression.

2) Principles of using symbols and illustrations to prevent a sensitive feeling in health communication related to depressive disorder prevention through the LINE Official Account application

Initially, the Psychologist advises against using a cross symbol, skull, rope, knife, grey cloud, picture of rain, cloudy sky, hanged man, wounds on the wrist, and people crying. In general, symbols and illustrations can be used in various ways. If it's the picture that gives out happy vibes, such as a clear sky, a green field, beach, or other pictures that convey love, warmth, a family, it might be suitable for people with a normal state of mind, but caution should be made to communicating with patients suffering from depression, as it can be a medium that triggers more grief. Moreover, many symbols are suitable for patients suffering from depression which is the "semicolon." It's a symbol that encourages trouble-minded people who are suffering from depression. This symbol means that "the struggle you are facing is not the end of the world, but a new beginning." The origin of this symbol came from the fact that this symbol is used to end a sentence to begin the next sentence. An author, like us, can always begin a new sentence when we have a sentence that we wish to end.

3) Content that should be included in the LINE Official Account application tool that is used to communicate health issues related to depression prevention.

Initially, psychologists advise against presenting content that is news about suicide or suicide method or process that results in death. There should be no depressing, sad, or suicidal content, nor should there be any separation or loss. However, other news, including general knowledge, health care knowledge, a positive perspective, how to relax, how to relieve stress, are suitable for presentation.

Additionally, psychologists believe that the following content should be included in the LINE Official Account application tool for communicating health-related issues for preventing depression:

1) How to observe oneself and others Psychologist wishes for the tool to include mental health quizzes such as the depression evaluation form/ stress test (ST5)/ depression evaluation form/ depression in children evaluation form and depression in teenagers' evaluation form to help screen and prevent initial depression.

2) Mental health care guidelines, such as mental health care articles and how to avoid depression, including daily health news. A psychologist also suggests creatively presenting news about mental health, excluding suicide news.

3) Suggestions on how to prevent depression and reduce depression, such as mental health articles on prevention, how to prevent, how to relieve stress, etc.

4) Suggestions on how to cure depression, such as facilitating users to find hospitals and institutions on their own.

5) Ways to obtain treatment and cure depression, such as a channel that facilitates counseling with psychologists.

Step 2 The design of tool through LINE Official Account application

The researcher gathered data from the discussions with psychologists who specialize in depressive disorder concerning the usage of colors, symbols, pictures, and content that are suitable for LINE application, including data from the interest of sample group from interviews in terms of format and content, to fulfill the need for health care news and depression prevention, to design the application tool, to use it to communicate health issues in terms of depression prevention properly to fit the targeted group. It can be described as follows:

The researcher summarized and categorized the content into six main groups to align it with the Rich menu, which is the keyboard shortcut menu in the chat room, which was designed using the 6-Section template. The study intends to create a Rich menu that is configured to specify external links and serve as a responding message to users, which can be differentiated as follows:

- 1) Section 1 of Rich Menu contains quizzes about mental health
- 2) Section 2 of Rich Menu contains articles about mental health and an infographic
- 3) Section 3 of Rich Menu contains daily news
- 4) Section 4 of Rich Menu contains the platform for discussing mental issues with psychologists.
- 5) Section 5 of Rich Menu provides a platform to search for hospitals/institutions
- 6) Section 6 of Rich Menu provides a hospital telephone numbers list

From 6 points above that have been categorized, the researcher has adjusted the titles to make them more appealing for readers as follows:

1) Section 1 of Rich Menu changed from quizzes about mental health into "Check first, know first, are you ready to take a test?" This space includes depression evaluation form/stress test (ST5)/depression evaluation form/depression in children evaluation form and depression in the teenagers' evaluation form.

2) Section 2 of Rich Menu changed from articles about mental health and Infographic into "Knowledge to fight depression and infographic." This space includes articles about mental health, including articles about useful health knowledge for self-care.

3) Section 3 of Rich Menu changed from the daily news into "Be informed of current events before anyone can allay your concerns." This space includes various news, including social news, health news, entertainment news, and so on that are up-to-date and useful to improve quality of life.

4) Section 4 of Rich Menu changed from the platform for discussing mental issues with a psychologist into "Private session with a psychologist." This space includes suggestions in the form of the chat (Chat counseling), Call Counseling, Face-to-Face counseling, including On-site Counseling.

5) Section 5 of Rich Menu changed from a platform to search for hospitals/institutions into "Recommendations of hospitals/institutions." This space includes links to hospital websites that take users directly to the external websites quickly, without the need for users to search through websites themselves.

6) Section 6 of Rich Menu changed from hospital telephone numbers list into "Lists of health center telephone numbers." This space includes hospital telephone numbers that can be automatically dialed for quick contact.

Step 3 The platform design on the LINE Official Account application tool

This is only the platform design step. It's not a real stage in the development of the real tool. The researcher gathered data on the form of interest from the perspective of a psychologist, working-age people with normal mental health and people with mental issues in a group of 15 people, which can be divided into 3 sub-groups of age 20-30, 31-40, and 41-65. They all reside in Bangkok and have previously used the LINE application through smartphones.

The purpose of developing this tool is to build a new form of communication, to change the method of health care communication so that everybody can access it more easily and conveniently. The tool includes content focusing on the prevention of depression, including self-care guidelines that can be implemented in daily life and shared with others. More importantly, it is free for everybody. Users can use it from all computers, smartphones, or tablets. Next, the research will present an example of a platform that depicts the overall LINE application as a tool for communicating health issues in terms of depression prevention as follows:

Example of Platform on LINE application

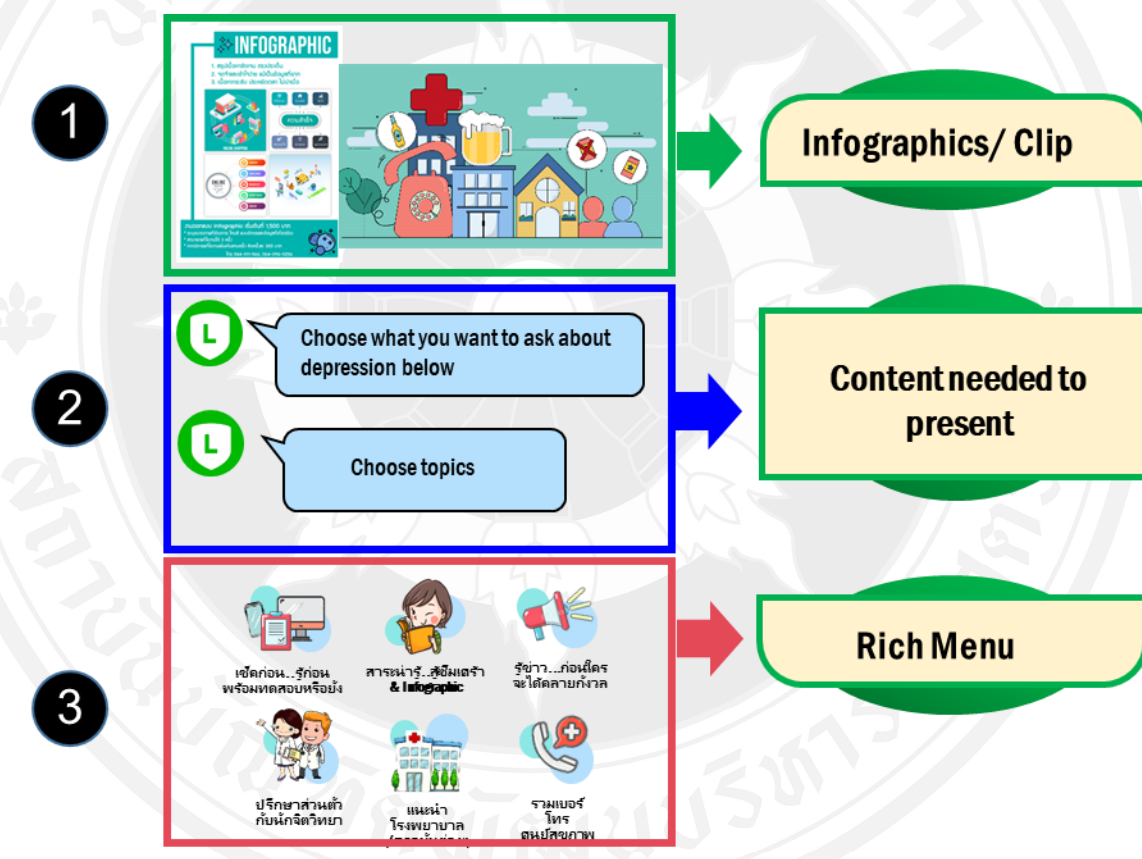


Figure 4.48 Features on the Page on LINE Application

The description of each part on the page (A page on LINE application)

Part 1 is a section for presenting infographics and video clips with health news that is useful for readers.

Part 2 is a section for presenting content in the form of text which aims to recommend and provide answers. It could be messages received from this platform's chat.

Part 3 is a section for presenting the Rich Menu where the researcher has selected a 6-section template. The short-cut keyboard in the chat room would have different content based on the titles of each section. Users can immediately access each section and connect to external websites. See the example of the Rich Menu in the picture below.

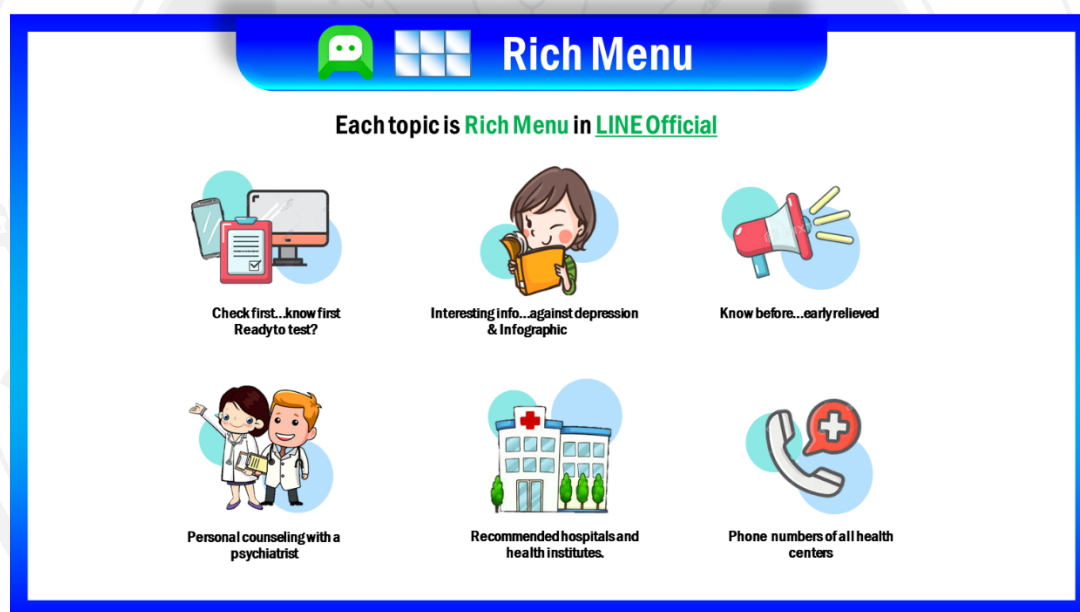


Figure 4.49 6-Section Rich Menu

4.5 Examination of the LINE Official Account Application Tool Used to Communicate Health Issues of Depression Prevention

The researcher had 15 people from the same sample group see the video clip of the platform example, which depicted the overall features of the tool that is being used to communicate health issues related to depression prevention. The video demonstrates the content and the features. After the sample group has finished using the tool, the researcher interviewed them to determine their level of satisfaction after using the tool as an innovative communication tool and the utilization of the tool as a communication tool for depression prevention, which can be summarized as follows:

4.5.1 Satisfaction Level from Using the LINE Official Account Application as an Innovative Health Communication Tool for Depression Prevention

Table 4.5 Illustrates the Number of Sample Groups Classified by their Satisfaction Level of Using the LINE Official Account Application as an Innovative Health Communication Tool for Depression Prevention

At which level are you satisfied with the application in the following matters?	Age 20-30	Age 31-40	Age 41-65	Satisfaction level
The modernization of communication channels	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (15)
How the users can easily access the application/news	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (15)
How the users can easily do the depression evaluation form	satisfied (5)	satisfied (4)	satisfied (3)	satisfied (12)
How the application is easy to use/not complicated	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (15)

At which level are you satisfied with the application in the following matters?	Age 20-30	Age 31-40	Age 41-65	Satisfaction level
The way the content is presented is interesting.	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (5)	Highly satisfied (15)
The application provides information on the causes/factors causing the disease	satisfied (4)	satisfied (3)	satisfied (5)	satisfied (12)
The application provides information on protection and prevention	satisfied (5)	satisfied (4)	satisfied (3)	satisfied (12)
The application provides information on mental health	satisfied (5)	satisfied (4)	satisfied (3)	satisfied (12)
The application provides information on treatment	satisfied (4)	satisfied (3)	satisfied (5)	satisfied (12)
The application provides information on hospitals that offer treatment	satisfied (4)	satisfied (3)	satisfied (5)	satisfied (12)

Table 4.5 illustrates the number of sample groups classified by their satisfaction level of using the LINE Official Account application as an innovative health communication tool for depression prevention. Overall, the sample group of 15 people, ten people who do not have mental problems and five people who do, are highly satisfied with the modernization of communication channels, how the users can easily access the application and news, how the application is easy to use and not complicated, and content of interest is presented.

Regarding the satisfaction with how the users can easily do the depression evaluation form, how the application provides information on protection and prevention, and how the application provides information on mental health are found the most in the age group of 20-30 years, followed by 31-40 years, and 41-65, respectively.

Users have a high level of satisfaction in the aspects that the application provides information on the causes/factors causing the disease, the application provides information on treatment, the application provides information on hospitals that offer, which can be found the most in the age group of 41-65 years, followed by the age group of 20-30 years, and 31-40 years, respectively.

4.5.2 The Utilization of the LINE Official Account Application as an Innovative Health Communication Tool for Depression Prevention

Table 4.6 Illustrates the Number of Sample Groups Classified by LINE Official Account Application Utilization as an Innovative Health Communication Tool for Depression Prevention

The form of utilization of the LINE Official Account application	Age 20-30	Age 31-40	Age 41-65	Satisfaction level
3.1 For news updates				
1 To receive/follow up information about depression	Highest (5)	Highest (4)	Highest (4)	Highest (13)
2 To use the information to develop oneself to prevent the risk of depression	Highest (5)	Highest (5)	Highest (5)	Highest (15)
3 To use the information to take care of one's mental health and use it as a guideline for solving problems related to depression	Highest (5)	Highest (5)	Highest (5)	Highest (15)
3.2 For social interaction				
1 To bring knowledge about depression to chat with other people	Highest (4)	Highest (4)	Highest (5)	Highest (13)
2 To bring knowledge about depressive disorder prevention to advise family/friends/other people	Highest (5)	Highest (5)	Highest (5)	Highest (15)
3 To use it as information in deciding to consult a psychiatrist or psychologist	Highest (4)	Highest (4)	Highest (5)	Highest (14)
3.3 For daily life usage				
1 To bring it to improve quality of life	Highest	Highest	Highest	Highest

The form of utilization of the LINE Official Account application	Age 20-30	Age 31-40	Age 41-65	Satisfaction level
	(4)	(5)	(5)	(14)
2 To enhance one's personality	Highest	Highest	Highest	Highest
	(4)	(4)	(4)	(12)
3 To use it to advise others	Highest	Highest	Highest	Highest
	(5)	(4)	(5)	(14)

Table 4.6 illustrates the number of sample groups classified by LINE Official Account application utilization as an innovative health communication tool for depression prevention.

From the overall sample group of 15 people, the form of utilization chosen the most is for news updates, followed by the purpose of social interaction and daily life usage, respectively, which can be classified by the age group as follows:

For news updates, there are different types of utilization. The age group of 41-65 years can use the information the most to develop oneself to prevent the risk of depression and use the information to take care of one's mental health and use it as a guideline for solving problems related to depression, followed by to receive/follow up information about depression, respectively.

For social interaction, there are various utilizations found. The age group of 21-30 years can bring knowledge about depressive disorder prevention to advise family/friends/other people the most, followed by to bring knowledge about depression to chat with other people and to use it as information in deciding to consult a psychiatrist or psychologist, respectively.

For the age group of 41-65 years, there is the utilization for every purpose in the highest level, which is to bring knowledge about depressive disorder prevention to advice family/friends/other people, to bring knowledge about depression to chat with other people and to use it as information in deciding to consult a psychiatrist or psychologist, respectively.

For the age group of 31-40 years, they can bring knowledge about depressive disorder prevention to advise family/friends/other people, followed by to bring

knowledge about depression to chat with other people and to use it as information in deciding to consult a psychiatrist or psychologist, respectively.

For daily life usage, there are various utilizations found. The age group of 21-30 years can use it to give advice to others, followed by to bring it to improve quality of life and to enhance one's personality, respectively.

For the age group of 41-65 years, they can bring it to improve quality of life and use it to advise others the most, followed by to enhance one's personality, respectively.

For the age group of 31-40 years, they can bring it to improve quality of life the most, followed by to use it to advise others the most, followed by to enhance one's personality, respectively.

In conclusion, the following conclusions can be drawn from the study of the format and method of communicating health issues for preventing depression through social media in foreign countries and Thailand:

Table 4.7 In Conclusion the Study of the Format and Method of Communicating Health Issues for Preventing Depression through Social Media in Foreign Countries and Thailand

The format and content of communicating health issues for depression prevention through a website in foreign countries and Thailand are different

<p>- For foreign countries, the format is simple with no graphic, cartoon, or motion text in the light blue or blue. The color is not too bright. The format does not appeal to the readers.</p>	<p>-In Thailand, mostly, the format is interesting full of pictures and colors, making it appealing for users to read. It focuses on the beautiful appearance by incorporating graphics, mixed with cartoon infographics and real-life pictures that help draws readers' attention.</p> <p>- The elements on the web page are the same.</p> <p>-There is no difference in the content of depression within the websites.</p>
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- The elements on the web page are the same.

- There is no difference in the content of depression within the websites.

Format and content of communication for depressive disorder prevention Via YouTube in Thailand and foreign countries are the same

- Mostly, the form of communication is the combination between "Education" and "Entertainment" which conveys a conversation about health issues from doctors who respond and communicate in the form of various programs that usually invite famous people to brighten up the atmosphere. The language used is simple and easy to understand and is presented with color, audio, video, where users can watch and share to exchange information.

- The content is the same. The majority of them provide content covering all aspects of depression.

Format and content of communication for depressive disorder prevention through applications in Thailand and foreign countries are the same

- Mostly, format and content are adapted to be used as a tool for communicating information. It's used in communicating between the public and private sectors to help reduce depression.

- There are 5 popular applications in Thailand and 10 applications abroad, which can be divided into paid and free applications.

- Most of the content helps reduce anxiety, promote relaxation, help develop a new way of thinking to reduce stress, including help screen and recommend nearby hospitals, as well as facilitate appointments.

Format and content of communication for depressive disorder prevention via Facebook in foreign countries and Thailand are the same

- 28 pages communicate about depression prevention through Facebook in foreign countries and 93 pages in Thailand.

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- The majority of communication is in the form of text, audio, video, which is the place to communicate between posters and receivers who want to exchange information and recommend each other places for treatment. No Facebook page presents content that reports the incidence of depression and its impact. It's also found that there are health articles shared that contain unreliable information that should be carefully checked before sharing. As a result, Facebook is not suitable for encouraging health care; rather, it can increase users' anxiety, which can lead to stress.
 - It can be divided based on the presented content as follows: (1 To raise awareness and provide health care guidelines (2 To give advice and listen to problems (3 To recommend hospitals and institutions.
-

Format and content of communication for depressive disorder prevention via Twitter in foreign countries and Thailand are different

- There are 1,412 pages in foreign countries.
 - The majority of the format and content is the post that provides useful knowledge about depression, which is suitable to use for communicating depression.
 - The content both in Thailand and foreign countries can be categorized as follows:
 1. Posts that express feelings and reveal stories.
 2. Negative messages/suicidal
 - There are 176 pages in Thailand.
 - The majority of format and content is the post that conveys negative messages that reflect unfortunate life events and self-harm or suicidal thoughts, making Twitter the tool that supports suicide since it can inspire people to imitate and can be motivation for suicide.
 - The content both in Thailand and foreign countries can be divided into 4 groups as follows:
 1. Posts that express feelings and reveal stories
 2. Negative messages/suicidal thoughts
 3. Pictures of self-harm and wrist cutting
 4. Messages that provide knowledge
-

thoughts

3. Pictures of self-harm
and wrist cutting

4. Messages that
provide knowledge

Methods of communicating health issues for depression prevention through websites in foreign countries and Thailand are different

- In foreign countries, there is both One-way and Two-way communication, which present content management that is clear, allowing users to search through information quickly and access information easily without wasting time.

- The methods of presentation are the same. Mostly, they present articles, research works, videos, knowledge blogs, slideshows, infographics as a source for knowledge.

- In Thailand, it is a One-way communication, which presents content management that is quite complicated without providing a big picture and is difficult and time-consuming to search through preferred titles.

- The methods of presentation are the same. Mostly, they present articles, research works, videos, knowledge blogs, slideshows, infographics as a source for knowledge.

Methods for communicating health issues for depressive disorder prevention via YouTube in foreign countries and Thailand are the same

- They are a one-way communication that focuses on conveying knowledge and disseminating news by utilizing a color system, audio, and motion video. Users can watch and share videos, as well as leave comments on the platform for free.

- There are 4 communication strategies which are (1 Presenting short and simple content (2 Presenting programs that relate to the audience (3 Presenting up-to-date/trendy topics (4 Providing entertainment for the audience.

Methods of communicating health issues for depressive disorder prevention through applications in foreign countries and Thailand are the same

- They are one-way communication that serves as a tool to help users practice mindfulness and serves as a pocket-sized mental health companion. There are daily quizzes to assess one's level of depression, which help users reduce anxiety and stress.

There are also online therapists available at all times, offering both free and paid services.

Methods of communicating health issues for depressive disorder prevention via Facebook in foreign countries and Thailand are the same

- They are two-way communication, which serves as a place to exchange information, which focuses on sharing experience, presenting content in the form of messages, audio, and video. The presentation method can be divided into 4 groups as follows: (1 To provide knowledge about depression (2 to encourage users (3 To serve as a place to exchange opinions (4 to provide advice and treatment guidelines

Methods of communicating health issues in terms of preventive depressive disorder via Twitter in foreign countries and Thailand are different

<p>- In foreign countries, the most found method of communication is to give knowledge, encourage users and provide preventive methods in a creative and useful way to the society.</p>	<p>- In Thailand, the most found method of communication is the post of negative messages that express the need for death, which can trigger imitation, leading to more stress.</p>
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From the conclusion of format and content of communicating health issues in terms of depression prevention through 5 types of social media in Thailand and overseas, the researcher has analyzed the information as follows:

1) In terms of the content and method of communication through websites, there are some limitations although there is content that provides comprehensive and reliable knowledge about depression and the presentation forms are mostly research, medical articles that focus on promoting organizations to invite and recommend readers to receive service rather than providing knowledge and raising awareness to find the way to prevent rather than treatment. The limitation of communicating through websites is that it's difficult to access or can hardly be accessed since it's hard to search for web pages. Moreover, it's difficult for working-age people who are elders to access unless they specifically access that site. The form of presentation is not sufficiently interesting, compared to YouTube and applications.

2) There are some limitations in terms of the content and methods of communication through applications, though there is an attempt to develop the tool to

provide interesting activities and games, which are useful for depression prevention, including the fact that it provides users with psychologists on call at all times. However, this tool is costly as the price varies depending on the type of service. The higher the cost, the more services users may receive, creating a loophole in the group of low-income people. Despite their need to take care of their health, they do not have access to this service due to application limitations.

3) For the content and methods of communication through YouTube, there are some limitations, though there is a high amount of usage of this media worldwide since it is easy to access and free, while users can follow up on the news and entertainment. Users usually are on this platform because of TV dramas, music rather than health-related news. People who watch health-related content are thought to have a very low viewing rate. Another limitation of YouTube is that its one-way communication. Although users have an interest and questions that require an instant response, it is impossible since it is not a platform that allows immediate interaction so it's not a channel for exchanging direct opinions.

4) There are some flaws in the content and methods of communication provided by Facebook and Twitter, even though this media is widely used around the world because it is simple to use, free, provides access to a wide range of content, as well as being a two-way communication. However, it is not an appropriate channel for communicating health issues since some unreliable pages contain harsh content that can lead to verbal bully, leading to stress and depression. This can diminish the efficiency to use it as a tool for health care; instead, this space has become part of the stress obsession, which can vary depending on the amount of use. The more you use, the more stressed you will be, and this may increase the risk of depression.

From what has been discussed above on the 5 social media platforms, there are limitations and loopholes since they cannot reach a large number of people, are insufficiently comprehensive, do not reach every age group, and costly to access. Also, the form of communication is not suitable for the lifestyle of people in digital society who need two-way communication which is immediate and fast, and who want to have access to various information at the same time, in the form of one-stop service, and who want to access various types of information for entertainment. Based

on the data collected about the users' needs and interest in using the LINE application to communicate health issues, it was found that most people dislike monotony, but instead, they prefer a unique and stylish tool that can provide up-to-date news and assists users in easily finding knowledge, without having to go through websites or search through downloaded applications.

According to a study of users' satisfaction and form of utilization in using LINE application to communicate health issues, most people want reliable content about depression, want to bring the knowledge to assess oneself and care for oneself, as well as prevent depression in their family members, without having to go to doctors. Thai people are shy by nature. They don't want others to know that they suffer from mental illness. They don't want people to know about the disease they are going through. They don't want to reveal their mental illnesses, so they require a tool that can assess their depression, measure stress, and evaluate the level of mental illness without requiring them to see doctors or go through the registration process to obtain a patient card, as they don't want their names listed in the mental illness medical record.

Therefore, the researcher has integrated the findings of this study about the efficiency of other social media platforms for communicating depression together with the depression issues Thai people are facing, to build a new tool that better fits the lifestyle of Thai people to prevent depression more widely and practically. The researcher wishes to introduce the m-Mental Health, which uses the LINE application to innovatively communicate health issues about depression in the 2021 era, which is ideal for every generation, especially 60% of the working-age population who are Gen-Y, or people born between 1980-1997. Gen-Y people were born with global digital technology who are opened to new traditions and are interested in innovation. Since there are comprehensive evaluation forms in the area of mental illness to service users and help them assess the disorder, the LINE application will be used as a tool in communicating health issues in terms of depression prevention. It will aid in the prevention of depression and provide a one-stop health care service that everyone can access easily and at no cost. It is regarded as an integrated communication innovation for mental health care for oneself, others close to them, or a family member in the long run.

CHAPTER 5

CONCLUSION, DISCUSSION, AND RECOMMENDATION

In this chapter, the researcher presents a conclusion, discussion, and recommendation for further studies and application. The study “Health Communication Innovation for Depression Prevention and Surveillance,” is aimed

- 1) To study the formats and content of health communication related to depression prevention and surveillance on social media.
- 2) To examine methods of health communication related to depression prevention and surveillance on social media.
- 3) To explore the needs of the uses of Line application in health communication for depression prevention and surveillance.
- 4) To design a Line-Application tool used in health communication for depression prevention and surveillance.
- 5) To test the designed Line-Application tool used in health communication for depression prevention and surveillance.

5.1 Conclusion

5.1.1 The Formats and Content of Health Communication Related to Depression Prevention on Social Media

- 1) Formats and content of health communication on depression prevention through websites as a social media platform in foreign countries and Thailand

It is found that most websites present information in regards to reporting the density of depression, pointing out causes and factors of having depression, raising awareness and a better understanding of symptoms, educating effects and how to prevent depression. Especially, medical websites are aiming to provide knowledge in self-prevention and self-treatments, stress assessments to screen

any risk of having depression, and also recommendations of medical institutes or hospitals specializing in depression cases.

The discussion of the research outcomes, formats, and content of communication via Thai and foreign websites can also be sorted by the objectives of creating websites.

Format 1 Formats and content of communication to report the density or prevalence of depression from Thai and foreign health websites.

An overview of formats and content of communication through Thai and foreign websites is that formats are varied while content remains similar.

Most foreign websites set simplified formats with no graphics, animation, moving texts, or adding colors. The color themes are mainly blue. Unlike Thai websites, web pages are filled with images, attractive colorful layouts, some engaging graphics or animation, and even images of real figures. Accordingly, these distinct components make Thai websites more attractive and beneficial for users who can be equitably educated and entertained altogether.

Meanwhile, key features on both Thai and foreign web pages appeared indifferent, such as available function menus to accommodate users and the implementation of images conveying contents. It is well-liked to apply neutral color themes and fonts to create comfortable feeling and credibility. Moreover, websites are carefully designed with navigation tools to facilitate user's experience. Contents retrieved on websites can be organized by Content-based Structure and also by User-based Structure depending on what the creator would like to highlight. Headers of each website are commonly reserved for websites' names and logos, followed by well-ordered function menus for easy-to-access information.

Besides, from the research observation on depression-related content presented on foreign and Thai websites, it appears clear similarity. Most contents cover all aspects in regards to depression that can also be divided into 5 key points which are the report of the density of depression, definition of depression, factors and causes of depression, prevention and surveillance of depression, treatment for depression patients. All contents are written in the format of depression-related articles, journals, and researches. Interested audiences can access all information and

request for consultation, further, recommended hospitals and medical institutes specializing in depression cases are as well provided.

Format 2 Formats and content of communication to provide knowledge, awareness, and health care techniques overseas and in Thailand

The overview of formats and content available via foreign and domestic websites presents different styles of formats while content in communication is similar.

Most web pages available overseas display simple layouts without any graphics, cartoons, or animated texts. These websites predominantly apply blue-colored themes with not many other colors which make the overall design look unattractive. While in Thailand, most web pages are filled with images and colorful themes that attract visitors with the enhanced aesthetics. Graphic techniques have been used to help attract attention and the combination between cartoon graphics and real portraits is illustrated to make readers benefit from both useful information and enjoyment.

Meanwhile, components available on both foreign and Thai websites show no difference. Websites consist of menu bars accommodating user's function and images that represent the meanings of content. The main web pages and texts apply neutral colors, along with a navigation system that is designed to avoid any perplexity during the operation and to make the searching process easy and swift to use for all users. The layout of the content applies a content-based structure. At the top left, a websites' name and a logo are located while on the right side, users can find a search bar. The second row is a menu bar that links to other web pages for users to access further information.

From the study, depression-related content presented on local and international websites shows no dissimilarity. Most websites present content that can be divided into 3 categories which are a report outlining the density of depression-related incidences, raising awareness and methods of health care, prevention, and treatments of depression.

Focusing on the content to raise awareness and to inform methods of health care, prevention, and treatments for depression, the presentation formats are often available as online advice i.e. researches, articles, depression-related news, etc.

In addition, there are recommendations of health care for patients suffering from depression to fight their depressive symptoms and anxiety by themselves. The information also includes advice on proper treatment options that are suitable for certain degrees of depression, advice on encouragement and how to change personal attitudes, guidance on self-perceptions to patients, etc. Further, these websites help promote mental health care by providing useful information to support and educate users. Most information is collected through reliable research and articles from doctors and psychologists. Within web pages, it also consists of a mental health assessment to evaluate an individual's stress level, feelings of loneliness, and depression. Besides, content also presents articles recommending self-care methods for people experiencing depression and providing 24-hour consultation service via websites with the assistance of doctors and therapists.

Format 3 Formats and content of communication to provide advice and consultation on health care overseas and in Thailand.

The overview of formats and content available via foreign and domestic websites presents different styles of formats while content in communication is similar.

Most web pages available overseas display simple layouts without any graphics, cartoons, or animated texts. These websites predominantly apply blue-colored themes with not many other colors which make the overall design look unattractive. While in Thailand, most web pages are filled with images and colorful themes that attract visitors with the enhanced aesthetics. Graphic techniques have been used to help attract attention and the combination between cartoon graphics and real portraits is illustrated to make readers benefit from both useful information and enjoyment.

Meanwhile, components available on both foreign and Thai websites show no difference. Most websites commonly have a menu bar to represent the conveyance of meanings.

Texts are applied with neutral colors with a single-layered menu layout. On the most left corner, a menu bar displays an icon called Hamburger Icon presenting in graphic formats to access other menu lists. These topics are hidden

under a 3-stroke symbol whilst the right-hand side of the menu appears a magnifying-glass symbol for users to type and search.

From the study, depression-related content presented on international and local websites shows similarity. Most websites present content that can be divided into 2 categories which are raising awareness and methods of health care, prevention, and treatments of depression. These websites serve as a source of data collection for depression including physical health diseases with a team of doctors and specialists to provide knowledge. The websites also perform as a platform for discussion and consultation servicing as users' friends talking on the phone with objectives determined to help people to be happy in life, to help anyone who requires mental help and get back to normal, and to introduce alternatives for private treatments with doctors and psychologists.

Additionally, there are various channels of health counseling services that have been introduced with specialist doctors i.e. contacts for doctor appointments, reservations for received treatment, remote consultation sessions, etc. Moreover, these websites also present news and knowledge relating to physical and mental health, articles and research about health, and become a gathering of psychologists, psychotherapists, and specialists in human development and way of living to convert their specialization to create greater benefit for others through services at organizational and individual scales. Lastly, new tools are designed to provide assistance for mental health and to increase the effectiveness in helping others.

Format 4 Formats and content of communication recommending hospitals and medical institutes specializing in depression cases overseas and in Thailand.

An overview of formats and content of communication through Thai and foreign websites is that formats are varied while content remains similar.

Most foreign websites set simplified formats with no graphics, animation, moving texts, or adding colors. The color themes are mainly blue. Unlike Thai websites, web pages are filled with images, attractive colorful layouts, some engaging graphics or animation, and even images of real figures. Accordingly, these distinct components make Thai websites more attractive and beneficial for users who can be equitably educated and entertained altogether.

Meanwhile, key features on both Thai and foreign web pages appeared no difference such as available function menus to accommodate users and the implementation of images conveying contents. It is well-liked to apply neutral color themes and fonts to create comfortable feeling and credibility. Moreover, websites are carefully designed with navigation tools to facilitate user's experience. Contents retrieved on websites can be organized by Content-based Structure. Headers of each website are commonly reserved for websites' names and logos. On the right-hand side, users will find a quick search bar and contact numbers, followed by a function menu that links to other related web pages.

Besides, from the research observation on depression-related content presented on foreign and Thai websites, it appears clear similarity. Most contents cover all aspects in regards of depression that can also be divided into 5 key points which are the report of the density of depression, definition of depression, factors and causes of depression, raised awareness of health care and prevention of depression, and lastly, information of proper treatments for depression. Key objectives of these websites are to recommend medical clinics and hospitals, pharmacies, leading insurance companies offering annual health check-up packages, dental care deals, accident insurances, health insurances, and life insurances. Users can select interesting links that will automatically lead you to other web pages that include lists of recommended clinics and hospitals, contact numbers, maps, ways to travel, images of the location, lists of reputed doctors, pricing, health check-up programs, and also actual customer reviews before making any decision or receiving treatments. These websites are mostly focused on modern treatments of psychiatric disorders to promote good mental health, to improve quality of life, and also to provide additional depression-related academic information and articles.

Format 5 Formats and content of communication promoting information for treatment and alleviation of depression in foreign countries and Thailand.

Overall, communication via the websites in foreign countries and Thailand is different in the format, but the content is not different.

Most foreign websites set simplified formats with no graphics, animation, moving texts, or adding colors. The color themes are mainly blue. Unlike

Thai websites, web pages are filled with images, attractive colorful layouts, some engaging graphics or animation, and even images of real figures. Accordingly, these distinct components make Thai websites more attractive and beneficial for users who can be equitably educated and entertained altogether.

Meanwhile, key features on both Thai and foreign web pages appeared no difference such as available function menus to accommodate users and the implementation of images conveying contents. It is well-liked to apply neutral color themes and fonts to create comfortable experiences and credibility. Moreover, websites are carefully designed with navigation tools to facilitate user's experience. Contents retrieved on websites can be organized by Content-based Structure. Headers of each website are commonly reserved for websites' names and logos. On the right-hand side, users will find a quick search bar and contact numbers, followed by a function menu that links to other related web pages.

Besides, from the research observation on depression-related content presented on foreign and Thai websites, it appears clear similarity. Most contents cover all aspects in regards of depression that can also be divided into 5 key points which are the report of the density of depression, definition of depression, factors and causes of depression, raised awareness of health care and prevention of depression, and lastly, information of proper treatments for depression with the main purpose to assist people to create happiness in their lives. Hence, websites apply easy-to-understand languages that cover all topics about treatment and methods. Also, another website's objective is to assist patients with health problems by forming medical teams and psychologists as staff who help with the treatment of patient's mental health. Apart from depression-related issues, the provided information is also considered as knowledge sharing that promotes prevention of drug abuse, treatment, rehabilitation, and also general service for patient's mental health targeting the general public who pay attention to their physical and mental health.

2) Formats and content of health communication on depression prevention issues through YouTube as a social media platform available in foreign countries and Thailand.

An overview of formats and content of communication via YouTube in foreign countries and Thailand is very much alike.

It indicates that similarity in formats and content of communication via YouTube in foreign countries and Thailand is recognizable. Most presented content is focused on mental health-related activities. Expert psychiatrists help to answer the inquiries regarding mental health problems. Additionally, sessions of discussion between experienced survivors are also available to motivate and encourage patients through several circumstances such as guidance on how to manage depression, how to prevent depression, how to improve their attitudes, how to get rid of stress, daily stress handling techniques, how to avoid stress and stressful conditions and how to manage with regular disappointments that can potentially lead to depression. The platform aims to educate and guide an alternative way of thinking towards the prevention of depression and of giving hope and happiness to people in society who are currently feeling hopeless. Moreover, YouTube is acknowledged as a medium informing academic information to support audiences' health and to instruct risks of having depression, prevention, and correct ways of rehabilitation.

Most formats of communication found overseas and in Thailand are similar. The format of communication is a combination of "Education" and "Entertainment" presented on various channels with a simplified and easy-to-understand narrative. In addition, live discussions about mental health problems among doctors create a greater impact that makes delivering messages more interesting. Also, interviews from well-known psychologists and experts clarifying mental health issues and questions can engage a large group of audiences, as well as, appearances of famous actors, singers, and other celebrities on shows. Other features that vitalize the platform are the options for viewers to watch anytime via free online streaming with captivating strategies on how to attractively present in distinct color schemes, high audio, and video quality, etc. As well, all viewers can share videos and short clips containing information on depression, interviews with doctors or experienced people in depression, exclusive programs introducing how to be treated and cured for depression patients, and ultimately on how to overcome the disease. Consequently, YouTube is often chosen by the Ministry of Public Health as a preferred media platform promoting a new way of health communication highlighting

the improvement of personal behaviors and positive effects regarding health care among larger audiences via a Content-based Structure that makes all access to other video clips easier.

Referring to the study of the depression-related content available on YouTube, there is a matching similarity between Thai and foreign platforms. Most contents cover all aspects in regards of depression that can also be divided into 5 key points which are the report of the density of depression, definition of depression, factors and causes of depression, raised awareness of health care and prevention of depression, and lastly, information of proper treatments for depression. In addition, techniques of adjusting mindsets and reducing stress are also mentioned. Delivering key messages relevant to depression through video presentation effectively offers a significant and notable narrative in which is accessible 24 hours.

3) Formats and Content of Communication via Applications Available Overseas and in Thailand

An outline of formats of communication via an application available overseas and in Thailand presents shared similarities.

It is found that most of formats and content of communication via applications available both in foreign countries and in Thailand have communication formats and content that are used in various forms of communication as a tool for data storage, as a tool for disseminating and sharing information, as a communication tool between government agencies and people, as a tool to manage and reduce depression, and also including in the form of communication to provide knowledge and understanding about depression and finding treatments. From the study of formats and content of preventive and surveillance depressive disorder communication, it appears that there are 5 popular applications in Thailand and 10 applications overseas commonly used for communicating about depression.

The 10 applications available overseas are divided between free and paid applications which are listed below;

(1) Free applications with no extra fee are found in 6 applications. Most formats and content of communication are created to reduce anxiety, improve sleeping quality, and help users feel happy. They serve as toolboxes that help all users to manage their anxiety and stress daily. Users are expected to be able to release their

emotions and control breathing that stimulates relaxation for both bodies and minds. This results in easier and better sleep every night. Furthermore, it focuses on assisting to adjust new ways of thinking and to give new perspectives reducing stress. Users will be more aware of depression and are encouraged to improve their ways of thinking and be more optimistic by applying a positive thinking approach in psychology to reduce stress and enhance wellbeing. Regardless of how users encounter or have a concern about their mental health, the main objectives of these applications are to support users through these challenging moments without being dragged into sadness and eventually manage stress and depression effectively.

(2) Paid applications are found in 4 applications. Most formats and content of communication focus on private in-depth consultation with therapists. These applications perform as online therapy that users can access 24/7 which means services are available 24 hours every day. Also, users can easily connect and benefit from convenience at affordable rates. All information is kept confidential. The performance of these applications assists to manage anxiety, stress, and chronic depression. According to a research result, 86% of all users reported that they felt happier with their lives after 1-2 months after starting to use the applications.

While other 4 applications widely used in Thailand can also be divided into free and paid applications which are listed below;

(1) Free applications with no extra fee are found in 3 applications that provide communication formats and content helping with depression. Mental health assessments are implemented to prevent and reduce the risk of suicide. Activities that help to minimize sadness are to enhance awareness, problem-solving skills, appropriate behaviors, positive thinking, self-identity, life goals, etc. Most applications are developed by the Department of Mental Health to create a suicide prevention system. Therefore, a database system contains content to help to screen risk groups into surveillance systems. All users can download and use it for free 24 hours a day. Moreover, when users require further assistance, these applications will help to navigate to the 1323 hotline number. The hotline will help to answer inquiries and balancing user's emotions back to improved states.

(2) Paid applications are found in 1 application. The paid subscription may affect the affordability of users with low income. However,

communication formats and content are available for consultation related to mental problems. Users can seek advice on both physical and mental health which will have varieties of experts from each field of study to provide services and users can also choose their preferred mentors. Provided contents mainly focus on psychotherapy and recommendations of hospitals within proximity of users' addresses. The key advantage of the application is convenience acquired from the service as users are not required to leave homes, commute, queue up, or unnecessarily waste their time. The entire process can be organized online and give the sense of having a mental health doctor close to a person at all times.

4) Formats and Content of Communication via Facebook Available Overseas and in Thailand

An outline of formats of communication via an application available overseas and in Thailand presents shared similarities.

Formats and content of preventive and surveillance depression communication via Facebook in foreign countries are studied from 28 popular Facebook pages which can be grouped into 2 groups based on content presented on each platform. 1) The group that presents communication formats and content to educate, raise awareness and provide healthcare techniques 2) The group that provides consultation. While Facebook pages are found in Thailand, as many as 93 depression-related Facebook pages are created in the country. These Facebook pages can be categorized based on different criteria. First, based on a key purpose, 73 Facebook pages are purposely initiated for communities while the other 20 are made for personal pages. The second criteria are based on presented content which can be consequently divided into 3 groups which are 1) The group that presents communication formats and content to educate, raise awareness and provide healthcare techniques 2) The group that provides consultation 3) The group recommends hospitals and health institutions for depression treatment.

Both in a foreign and domestic context, there is no difference in communication formats. Most communication comes in the forms of text, audio, video and appears as a communication platform between a person who posts and each recipient to exchange information, create connections and also recommend health institutions for further treatment among users. The research also finds that there are

none of the Facebook pages that provide information in regards to any report of the density of depression causes and effects caused by depression. In addition, many Facebook pages share fake news or false understandings towards health information. Due to unreliable data resources, audiences are strongly encouraged to carefully consume and share information. Accordingly, it can be concluded that the communication formats and content of preventive and surveillance depression shared via Facebook are not suggested. On the contrary, these Facebook pages can be considered as platforms that potentially develop increased anxiety, stress, and later, further mental health problems. Another finding is the more users engage with Facebook, the higher the chance users are saddened and experience addiction to Facebook which may cause low self-esteem, one of the major risks of having depression. Therefore, Facebook as an online media is not suitable to be a communication medium presenting depression-related information because it may become a factor that reinforces depression. The study proves that depression-related content presented on foreign Facebook pages differs from content presented in Thailand. In foreign countries, Facebook pages highlight more information promoting raising awareness, healthcare, and prevention of depression problems to guide individuals on how to look after their mental health and to be able to handle possible health problems. Additionally, recommended hospitals and health institutions are stated for depression treatment including suggested channels for a medical appointment, doctors, and psychologists who specialized in the field. In comparison with information accessed in other countries, most pages found in Thailand focus more on providing definitions, factors, and causes of depression.

5) Formats and Content of Communication via Twitter Available Overseas and in Thailand

An outline of formats of communication via an application available overseas and in Thailand presents dissimilarity.

According to the study of communication formats and content of depression prevention issues via Twitter, it is found that there are a large number of pages used to communicate about depression. The study found that there are 1,412 pages in foreign countries while in Thailand, 176 pages appear. The overview of communication formats and content of preventive and surveillance of depression via

Twitter in both domestic and overseas demonstrates that the formats and content presented are contrasting. This is because most of the posted content in Thailand shows negative messages that reflect bad aspects of life, self-harm, or suicide. Hence, Thailand's Twitter is somehow potentially set off as a terrifying platform where suicides can be easily promoted and imitated among users. It then concludes that Twitter in Thailand may cause negative outcomes rather than creating benefits and is not recommended to use the media to communicate about preventive and surveillance depression. On the contrary, Twitter pages available overseas relatively share more beneficial content promoting helpful knowledge about depression.

The most commonly found formats and content presented in foreign countries are posted messages promoting useful knowledge about depression, followed by posts revealing feelings and personal stories, and lastly followed by posts negatively reflecting bad life experiences, self-harm, or suicides. The least common were posting pictures of self-harm, wrist slits, arm slits, pictures of blood, piles of blood, respectively. Subsequently, Twitter in foreign countries presents more positive content focusing on prevention and encouragement through supportive therapy, unlike Twitter in Thailand where it is more likely to be perceived as a platform provoking suicides.

Therefore, communicating about depression on Twitter in foreign countries is more appropriate for communication of preventive and surveillance depression. Because the media presents more creative aspects rather than pointing out only negative sides which are distinct from the content of depression prevention communication via Twitter in Thailand. In the domestic context, most Twitter's posts negatively reflect bad life experiences including thoughts of self-harm or committing suicides, followed by posts sharing personal stories about daily lives and lastly followed by posts of pictures related to self-harm, wrist slits, arm slits, pictures of blood, piles of blood illustrated in both cartoon images and photos taken at actual scenes including videos made to imitate the action of wrist slits and hanging. Sometimes, images and videos recorded from real incidents are shared. Delivering rather tragic, scary, and heartbreaking content, Twitter has become a platform influencing on imitation of self-harm through various forms of self-torture. It is found that users share content, methods, and impactful messages provoking suicides and

resulting in unexpected consequences. To elaborate, Twitter may be recognized as a media that easily influences suicides. The idea is supported by how users imitate posted content which may eventually lead to a motive for suicide. In the meantime, it hardly appears supportive and helpful knowledge towards depression prevention on Twitter in Thailand in comparison with the entire content presented. Again, Twitter within the domestic context is yet fully accepted and supported as a suitable platform for communication of preventive and surveillance depression. The media still presents more destructive content than a constructive one.

According to the study of content communicating preventive and surveillance depression via Twitter both overseas and in Thailand, it can be categorized, based on content and format posted, into 4 groups which are;

(1) Twitter posts to share personal feelings and stories

In foreign countries, there are 376 pages (out of 1,412 pages) while in Thailand, there are 43 pages (out of 176 pages).

(2) Twitter posts to negatively reflect bad life experiences, thoughts of self-harm, and suicides

In foreign countries, there are 187 pages (out of 1,412 pages) while in Thailand, there are 97 pages (out of 176 pages).

(3) Twitter posts to show images of self-harm, wrist slits, arm slits, blood, and a pile of blood

In foreign countries, there are 61 pages (out of 1,412 pages) while in Thailand, there are 22 pages (out of 176 pages).

(4) Twitter posts to deliver messages supporting helpful knowledge of depression

In foreign countries, there are 787 pages (out of 1,412 pages) while in Thailand, there are 14 pages (out of 176 pages).

5.1.2 The Study of the Methods of Health Communication Highlighting Preventive and Surveillance Depression Issues Promoted through Social Media Available in Foreign Countries and Thailand

According to the study, the methods of health communication highlighting preventive and surveillance depression issues promoted through websites available in foreign countries and Thailand share a similarity. Most communication methods are one-way communication and two-way communication. Content is organized by broadly categorizing information, mainly presenting reports of concentrated incidents of depression, knowledge in causes and factors of depression, the definition of depression, raised awareness of consequences from depression, preventive measures, self-treatment, and recommended health institutions and hospitals to audiences.

To discuss the results of the study, communication via websites is divided into communication available in foreign countries and Thailand.

1) The Methods of Health Communication Highlighting Preventive and Surveillance Depression Issues Promoted through Social Media Available in Foreign Countries and Thailand

An outline of the methods of communication through social media via websites available overseas and in Thailand are similar. Most communication methods are one-way communication and two-way communication which can be divided considering the main objectives of developing websites which are

Method 1 The communication methods for reporting the density of depression via medical websites in foreign countries and Thailand.

The communication methods of websites reporting the density of depression-related incidents, mainly found on medical websites overseas, are commonly one-way communication and two-way communication. The content is organized within websites. Topics are categorized and specified which allows users to quickly and simply search what they want. Moreover, they can also directly communicate with specialized doctors to enquire about further information on websites.

Instead, the communication method found in Thailand is mostly presented in one-way communication. The information is available in the form of reporting on medical treatment, including articles, journals, research papers, and

inspiring video clips for the discouraged. The media also includes infographics to provide health-related knowledge and technology promoting and preventing mental health problems to report the concentrated depression incidents, numbers of patients, numbers of people who received treatment, etc.

Within websites, topics are divided into broad sections without clearly specifying mental health, depression, and related information as main subjects. Hence, website visitors are required to randomly click each section to search for the information they need, or visitors can apply a faster and more convenient method by typing keywords into a search bar.

Method 2 The communication methods via websites for educating, raising awareness, and providing healthcare information in foreign countries and Thailand.

The communication methods to educate, raise awareness, and provide healthcare information in foreign countries and Thailand are similar. Most methods are one-way communication and two-way communication. Likewise, how the methods are presented in foreign and domestic, there is no difference. It is presented in the form of articles, research papers, video clips, knowledge blogs, slideshows, infographics, etc. by providing details about medical and health-related knowledge to help create awareness and provide guidelines for prevention, definition, and causes of depression as well.

The research also finds that available content appearing on foreign websites is organized more clearly. All web users will be directly guided to the right function according to their preference within a short period and can easily access depression-related sources of information without wasting their time in random searches. While data management in Thailand offers a more complicated structure within websites, resulting in the absence of the overview of websites that leads to each topic. It can be difficult and time-consuming to find the right topics for a person's needs. And if users want to find information about depression, they can apply a faster and more convenient method by typing keywords into a search bar.

Method 3 The communication methods via websites for providing consultation in healthcare and related problems in foreign countries and Thailand.

The communication methods for depression prevention through websites for providing consultation in healthcare and related problems in foreign countries and Thailand are similar. The most commonly used method is two-way communication to provide consultation and private online mentoring service with psychiatrists and psychologists at any time.

There is also a strong similarity in how content is organized within websites for both foreign and domestic providers. Content is well managed and clearly and specifically categorized with guidance for submitting requests for consultation mainly related to mental health, depression, and stress. However, the significant issue is because these websites specifically present certain topics that are outstandingly shown on web pages. Therefore, audiences can find listed topics available on websites and choose functions that match their needs promptly and easily.

Method 4 The communication methods via websites for recommending hospitals and health institutions for depression treatment in foreign countries and Thailand.

The communication methods via websites for recommending hospitals and health institutions for depression treatment in foreign countries and Thailand are similar. Most methods are used in both one-way communication and two-way communication. The list of clinics and hospitals, contact information, travel means, pricing recommended doctors, recommended and well-recognized therapists are all provided on websites to accommodate visitors on choosing where they should have treatments, which doctor and suitable pricing. Visitors can click links that will automatically lead them to other web pages with the information matching their interests. Several health-related websites are suggested and users can have online chat right on web pages. Content appearing on each website is organized and categorized into broad areas such as diseases, medications, hospitals, clinics, asking a doctor, scheduling a medical appointment, etc.

Method 5 The communication methods via websites for providing information about treatment and alleviation of depression in foreign countries and Thailand.

The communication methods via websites for providing information about treatment and alleviation of depression in foreign countries and Thailand are similar. Most methods are used in both one-way communication and two-way communication. Each website organizes its content by categorizing it into broad areas such as information about hospitals and provided services. Also, it contains sub-headings that are very much alike in most websites such as treated diseases, processes of treatment, methods of treatment, locations, pricing for treatments, psychiatric examination, etc.

2) Methods of health communication highlighting depression prevention and surveillance promoted via YouTube available in foreign countries and Thailand

The overview of communication methods that appeared overseas and in Thailand are similar. From the study, it is found that communication methods available on YouTube focus more on objectives of educating and sharing information to a wider group of audiences by implementing a format of presentation that engages every one of all genders and ages. In addition, the methods of communication via YouTube are also accessible for visually impaired people who can listen to the audio instead of watching a screen while a hearing-impaired group of people can watch and learn through YouTube channels. YouTube introduces attractive communication methods by applying color-sound system and motion picture videos where audiences can watch, share and also comment in the form of conversation which is very popular nowadays. Users or general subscribers can upload images and videos to share their video clips and stories for free. Further, YouTube also has a way of presenting information, both verbally talking about the content and posting clips of short films including clips for television shows and music videos. Most of the video clips released are short clips of about 10 minutes and are categorized and set in ranking such as Most recent posts, Most viewed posts, Most Voted posts, etc. It is also considered as a highly effective communication channel that the Ministry of Public Health is extensively using as a new health communication channel worldwide with the purpose to provide knowledge on healthcare that is easy to understand, worth watching, and listening to without spending too much time to understand each content. The media is conveyed through visual and sound concurrently to reach more

audiences of all genders and ages. YouTube's communication strategy is a successful monetization in the channels communicating about mental health, particularly depression, by executing 4 strategies which are 1. Keep stories short and simple 2. Present relatable content to audiences 3. Select “Talk of the Town” 4. Create entertaining content with famous moderators. Besides, YouTube can potentially create reputation for users, and users can generate their content to the audience more easily than traditional media; thus, it can yield income for media producers. Another finding is that most content is factual.

According to the study communication methods via YouTube in both international and domestic contexts, the health communication methods can be divided as followings;

Method 1 The method of communication to define a term of depression

The communication method via YouTube defining depression in foreign countries and Thailand is explained similarly. One-way communication is applied as a presentation format focusing on health issues such as physical health, mental health, health in aging groups, medications, dietary, exercises, health-related news, etc.

There are expert doctors at the master level to give useful advice through the channels as well. These channels can also be an alternative way that should not be missed. Considering the format, it is found that the language used is simple and easy to understand. The way it is presented is interesting as they invite actors, singers, and other celebrities to feature in the shows. Meanwhile, video clips can inspire discouraged people. Infographic media is also essential to help promote health-related knowledge and raise awareness of health care by involving technology to prevent mental health problems.

Method 2 The method of communication to provide knowledge, awareness, and health care

The communication method via YouTube providing knowledge, awareness, and health care overseas and in Thailand is similar, mostly one-way communication. The information is presented through videos and interviews aiming to introduce self-care for mental health i.e. how to manage stress, how to control emotions, how to relieve stress, guidelines for taking care of physical and mental

health, etc. as guidance on self-care looking after their mental health, be able to manage occurring health issues and techniques on how to prevent themselves from depression such as knowledge in prevention, suggestions on health care and restoration, how to provide mental health care to themselves and their family members, etc.

Method 3 The method of communication to provide consultation for treatment of depression

The communication method providing consultation for treatment of depression in foreign countries and Thailand displays similarity, mostly one-way communication. The objectives are to provide consultation services to treat and reduce depressive symptoms. It presents methods for treating depression such as methods of treatment, treatment options, recommended hospitals and health institutions, etc.

3) Methods of Health Communication Related to Depression Prevention and Surveillance Promoted via Applications Available in Foreign Countries and Thailand

The overview of communication methods that appeared overseas and in Thailand are similar. Refer to the study, there are 10 applications available overseas and 4 applications in Thailand that are widely used to communicate about depression. The communication method between these applications is similar. Most of them apply the mode of communication into various formats such as data storage tools, information sharing devices, communicative instruments between government agencies and the public, and instruments to manage and reduce depression.

The study categorized them into unpaid and paid applications available overseas and in Thailand.

(1) Free applications available overseas and in Thailand are similar, mostly one-way communication. They are designed to perform as a tool for users to practice mindfulness and are considered a pocket-sized mentoring companion. These applications daily ask questions to screen depressive symptoms and function as a toolbox that helps users manage their anxiety and stress. Additionally, some games strengthen the mind and affect mood changes and also mental health assessments to avoid and reduce the risk of suicide. To reduce users'

grief, In-app activities are offered and act as an online therapist who is approachable 24 hours every day. Recommendations are developed in audio mode and read by hypnotists, along with music and sounds that mimic nature for relaxation and improved sleeping quality. With these applications, users can effortlessly connect with secured information by downloading applications for free anytime.

(2) Paid applications available overseas and in Thailand are similar, mostly one-way communication. The paid subscription may affect the affordability of users with low income. However, communication formats and content are available for consultation related to mental problems. Users can seek advice on both physical and mental health which will have varieties of experts from each field of study to provide services and users can also choose their preferred mentors. Provided contents mainly focus on psychotherapy and recommendations of hospitals within proximity of users' addresses. The key advantage of the application is convenience acquired from the service as users are not required to leave homes, commute, queue up, or unnecessarily waste their time. The entire process can be organized online and give the sense of having a mental health doctor close to a person at all times.

4) Methods of Health Communication Related to Depression Prevention and Surveillance Promoted via Facebook Available in Foreign Countries and Thailand.

Studying the outline of communication methods that appeared on Facebook in Thailand and overseas, the researcher finds differences between the two. To explain, in other countries, 28 Facebook pages are widely used and can be divided into 2 groups which are

(1) Facebook pages demonstrating the method of communication to educate, raise awareness, and provide health care with a total of 13 pages. These pages apply two-way communication as information exchanging platforms. The communication method highlights experience and knowledge sharing and advising on self-care, available in the format of text messages, audio, and videos.

(2) Facebook pages demonstrating the method of communication to provide consultation and listen to problems with a total of 13 pages. These pages apply two-way communication as information exchanging platforms. The

communication method highlights encouragement, knowledge, and story sharing including featured music to help users feel relaxed and giving a comforting feeling, suggesting how to regenerate mind, self-relaxation, and relieving stress, available in the format of text messages, audio, and videos.

On the other hand, in Thailand, there are 93 pages which can be divided into 4 groups based on how the methods are presented;

(1) Facebook pages with a communication method to provide knowledge related to depression with a total of 22 pages applying two-way communication as information exchanging platforms through the method of experience and knowledge sharing and self-care, available in the format of text messages, audio, and videos.

(2) Facebook pages with a communication method to encourage depression patients with a total of 25 pages applying two-way communication as information exchanging platforms through the method of experience and knowledge sharing, available in the format of text messages, audio, and videos which helps entertaining and relaxing through music.

(3) Facebook pages with a communication method to exchange opinions with a total of 28 pages applying two-way communication as information exchanging platforms. The observed method is presented in sharing personal stories among depression patients and users who are feeling stress, where they are also able to express their feelings, available in the format of text messages, audio, and videos.

(4) Facebook pages with a communication method to recommend and to advise on treatment with a total of 17 pages applying two-way communication as information exchanging platforms through reliable academic knowledge from specialized doctors who provide information and guidance for further treatment. The experts also advise how to properly prevent depression, recommend how to rehabilitate the mind, to relax and relieve stress by themselves via text, audio, and videos.

5) Methods of Health Communication Highlighting Preventive and Surveillance Depression Issues Promoted via Twitter Available in Foreign Countries and Thailand.

From the observation, it appears that on Twitter, the communication methods for depression prevention found in Thailand and overseas are different.

In foreign countries, the most common way to communicate via Twitter is via posts. Users post messages to provide education, encouragement, inspiration, hope, love, understanding, empathy, including guidance for self-care and several useful methods to prevent themselves from depression. Considering the entire content format, Twitter potentially became a platform that comprehensively helps prevent and monitor depression as most presented depression-related content led in more positive than negative senses. Meanwhile, the key communication method within the pages is two-way communication. Users can post messages to enquire and exchange information. In Thailand, the most common communication method is presented via posts that negatively communicate and reflect their unfortunate life stories including expressing the idea of self-harm and suicide. Following by, posts revealing their personal daily lives and images of self-harm such as wrist slits, arm slits, piles of blood in the format of cartoon comics, and also from real events. Also, videos are created to imitate wrist slits, hanging, and self-torture. These negative contents can potentially urge users to need to die.

The method of communication can be discussed and divided into 4 groups based on how each post is presented;

Method 1 Posts that express feelings and reveal personal stories

Online posters aim to express their feelings and thoughts based on what they experience daily and are willing to share them with others. To show their emotions, they post messages and share cartoon images with a crying expression, pictures of an overcast sky, pictures of withered flowers, and also motion videos presenting i.e. loneliness, sorrow, sadness, gloominess, disappointment, etc.

Method 2 Posts that negatively reflect unfortunate episodes of life and the idea of self-harm and suicides

The objectives of these online posters are to narrate their emotions reflecting bad events that happened to their lives, they need to hurt themselves and their need to die by committing suicide. The communication method is presented in the format of self-harm, self-torture, and suicide methods. These contents display how human's thoughts and needs are conveyed by enduring sadness that a brain functions

at the time. Furthermore, there are cartoon images of hanging, bodies covered with a pile of blood, wounds all over bodies, etc. available on these posts.

Method 3 Posts that exhibit images of self-harm, wrist slits, arm slits, blood, and a pile of blood

It appears that there are online posters that intend to exhibit images of self-harm through wrist slits, bloodstains on their wrists, slit marks, wounds covered with blood, flowing blood, etc. to communicate with other users aiming to share those pictures with sarcastic captions that challenge death and show gratification of seeing themselves physically suffered and pain, etc.

Method 4 Posts that support useful knowledge about depressive disorder

The objectives are to provide knowledge and understanding about depressive disorder, including communication for expressing encouragement, inspiration, love and understanding, empathy, attention, etc.

5.1.3 The Study of the Need of using Line Official Account Application for Health Communication Related to Depression Prevention

According to the study of the need in using Line Official Account application for health communication of depression prevention issues, the researcher conduct surveys questioning on interest levels, key reasons of usage, interest towards formats and content to meet the need for health care news and surveillance of depression and also to understand the need in using Line Official Account application for health communication of depression prevention issues among a working group who resides in Bangkok. The researcher as well gathers information collected from 15 interviewees during in-depth interviews. The sampling process applies a specific selection with criteria that the sampling group must be of the working-age, consisting of both individuals without mental health problems and those with depressive disorders, including the ones who are involved or closed to patients who are at risk of having depression. The working-age is between 20-65 years old. It can be divided into 3 groups which are the group of 20-30 years old, 31-40 years old, and 41-65 years old.

The study finds that the need in using Line Official Account application for health communication of depression prevention issues can be discussed based on characteristics and user's preferences below.

Study 1 When the Line Official Account application is used as a health communication channel for depression prevention, what level of interest do users have?

Study 2 The main reasons that users are interested in implementing the Line Official Account application as a health communication channel for depression prevention.

Study 3 In which format do users want the health news on preventive and surveillance depression to be presented through the Line Official Account application the most?

Study 4 What kind of content do users want about the health news on preventive and surveillance depression presented through the Line Official Account application?

The discussion of the need in using Line Official Account application for health communication of prevention depression issues among the sampling group of working age who lives in Bangkok can be explained below

1) To Discuss the Results of Using the Line Official Account Application as a Health Communication Channel for Depression Prevention. To what extent are users interested?

It is shown that most sampling groups demonstrate a high level of needs with a total of 9 people which is most commonly found in the age group of 20-30 years old, followed by the highest level of needs of a total of 6 people, mostly found in the age group of 41-65 years old and 31-40 years old respectively.

2) To Summarize Predominant Reasons for Explaining why Users Need to Use the Line Official Account Application as a Health Communication Channel for Depression Prevention

It is found that among a sampling group of 15 people, the most popular reason for using the application is because of its simple function and accessibility which applied to all age groups. This was followed by reasons for a two-way communication method and quick responses with a total of 14 people, mostly found in

20-30 years old, 41-65 years old, and 31-40 years old respectively. Lastly, another reason is its new modern format with a total of 11 people, mostly found in the age groups of 20-30 years old, 31-40 years old and 41-65 years old respectively.

3) To Conclude in which Format Users Need the Content on Depression Prevention to be Presented the Most

It can be concluded that users would like the health news on depression prevention issues to be presented via the Line Official Account application through various forms. Considering how it was presented, the preferred methods are 1) text messages 2) images 3) Infographics 4) videos. In the meantime, to consider the presentation formats, people would like to receive informative formats that offer 1) a variety of media to choose from 2) updated content 3) communication access through this channel 4) links to other websites

(1) From the study on how the health news of depression prevention issues available through Line Official Account application is presented, the overview of the entire sampling group of 15 representatives have high needs in the outline of presentation methods at the highest level and also interested in applying infographics and videos as presentation methods at the same level. This can be discussed by age ranges, as the levels of needs are varied at certain ages.

(1.1) The 20-30-year-old age group needs the method of the presentation via infographics and videos at the highest level and respectively, followed by images.

(1.2) The 31-40-year-old and 41-65-year-old age groups need infographics and videos at the highest level, followed by the presentation via text messages and images.

(2) From the study on the presentation formats promoting the health news of depression prevention through Line Official Account application with the total numbers of 15 representatives from the sampling group, the overall interest towards the format of presentation is at the highest level and the level of interest towards the format that can be communicated via the application and be able to link with other websites reach the highest level as well. This can be discussed by age ranges, as interest levels are varied at certain ages.

(3) The 20-30-year-old age group shows their interest towards the formats of presentation consisting of varieties of media to follow, the ability to communicate via the application, available links to other websites are the one with the highest level of interest, followed by up-to-date information

(4) The 31-40-year-old age group has the highest interest in the formats of presentation that offer up-to-date news, the ability to communicate via the application, available links to other websites, followed by a variety of media to follow.

(5) The 41-65 years-old age group is interested in the presentation formats that can communicate via the application and linked with other websites at the highest level, followed by a variety of media to follow and up-to-date news content.

4) To Summarize what Aspects of the Content Users Want the most from the Health News Related to Depression Prevention Presented via the Line Official Account Application.

According to all 15 representatives from 3 sampling age groups which are the 20-30-year-old group, 31-40-year-old group, and 41-65-year-old group, their interests in content presented are similar. Most of them would like content informing about screening tests and depression assessment forms, recommendations on how to look after their mental health, guidelines on how to prevent and surveillance, suggested treatment methods, psychologists and psychiatrists including advice for contacting hospitals and health institutions at the highest level.

5.1.4 The Design of the Line Official Account Application as a Health Communication Tool for Depression Prevention

1) The result of the study on the need of using Line Official Account application as the health communication channel for depression prevention shows that among all 15 representatives from the sample group, 9 people are interested in using the application at a high level while the other 6 are strongly interested in at the highest level.

2) The result of the study of reasons that make people interested in using Line Official Account application as the health communication channel for

depression prevention issues. It shows that all 15 representatives are mainly interested because of its simple function and accessibility, followed by a two-way communication method and quick responses, and lastly followed by new modern formats.

3) The result of the study on how users would like the health news related to depression prevention to be presented via Line Official Account application is considered based on the method and the formats of presentation. Overall, all 15 sampling representatives prefer the method that includes infographics and videos into the presentation for the health news of depression prevention issues at the highest level, followed by, presentation implementing text messages and images. Regarding the formats, the groups agree to prioritize communication access through this channel and links to other websites at the highest level, followed by updated news and a variety of media to choose.

4) The result of the study of what content users want to be presented the most from the health news related to depression prevention presented via Line Official Account application. Overall, all 15 sampling representatives are interested in the content related to screening tests and depression assessment forms, recommendations on how to look after their mental health and on how to prevent and surveillance at the highest level, followed by the content indicating causes and factors of having depression and advice on hospitals and other health institutions at a high level. Lastly, the request for the content defining depression, depressive symptoms, and degree of severity shown at an intermediate level of their interest.

5.1.5 To Test the Use of the Line Official Account Application as a Tool for Health Communication Related to Depression Prevention

The researcher assigns the same sampling groups of 15 people to watch a clip video presenting a sampled platform that simulates an overview of the components of the Line Official Account application to apply as the health communication tool handling depression prevention issues. The session is conducted to find out what content should be included and how the tool should function. After the sampling groups finished watching, the researcher questioned them about their gratification and

benefits in using the Line Official Account application as an innovative tool for health communication of depression prevention issues.

1) The gratification from using the Line Official Account application as an innovative tool for the health communication related to depression prevention and surveillance

The result of the study of the gratification from using Line Official Account application as an innovative tool for health communication related to depression prevention shows that all 15 representatives from sampling groups have the highest level of gratification in communication channels, convenience in filling the depressive disorder assessment form, interesting content presentation, and the provision of preventive and surveillance information, followed by the convenience in accessing information, easiness to use without difficulty, and the provision of mental health information, found the most in the group of 20-30 years old. The gratification with the provision of information on the causes and factors of the illness, treatment information, and information of the infirmaries is at a high level, found the most in the group of 41-65 years old.

2) The Uses of the Line Official Account Application as an Innovative Health Communication Related to Depression Prevention and Surveillance Tool

From the study, it was found that all 15 samples use the Line Official Account Application for receiving news and information the most, followed by social interaction, and daily application. Considering uses in each aspect, it can be classified based on the age ranges, as follows:

(1) The uses of news and information

It demonstrates that the utilization among different age groups is varied. The age group of 41-65 years old presents as the group that benefits from news and information the most, followed by the 21-30-year-old group, and lastly, it appears that the group of 31-40 years old benefits the least. Most users can apply the collected information to observe themselves to prevent a risk of depression and also use them as a guideline on mental health care and solutions for treating patients who are having depressive disorders.

(2) The uses for social interactions

It shows that the uses among different age groups are varied. The age group of 21-30 years old presents as the group that benefits from having social interactions the most, followed by the 41-65-year-old group, and 31-40 years old respectively. The tool is used the most for applying gained knowledge as guidelines for preventing the illness for themselves and others, followed by exchanging information with others, and for making decisions while consulting with psychiatrists and psychologists respectively.

(3) The uses for daily application

It shows that the utilization of different age groups is varied. The sampling group of 21-30 years old uses for recommending health care to others the most, while the group of 41-65 years old uses for applying in their daily lives and in recommending health care to others. The group of 31-40 years old uses the most for their daily life.

5.2 Discussion

5.2.1 Part 1 Formats and Content of Health Communication Related to Depression Prevention and Surveillance through Social Media

1) Websites in foreign countries and Thailand

To discuss the result after studying the overview of the communication formats and content based on the key objectives on each website which are to report the density of depression, to raise awareness and provide health care guidance, to give health care advice, and listen to problems, to recommend hospitals and medical institutes specializing in depression cases and lastly, to provide information for further treatment and on how to reduce depressive symptoms. It is found that most foreign web pages have similar formats and layouts with Thai web pages. Both sources present web pages full of images of graphics and figures. The layout of these websites is to mainly highlight the aesthetics with images covered with content which is commonly used nowadays. Readers who visit these websites can obtain usefully and conveying information supported with presenting images and graphics that effectively attract most readers' attention especially from more advanced graphics techniques,

cartoon graphics, and actual images of people. While other components available on websites show no difference such as a menu bar accommodating users, images that help interpret the meaning of the content, etc. Regarding the application of colors, most websites apply neutral colors for backgrounds and text colors to make them comfortable to read and create credibility. Also, navigation systems are adopted to get rid of any confusion for users while visiting these websites with search functions that users can quickly search for their interested information. Most websites are structured based on either a content-based structure or a user-based structure. Meanwhile, the way these websites are set is focused on what are the main content they would like to present. Within each website, a heading displays a logo and the name of the website, followed by a simple single-layered menu bar that makes it easy to access various information.

From the research of Thitinun Iadrak (2010) who conducted the study of Development of Online Clinical Medical Record Website. He discovers that the principle of web design requires all data collection including website objectives, target audiences, etc. Collected information is used as an approach to analyze and organize the structure and layouts of websites presented to larger audiences. The design consists of 2 parts. The first part is the structural design of websites. It is how layouts of web pages are structured indicating all available web components, content, navigation tool design for the appropriate navigating performance to help avoid any complications and provide quicker search results. These navigation tools are provided for users to internally visit web pages set in categories. For example, the main menu providing access to key topics of the websites. It commonly appears in text or graphic links displayed on every web page. While more specific menus connecting the current web page to other pages present subtopics in related content. It mostly appears in the text and graphic links as well. Recommended features of navigation tools are a prominent position and easy-to-access layout i.e. the top right corner of web pages, adjustable colors when links are clicked, etc. to avoid complications. There are several options for use such as graphic menus, texts, search bars, drop-down menus, and also a link returning to a home page. Regarding how websites are structured, there are 2 ways which are Content-based structure and User-based structure which can be

laid out in various ways. For instance, the method of laying out by applying hierarchy is suitable for websites containing numerous web pages which are easy to be found.

2) YouTube in foreign countries and Thailand

To discuss the outcomes from the study of formats and content available on YouTube in Thailand and other countries, it is found that presented content in the form of video clips, health care plan, health care technique sharing, etc. While depression-related content on YouTube includes definitions, causes, symptoms, and treatments of depression. Most information is presented in positive ways, considering it beneficial for platform users to apply with their daily lives and mental health care. Some specialists or psychiatrists advise on how to create more positive emotions and attitudes. Meanwhile, these recommendations are shared in the presentation formats with attractive colors, audio, motion video system. YouTube is an online platform providing free video streaming services where users can watch and share videos for information sharing. It consists of content with short clips giving knowledge about depression, online channels interviewing doctors specialized in depression or interviewing people experienced with depression in the past, exclusive programs introducing how to treat and cure depression, or providing guidance on how to overcome the disease. Therefore, YouTube is considered as one of the most effective communication channels offering the best ideas to convert into happy lives in which the Ministry of Public Health chooses to communicate with larger audiences to support health care behaviors and to provide optimistic opinions towards healthcare.

In accordance with the research of Wareethip Boonyor (2019), the findings showed that 1) The format and content to create inspiration via YouTube are narrated by primarily introducing the importance of depression, then leading to the issues aimed to communicate, and eventually encouraging and inspiring audiences who are encountering depression. The significant elements stimulating audiences' feelings and sharing emotions along with the stories are the host's speaking tone, language, and production. In the meantime, the content presents the treatment of depression. 2) Positive and negative perceptions and attitudes in depression-related content presented on YouTube demonstrate that information providers apprehend treatment methods of depression presented by expertise psychiatrists, from their

credibility with the extensive and easy-to-understand information. While positive attitudes are derived from how information providers confidently believe in the information provided by respected doctors. On the contrary, negative attitudes can occur in case information is shared by social media influencers who do not acquire knowledge from experts or experienced individuals which also affects the credibility of information. 3) On YouTube, it is presented that the information providers understand all 6 aspects of depression at the basic level, interaction level, and judgment level, which can rationally analyze content, check reliability, and compare content gained from experiences and perceptions.

3) Applications in foreign countries and Thailand

To discuss the outcomes from the study of formats and content available on online applications implementing various communication formats as tools for information storage, for news and information sharing, for communication between governmental organizations and the public, and for the management in reducing depression cases. In addition, from the research study of formats and content of health communication of depression prevention issues, it is also found that applications popularly used to communicate depression issues can be divided into free and paid subscriptions.

(1) Applications with free subscriptions comprise the communication formats and content to reduce anxiety to improve sleeping quality and generate happiness. It serves as a toolbox to help manage anxiety and stress for application users daily and also helps users to release their emotions and to exercise breathing, stimulating physical and mental relaxation that is resulted in better sleeping quality nightly.

Additionally, the applications help to change the way of thinking with new perspectives, benefits in reducing stress, having a better understanding of depression, improving thinking habits and optimism through the application of the psychological positive thinking approach. No matter to which degree users are facing mental health problems, the applications aim to support all users to overcome their challenging period without being sunk in sorrow and at the end capable of handling stress and depression.

(2) Applications with paid subscriptions comprise the communication formats and content focusing on private in-depth consultation with professional therapists. These applications perform as online therapists who are reachable 24/7 which means the consultation service is available every day at all times. Users can easily connect with affordable convenience and be guaranteed that their shared information remains confidential. The function of these applications helps manage anxiety, stress, including depression as a chronic disease. According to the research on the result of the use, it shows that 86 % of the overall users are reported to feel better about their lives after having been using within 1-2 months.

The above finding is congruent with the research of Chadatarn Wannapho, Thitikarn Sangsutta, and Thitiporn Samransart (2018), studying Factors Affecting the Selection of Elderly Care Service through the Application. The study reflects that most users widely use the Android operating system with an average of 1-3 applications used with the frequency of 6-10 times per day. Users are allowed to download and use them for free. Health service is the most popular feature, followed by scheduling meetings with doctors, news, and online communication. While the number of applications available on smartphones is 6-10 applications, categorized into 1-5 applications offering health services where users can easily search by themselves. The key reason for using these services is the necessity in gaining information available within the application, for example, blood pressure tests for users with high blood pressure records. During the use of applications, it pointed out the issue of inconsistency of the assessment. Personal factors are related to behaviors in selecting services for aged care via applications including gender, age, marital status, address, lifestyles, profession before retirement, income, and monthly expense. While marketing factors which are products, pricing, distribution channels, marketing promotion, human resources, physical appearances, processes, etc. relate to decision-making outcomes for aged care services via applications.

4) Facebook in foreign countries and Thailand

To discuss the outcome of formats and content of health communication of depression prevention issues via Facebook, it presents several depression-related communication formats. There are 28 Facebook pages obtaining popularity overseas while, in Thailand, the number of Facebook pages reaches 93 pages that communicate

about depression, mostly through text, audio, and video formats. It is also considered as a communication platform between posters and receivers to exchange information and interact. These Facebook pages also provide information suggesting recommended medical institutions for users. It shows that none of these pages publicly presents any report of a density of depression causes and effects caused by depression. It is also found that health-related articles shared among Facebook pages are fake news and non-credible. Consequently, readers are required to be attentive and carefully share content available on Facebook. In summary, the health communication formats and content of depression prevention issues shared on Facebook might not be a suitable platform to promote health. On the contrary, it exacerbates anxiety and later turns the feelings to stress and mental health problems. Moreover, the more users engage in Facebook activities, the sadder feelings are subsequently involved. The addiction to Facebook will create negative feelings within the self which undeniably affect the risk of having depression in the later stage. Hence, Facebook as a social media platform is not recommended as a medium to present depression issues as the platform itself may become a factor that worsens the situation relating to depression.

The suggested study is consistent with the research of Chalermpon Kajai, Darawan Thapinta, and Sombat Skulphan (2018), who conducted the study of *The Relationship between Facebook Addiction and Depression among Adolescents Attending State University in Chiang Mai Province*. It is shown that the addiction to Facebook affects adolescents' both physical and mental health. The research narrated the findings with the main objectives in finding relations between Facebook addiction and depression in a collective group of adolescents. It appears that among the entire group, 34.93% of them are addicted to Facebook. Within these numbers, 51.25% are severely addicted while the other 48.75% show mild addiction. Among adolescents encountering depression at the rate of 72.71%, within these numbers, 59.46% of them is at a mild level, 28.83% at a moderate level, 9.31% at a rather severe level, and 2.40% at a severe level. Thus, it statistically proves that Facebook addiction positively relates to depression at a moderate level.

In addition, the research of Sutinee Laothai (2016), who studied the relationship among behaviors in using Facebook, depression and mental health problems in undergraduate students, demonstrates that the behavioral study in using

Facebook may cause depression. From the statistical analysis for testing the hypothesis, it was found that the hypotheses are partially confirmed. To elaborate, behaviors of users who actively use Facebook and give importance to the numbers of people clicking Like buttons are positively related to depression. It can be explained that Facebook users who obtain high numbers of Likes have increased self-esteem. On the contrary, users who are not admired may experience negative emotions. Besides, the research, conducted by Farahania, Kazemib, Aghamohamadib, Bakhtiarvandc, and Ansarid (2011) through the assessment scoring mental health of university students who use Facebook in Iran, said that the use of Facebook significantly shows positive relations to the result of the assessments scoring mental health, anxiety, and stress. The study also mentioned that the use of Facebook can also cause anxiety and stress at the same time.

5) Twitter in foreign countries and Thailand

To discuss the health communication formats and content of depression prevention issues via Twitter, it is presented that there are a great number of Twitter pages communicating about depression. In an international context, there are 1,412 pages while there are 176 pages in Thailand. The overview of formats and content appeared both domestically and internationally, it shows distinctive differences between the two. Overseas, most Twitter pages post countless messages to promote beneficial knowledge of depression and present positive content to highlight information on prevention, treatment, encouragement, recommendations, assistance, etc. Therefore, the communication relating to depression available on Twitter overseas is suitable to be implemented in communicating depression prevention. Conversely, most Twitter posts in Thailand present more negative content reflecting bad life experiences, self-harm, and suicides which makes the platform risky and easily promotes suicidal thoughts through imitation. To conclude, Twitter in Thailand may cause more negative rather than positive effects and is not recommended to apply for communicating depression prevention issues.

The above study confirms the research result conducted by Ratikorn Soongsomsakul (2019). who studied negative behaviors in using Twitter as social media. Another purpose of the study is to analyze behaviors of using social media platforms. The samples are 30 articles available on Twitter. The researcher selected

articles containing negative content and discovered that users share their personal opinions to public spheres without realizing the impact after posting. Contents posted on Twitter reflect the behavior and attitudes of posters. Besides, posting and sharing information might mislead others when reading posted content including the use of ambiguous messages on Twitter.

In addition, the research outcome responds to the research from Montira Sakeatong (2019) studying distancing in the era of 4G. The study explained communication in modern days in which the internet has a significant role towards adolescents and has become a crucial part of our lives as well as interpersonal communication until it emerged a current called, "Online Social Network" where a virtual community is created via a computer network and share activities through internet network especially on Twitter by applying the concept of "Life is sharing". Hence, a new culture is formed among adolescents, along with the trend of online social networks in which everyone willingly shares their personal information with others via the online world. Consequently, adolescents keep engaging more in online social networks to connect with others with flexibility in location and time. Technology advancement nowadays plays a vital role and tends to increasingly create problems in Thai society. It can be considered as a double-edged sword that consists of both good and bad attributes to users. Advanced technology can accommodate users as they can easily and conveniently connect anywhere and anytime. Users can also access news and information more promptly at an affordable cost. On the other hand, when uncontrollable events occur on the internet system, unexpected outcomes can put users at risk as confidential information and personal identity are violated. Cyberbullying is also concerned as an act virtually threatening others. The action is emotional abuse that can inflict a very serious psychological trauma causing depression or in the worst case, suicide. It deteriorates the quality of life and affects physical, emotional, social, and intellectual development.

The discussion of depression-related content in foreign countries and Thailand mostly presents extensive issues relating to depression which can be separated into 5 key issues below.

(1) The content reporting the density of depression helps explain several concentrations of depression, several patients in children, adolescents,

working groups, and age groups, several prone-to-depression groups, the tendency of having depression and suicidal rates worldwide with the purpose to support medical organizations in preparation with depression more effectively and also to report many access to mental health services on a global scale i.e. the estimated number, of patients receiving treatment and the estimated number of depression patients who are yet treated.

The result of the previous study corresponds to the research conducted by Suthanan Chunjam (2011) surveying research studies related to depression in Thailand. The author proposes that since 1974-2007, there were 40 out of 120 research works that studied the concentration and incidence of depression, mostly focusing on the concentration with point prevalence. It is found that depression is concentrated at 78.05 % and when the concentration is monitored among sample groups, depression cases are highly concentrated in female groups who are experiencing pregnancy, postpartum, menopause period, aging, chronic diseases, and mental health issues. The research also found that the density of depression is higher in females than males. For the study of the incidence of depression, there were 5 studies that studied the factors related to depression, which were found the following factors: a) personal background factors, i.e. female gender, professions, marital status as divorced or widowed, financial issues, etc., b) biological factors i.e. the diagnosis of having cervical cancer, chemotherapy, sexual dysfunction, severity and side effects from sickness, etc., c) psychological factors i.e. beliefs in merits, self-esteem, hopefulness, etc., and d) social factors i.e. economic problems, litigation problems, home surveillance, drug dealing locations, social support, social participation, family relationship, daily stress, etc.

(2) The content defining depression helps explain what depression is, types of depression, and symptoms with numerous objectives. First, to present terms of depression i.e. detailed information about what depression is, causes and how the degree of severity can be differentiated, etc. Second, to report types of depression i.e. how many types of depression exist, symptoms of each type of depression, change in behaviors, etc. Lastly, to describe symptoms and changes which are relevant to the research done by Nantira Hongrisuwan (2016). who studied depression and defined the term as a mental state that exposes emotional disorders such as unhappy feeling,

boredom, depressed feeling, desperate and hopeless feelings, lethargy, insomnia, loss of appetite, distraction, anxiety, pessimistic attitudes, etc. Depression is a mental problem that can occur to anyone, with healthy people, physically and mentally ill patients. The disease can be developed from a normal stage to a more severe stage. The neglect of proper treatment can result in depression in the end. In addition, depression is a psychological disorder incorporated with a lack of self-respect and dissatisfaction. The latter term can be defined as a condition in which there is no gratification in doing activities that are generally satisfied. The dissatisfied feeling can negatively affect the quality of life that eventually leads to suicide. Patients with severe conditions or individuals who are suffering from depression without receiving any medical treatment are likely to commit suicide. One of the reasons is they might not realize that they have depression and be aware of possible danger that follows if they do not proceed further treatment required. Depression is derived from several factors such as genetic disorders, biochemical abnormalities in brains, psychological problems, environmental problems. It indicates that causes of depression can be both internal and external factors, and either controllable or uncontrollable.

The findings of the research led by Oraphan Lueboonthawatchai and Peeraphon Lueboonthawatchai. (2010). define depression as a collective mental disorder such as sadness, boredom, depressed feelings, despair, hopelessness, lethargy, loss of appetite, weight loss, insomnia, etc. which may eventually lead to self-harm or suicides.

Besides, Somphop Ruangtrakul (2000) describes characteristics and symptoms of depression below;

Sadness is a chief complaint of depression. Feelings reflecting sadness can be presented in various ways i.e. feeling depressed, lifeless, gloomy, etc. Interestingly, many patients appoint doctors without mentioning sadness. This can be interpreted as either patient do not feel sad or are not aware of the importance of acknowledging sadness. For this reason, it should be assumed that if a patient is suspected of having depression, doctors are obliged to always ask about their emotions and feelings. Sadness is unnecessary to occur the whole time. It is possible that patients feel joyful and have a sense of humor, but once the level of depression is lifted, patients can continuously feel sad. The degree of sadness will fluctuate

throughout the day and most patients feel the worst in the morning and recover at night. Mood swing at certain timing is also another crucial characteristic of depression.

(2.1) The irritable feeling is also another chief complaint found in the majority of patients having depression. They will feel the emotional change but are not able to control it. Also, they will feel sorry for the actions that might discomfort people around them. Many patients often explain that nobody understands their illness and be aware that it is also undesirable for them to have these symptoms. However, once they feel irritable, they are unable to control their emotions.

(2.2) Feeling bored and loss of interest occurring in patients who feel bored and lose interest in daily activities that they used to do and then stop doing now, or some activities that they once enjoyed and now they are indifferent. Most 60% of patients encounter reduced sexual need or close to none.

(2.3) The symptom of losing appetite is usually shown in the early stage of depression. Moreover, your taste buds will function differently causing no appetite, even with your favorite menu. On the other hand, some patients obtain an increased appetite than usual. Most patients lost 2-5 kilograms on the first doctor visit.

(2.4) Insomnia is commonly the first symptom signaling. Patients might experience sleeping problems for 1-2 weeks causing difficulty to fall asleep, followed by other related symptoms.

(3) The content of factors and causes of depression is how the content is outlined and indicates several factors leading to depression. The key objective is to inform factors and causes of depression i.e. hereditary factors, factors associated with family, biological factors, etc. It is discovered that most depression cases are related to various aspects. The absence of appropriate treatment, all minor symptoms are potentially developed into depression

The study is accordant with the study of Natsornchai Porn-eim and Thanyawit Yotthaweehiran (2019). They examined the video production project to raise awareness of depression at Klong Luang Hospital. It is suggested that patients suffering from depression should be taken care of by someone close to them which are their families and friends to enhance their wellbeing. Nevertheless, all care takers

close to patients are required to acknowledge and understand factors and causes of depression including possible symptoms and treatment to adjust their attitudes towards patients and to provide proper assistance.

In addition, the research result, collected by Malinee Yeaujaiyen (2018), of the study of factors in relations to depression presenting in a slum. It points out that one of the factors relating to having depression is the scenario in which family members use substance abuse to build family relationships, relaxation and stress reduction, the lack of social support, etc. It also reflects that ongoing drug problems remain in Thai society because of many relatable factors. Mental health issues are common problems associated with long-term substance abuse, resulting in changes in neurotransmitters. Other mental problems include mood swings, aggressiveness, and inappropriate behaviors affecting their families and communities. To elaborate, in the situation where a family member is involved in drug abuse, the family relationship is likely to become unhealthy and is subjected to confrontation and accumulated stress within the family, subsequently anticipating divorce problems at last.

(4) The content raising awareness and providing information on health care and prevention of depression presents content focusing more on surveillance and guidance on how to take care of mental health i.e. stress management, emotional control, stress relief, relaxation, mental health care, etc. These are guidelines for individuals to look after their mental health, not too sensitive to stress, and capable of handling possible health problems. Further, the information can apply to other family members and close people to have a better understanding of mental health. Correspondingly, the informative content is used as a technique in the prevention of depression such as how to prevent depression, how to protect mental health, how to find solutions to recover from depression, etc.

It corresponds to the research conducted by Sophon Mekthon (2017), who studied the campaign of depression under the concept of “Depression, Let’s Talk”. The study reveals that at the moment, in Thailand, there are 1.5 million patients with depression, or 2.5% of the total Thai citizens. It also points out that females have a 1.7 times higher risk of having depression than males. Meanwhile, the Ministry of Public Health publicly released a campaign to create awareness and

understanding of the prevention and treatment of depression so that patients can live with other people as well as support from family and community by genuinely listening and understanding them. The Ministry also announced 5 measures to solve depression issues which are 1) reducing bias, creating awareness, and promoting precise knowledge and understanding 2) minimizing the number of patients by active searching and prevention 3) Decreasing duration and severity of the disease 4) Preventing suicides 5) Avoiding repeated occurrences of depressive symptoms. The initiated campaign to promote knowledge and awareness of prevention and treatment of depression to the public via social media and other media channels proposes a surveillance system at the provincial scales, quality development, a service creating an online database on depressive disorders, etc.

Furthermore, the research findings found by Kanyakorn Madamrat (2018), said that apart from the campaign encouraging patients with depression to be involved in screening assessments, it is necessary to ensure that people close to patients are well informed. Although hospitals provide accessible information on websites or handouts, alternative communication channels via other media are still inadequate to effectively raise awareness and understandings of depression to the hospital's target groups.

(5) The content focusing on therapy and treatment of depression presents the overview information for available therapy and treatment i.e. treatment methods, treatment options, recommended suitable places for further treatment, etc. While, the information suggesting hospitals and medical institutions specializing in depression includes the lists of hospitals, rehabilitation centers, medical clinics, and guidance on how to make medical appointments.

The content accordingly responds to the research conducted by Sunisa Srmo-on, Aditya Pornchaiket Ow Yong, and Acharaporn Seeherunwong (2011). The researcher examined the study of problem-solving therapy to reduce depressive symptoms in older adults. The study found empirical evidence in eight studies. Two meta-analyses, one systematic review, and five randomized controlled trial studies. The researcher utilized acquired empirical evidence to assess the quality in three areas based on the empirical-evidence assessment criteria set by Polit and Becks (2006), which are the relevance to problematic issues, including the assessment

of the level of empirical data classified by evidence of Melnyk and Fineout-Overholt (2005), It discovers that there are two main types of problem-solving therapy to reduce depressive symptoms in older adults which are Social Problem-Solving Therapy (SPST) and Problem-Solving Therapy Primary Care (PST-PC). When considering steps of both types, it is found that the procedure shares similarities and it may differ only in some processes. In other words, SPST undertakes 2 components, which are 1) Recognition and Problem Assessment 2) 4-step problem-solving type, while, PST-PC focusing on current issues and problem-solving processes without examining in-depth to adjusting thoughts and beliefs of recognition and problem assessment. There are 6 steps of problem-solving type. The study also indicates that both SPST and PST-PC have efficiency in reducing depressive symptoms and can be extensively implemented in patients with major depressive disorder, dysthymia, and minor depressive disorder. However, before applying the suggestion, clinical nursing practice guidelines should be developed and also appropriately select for the context of the agencies and the target population.

Additionally, the research findings from Wanna Raungprayoo (2014), studying Problem-Solving Therapy to Reduce Depressive Symptoms in Older Adults: Synthesis of Research Studies. The result shows that the effective program to reduce depressive symptoms in older adults in primary care is the collaborative treatment program called "IMPACT" which incorporates the use of antidepressant medication (AD) and problem-solving therapy (PST-PC). The clients were adults ages 60 years and above with the diagnosis of major depressive disorder or dysthymia. The program processes were as follows. 1) Clients were screened for depression; then, knowledge about late-life depression was provided. 2) In the initial treatment phase (8-12 weeks), clients selected their choices of treatment either AD or PST-PC. At the end of the phase, depressive symptoms were assessed. If the symptoms decreased, a relapse prevention plan would be developed. If not, clients would proceed to the second phase. 3) In the second phase (6-10 weeks), the treatment plan could include switching to a different AD, augmenting a dosage of AD, switching from AD to PST-PC, or vice versa, or a combination of both.

5.2.2 Part 2 The Communication Methods of Health Communication for Depression Prevention through Social Media

1) Websites

It can be divided based on the objectives of websites which are websites' communication methods to report concentrated incidents of depression, to instruct and raise awareness for health care, to provide consultation services for depression, to recommend hospitals and medical institutions treating depression, to provide information of treatment and reducing depression, both overseas and in Thailand. Most medical websites present either one-way communication or two-way communication. The content appearing on websites is organized into distinct subjects for users to quickly search for their interesting information and also to offer communication with specialized doctors for further inquiries. The methods of communication can be found in various ways i.e. articles, journals, researches, including infographic media educating health-related knowledge, etc. Video clips are communication methods of sharing knowledge and applying technology to promote and prevent mental health problems, to report incidents and density of depression, statistical numbers of patients, numbers of patients who are treated, etc. Although the content on websites is grouped under different subjects, most subjects are vaguely set without any specification guiding to the subject of mental health, the subject of depression, or clear information of depression. Consequently, website users are obliged to randomly click on each category to search for what they are looking for or choose a search toolbar and type keywords instead of aimlessly selecting into each category for promptness and convenience.

The study is consistent with the research conducted by Hatairat Lekkla (2006) who investigated the health communication strategies to success. It requires ingenious operation appropriate to the circumstance of people and space, particularly by following strategies, for example, the communication delivering the message. Each communication needs investment in finance, resources, labor, etc. Hence, communication expects a return with the most accurate target. Here, the public can be either a primary or secondary communication target. People usually apply two-way communication while the target group for communication should participate in planning, interactive communication, and adjustment of effective communication

methods. As the health issue is a sensitive issue connecting with everyone's lives, it might be easier to implement interactive communication and exchanging opinions to have a better understanding towards others and eventually find solutions for health problems.

Besides, the research outcome, provided by Woraphan Yeamhongpapha. (2018). who studied social communication to develop learning processes of Buddhist organizations, discovers that organizations as senders have similar communication formats. First, most organizations apply one-way communication to delivering information or to unilaterally interpret to receivers, while receivers are unable to instantly respond to senders. They can only send feedback at a later stage. This format of communication then shows that receivers cannot interact immediately such as listening to a radio, watching television, etc. Secondly, these organizations also implement two-way communication to communicate or to interpret whereas receivers can return an immediate response to senders. Senders and receivers might be at the same location or entire different places. However, both sides are still able to negotiate or interact with each other. The organizations share identical key messages which are education management, propagation of dharma, academic services for societies, and preservation of art and culture. On the other hand, the organizations also focus on social development and peace by adopting key messages to create a relationship between individuals and societies to promote a genuine understanding among people in the society, to inherit culture, to mentally cure patients, etc. through similar communication channels i.e. printed media, televisions, radios, new media, and social media.

2) YouTube

The overall communication method through YouTube both overseas and in Thailand shares similarities. Most of them apply one-way communication by providing useful information via video presentations and interviews from specialized and experienced doctors advising on these channels. YouTube is an online channel promoting health care that audiences shouldn't miss. The format of channels presents simple languages, easy-to-understand content featuring interesting guests who are actors, singers, celebrities, etc. The previous observation is congruent with the research of Patcharaphon Kraichumpol (2012) who studied attitudes and behaviors of

communication through social media to create a reputation. Regarding the case study of the YouTube channel, the work reflects the researcher's strong interest in understanding attitudes and behaviors of communication through social media to build up a reputation. Further, the study also informs and explain factors and reasons in relevant to perception, attitudes, and behaviors of receivers to create knowledge updated with media trend in the future and to utilize the research's result by using the information from the study to create benefits to the media users as much as possible.

Clip videos are also considered as aspiring communication channels for discouraged people by inspiring them and providing information on mental health care such as stress management method, emotions control method, stress relief method, mental health care guideline, etc. to guide mental health care, to handle existing health problems, to suggest some techniques preventing depression and to educate i.e. prevention, healthcare and rehabilitation guidelines, mental health care for themselves and their family members, etc. The communication method used for consultation and counseling services is one-way communication to advise and treat to reduce depression. It presents treatment methods for depression i.e. treatment methods, treatment options, recommended treatment institutions, hospitals and, medical institutions specializing in depression, etc.

3) Applications

According to the research, the overview of communication methods through applications shows that there are 10 applications popularly used overseas for communication depression-related topics while there are 4 applications used in Thailand. It is also found that communication methods appearing on these applications are identical. Most communication formats are applied to various formats. They can be used as tools for data storage, for distributing news and information, for communicating between governmental agencies and the public, and for managing and reducing depression. The discussion is divided into two parts:

The above findings are relevant to the research conducted by Nuanchavee Prasertsuk. (2015) studying on the influence of communication through Line application in today's society. The research points out that, nowadays, technology or other applications are undeniably necessary for all human life as everyone now relies on technology to accommodate their lives in every aspect, from

waking up in the morning until the time they are going to bed. Therefore, technology is highly essential for humans. Regarding applications, the Line application is commonly known and gains much popularity for users, especially the ones who reside in cities with busy and rushing lifestyles. The implementation of Line application is as well inevitable as new technology and modern applications help accommodate professionally and reduce time consumption caused by other activities. Further, to discuss family, it is the first institution where people live together and unavoidably interact together. Thus, communication is an important element in life. Families can apply creative media to create understanding, emotions, and feelings among members which will consequently result in good impressions, gratification, and healthy relationships.

4) Facebook

The overview study of communication methods through Facebook in Thailand and overseas. Facebook pages present two-way communication as an information-sharing platform that consists of communication methods to share i.e. knowledge and experiences, general care, exchange data, encouragement, etc. These materials are shared in various formats which are texts, audios, and videos, helping to relax and comfort users. The method also includes recommendations of mental rehabilitation, relaxation, self-stress relief via texts, audios, and reliable videos made by specialized doctors educating and giving guidance for suitable prevention and treatment. The observation is relevant to the research from Weerapong Ponglek (2019) examining the communication through Facebook fan pages and the effects to Facebook fan page founders: The Case Studies of Popular Facebook Fan Pages in Thailand. The research outcome points out that there are 2 popular formats used by Facebook fan pages which are fan pages that focus on sales and services and fan pages that do not focus on sales and service, but more on how to create popularity by following 3 steps which are finding concepts and characteristics to fan pages to make them stand out from others, creating suitable content to match with target audiences' interest, and purchasing advertisements on Facebook to increase numbers of followers. There are 5 strategies to create fan pages aiming for sales and services which are 1) Solely focusing on selling products without considering target groups 2) Offering authentic products 3) Posting product teasers 4) Displaying evident

product information 5) Reviewing feedback from customers. While there are 7 strategies applied for fan pages that do not focus on sales and services which are 1) Using cheerful photos 2) The knowledge that is relevant to target groups 3) New fashion engaging teenagers 4) Inspirational quotes 5) Contents that mainstream media does not offer 6) Divided folders as magazine-like columns 7) Consistent posts daily

Moreover, the research findings are as well consistent with the research conducted by Time Chuastapanasiri (2017) studying Facebook Depression Syndrome and writing an article to educate depression on Facebook. It was interestingly written that a journal of pediatric medicine in the United States studied the subject and found that it is more dangerous witnessing people who are rejected or despised by others on Facebook than being rejected in reality. Many cases may subsequently have depression.

Facebook has created an artificial reality by posting only good stories while hiding terrible experiences behind them. We are then limited to seeing just people with perfect lives in a virtual world. Once we compare what we see to ourselves, the feeling of worthlessness then occurs. As well, you will lose self-confidence if you ask someone for a favor and are ignored. You will keep thinking about why you are unwanted and this kind of thought is a sign of Facebook Depression Syndrome. The solution to getting away from the symptom is to reduce the amount of time using Facebook, reading others' posts, and stopping posting their own stories to feel better about themselves.

5) Twitter

The outline of the study of communication methods via Twitter overseas and in Thailand shows the application of two-way communication as the main method. Each poster and receivers communicate to enquire and exchange information. The method of presenting via Twitter posts can be categorized into 4 groups which are;

Method 1 Posts to express feelings and to reveal personal stories

The objective is to unveil posters' emotions, to express what they encounter to other people to know and to release emotions at that time by typing, posting, sharing cartoon characters acting crying, motion pictures reflecting loneliness, sorrow, sadness, gloominess, disappointment, etc.

The statement above corresponds to the research from Damrongdet Doenribram (2019) who studied the comparison of data mining structure performance to distinguish the depressive disorder from Twitter posting behavior. It discovers that the World Health Organization and the Department of Mental Health identify depression as the second leading factor damaging health by inappropriately and incautiously using social media. The careless behavior resulted in stress, violence, and eventually depression. The research aims to distinguish depression based on Twitter posting behavior by comparing one-level and two-level classifications. The one-level classification works with the Bayes algorithm and SVM algorithm filtering general messages and content indicating characteristics of depressive disorders. The criteria are based on DSM-5 assessment which are depressive emotions, reduced interest, abnormal weight loss or weight gain, sleeping quality, fatigue, sense of worthlessness, ADHD, lethargy, and suicidal thoughts. While the two-level classification of the SVM algorithm helps screen general messages and content warnings about depression. In addition, the study is also consistent with what Kolliakou (2020) proposed in her research investigating the conversation of mental health on social media during a crisis. The research outcome is to assess the volatility of Twitter posts and mental health and to find out whether Twitter posts fluctuate with daily mental health conditions. The research then analyzes preceding data collected from Twitter and hands the collection of data to mental health service providers in London "during crisis". It is found that tweeting about depression and increasing numbers of schizophrenia cases are relevant to higher numbers of day people experiencing a crisis. Hence, the study confirms a temporary relationship between content related to mental health appearing on Twitter.

Method 2 Posts to reflect bad life experiences, self-harm, and suicidal thoughts

These posts are to narrate personal feelings reflecting bad events in life, the willingness to hurt themselves and share how they feel like dying and want to commit suicide by mentioning the methods of self-harm, self-torture, and suicide. All described content is a thought conveying ideas and needs functioned by a brain while feeling sad at that moment. Further, there are some posts sharing cartoon characters

with a rope tied to a neck, photos of hanging, photos showing a body covered with blood, photos presenting wounds all over a body, etc.

The description matches with the research from Ratikorn Soongsomsakul. (2019). interested in the behavioral study of the negative use of Twitter as social media. The research illustrates when Twitter users share personal opinions in the public realm without being aware of the following effects. Once messages are posted, the content reflects the behaviors and attitudes of users. Besides, posting or sharing information might make people misunderstand or feel bad when they read these messages, especially words with double meanings used on social media like Twitter which can negatively create confusion.

Method 3 Posts to share images of self-harm, wrist slits, arm slits, blood, and a pile of blood

Twitter posters are willing to release images while they are harming themselves by slitting their wrists, blood on their wrists, slit marks, wounds, cuts covered with blood, flowing blood, etc. and broadcast these materials to other users to witness their posts with captions outlining sarcasm, challenging death, gratification to see themselves tortured, having pleasure in physical pain, etc.

These sampled behaviors responses to Luxton (2012)'s research discussing social media and suicides: public health perspective. He suggests that there is more evidence proving that the internet and social media can potentially influence behaviors related to suicides. The main questions then are how the influence extensively risks the public and how it can be solved from the perspective of public health. To answer these questions, we outline how social media can influence suicidal behaviors in both negative and positive effects and we evaluate the evidence of the risk. Besides, we discuss the legal complexity towards the significant subject and propose solutions for future research projects and prevention from public health's perspective.

It corresponds to the research done by Hswen (2019) who conducted the study of depression-related online communication and anxiety among users suffering from schizophrenia. It is primarily found that digital technology helps reinforce the detection and management of schizophrenia. This survey aims to provide a preliminary understanding by informing that communication methods for depression

and anxiety found on social media are popularly used among schizophrenia patients. Besides, it tries to answer whether the methods are relevant to how the patients express their sickness. A certain number of Twitter posts was collected between the sample group of Twitter users who identified themselves as schizophrenia patients and the control group. Frequency and period spent on communicating depression and anxiety were compared among different groups. Overall, the study group which posts and tweets and users share similar characteristics. Twitter users with schizophrenia are likely to significantly tweet more about depression than the control group. The study also provides introductory in-depth information highlighting that schizophrenia patients may increasingly express depressive symptoms and anxiety via online posts which related to clinical characteristics of schizophrenia available through offline settings. Social media platforms conclusively can improve our understanding of schizophrenia.

Additionally, the finding applies to the research from Nadeem (2018) identifying depressive symptoms that appeared on Twitter. The research outcome recently proved that Twitter has become a leading method in distributing online depression-related information with a high volume of users. The researchers then surveyed the potential of Twitter in predicting individuals online before Major Depressive Disorder or MDD are presented through the process of collecting data, lists of users with depression who previously posted on Twitter in the past. As well, the research applies the method called Bag of Words to find out the number of tweets in each category and eventually benefit from the statistical classifier to estimate the risk of having depression. The research accessed 2.5 million tweets with an 81% accuracy rate. To classify resources with an 86% accuracy score, it is believed that this method will help develop a tool to assess individuals' risks of having depression. Consequently, doctors and other healthcare-related agencies can proactively help people suffering from mental health problems.

Method 4 Posts to underpin useful knowledge related to depression

Twitter posters would like to educate and instruct knowledge about depression. Also, they communicate to offer encouragement, inspiration, hope, love, understanding, empathy, opportunities, acknowledgment, etc.

It is consistent with the research proposed by Bonner (2019) studying the detection of depressive symptoms presented on social media, particularly Twitter. The concept of detecting any depressive symptoms is to initiate a project for detecting and analyzing the depression symptom through linguistic signs at the early stages, and the persistence of depressive symptoms. It also helps to effectively predict depression in a way that can complement and expand an approach that can analyze characteristics of depression. Initially, medical benefit in assessing individuals and in analyzing Twitter posts to trace language cues signaling worsen mental health conditions before realizing that it is too late to receive treatment and assist to promptly recognize signs of depression for people in the society.

Further, the information is consistent with the research prepared by the National Suicide Prevention (2019) investigating social media to prevent suicides. It discovers that the best practical way is to adopt social media as a platform where organizations can directly communicate with general audiences. As well as families and other key viewers, when the prevention of suicides is mentioned on social media, it is strongly advised that the platform needs to carefully communicate and share information that does not lead to any hazardous statements that might unintentionally emphasize negative feelings, thoughts, and suicidal feelings that people might only want to express feelings but at the same time can harmfully lead to imitation for others.

5.2.3 Part 3 Needs of Using the Line Official Account Application as a Health Communication Tool for Depression Prevention

Features and formats of needs can be discussed below

- 1) To discuss the outcome after using the Line Official Account application as a health communication tool for depression prevention.

Users express needs of using the Line Official Account application as a health communication tool for depression prevention at a high level, mostly found among people between the age of 20-30 years old, followed by the group of 41-65 years old and 31-40 years old at a very high level respectively

The observation is relevant with the research from Ketpreeya Kaewsanmuang (2016) studying usage behavior and gratification from Line

application among Bangkok-based users. It is found that sample groups who mainly used Line are women rather than men. The majority of them are between 25-30 years old. Besides, this 25-30-year-old group uses the Line application to seek new things, to open to news and information, to benefit in profession and entertainment. Concerning the concept of demographics, it explains that the working group is differently satisfied with the use of the Line application. They seek for new things and are open to updated news and information for professional advancement (Yubol Benjarongkij, 1991, p. 69) In addition, the idea links to the demographic approach suggesting that the characteristics in demographics (ages, educational levels, income) are varied which affects the differentiation of communication behaviors.

2) To discuss key reasons for using the Line Official Account application as a health communication tool for depression prevention.

The study shows that the total of 15 samples has interesting motives. Easy-to-use and accessible features are the most agreeable, following by, two-way communication and quick-reply features that are mostly found among the group of 20-30 years old and subsequently found in 31-40-year-old and 41-65-year-old groups.

The findings correspond to Kritsanee Suayai (2016)'s research who studied the Usage of LINE Application, gratification, and Capability for Bangkok citizens. It points out that the use of the Line application is widely popular and has a large number of users. Most of them have been using Line applications for more than 2 years. Regarding the frequency of usage, people usually open the application throughout the day while the chatting feature is the most used. Line Chats helps us directly connect with other users within the same application by delivering messages. The conversation between senders and receivers is easy to use with convenience in communication.

Another related research is from Songsit Samguansak. (2016). The study focused on Attitudes and Behaviors towards Line Application through Online Social Network: The Case Study of Undergraduate Students from the Faculty of Political Sciences and Law, Burapha University. The research outcome reveals that most students have an overall attitude towards Line application at an appropriate level. The highest rank is to conveniently and promptly communicate with important people through the Line application. Meanwhile, the lowest rank is the importance of

Line application to their livelihood. Behavior towards Line application also demonstrates that most students choose to use Line application on smartphones rather than other appliances and also vote smartphones as the most used devices for Line application. The main purpose of the use is to communicate and most of them recognize Line application through referral among friends and have different attitudes towards Line application via online social networks.

The collected research data above is relevant to the research conducted by Hemin (2013) examining usage behaviors and public opinions of the consequences from using social media networks in Bangkok. The result shows that communication via the Line application provides easy and rapid communication to important people. It also helps people to be informed about news and information faster. Therefore, the implementation of social media networks into communication is strongly agreed at a very high gratification rate.

As well, the research results respond to Sakarin Tansupong (2015)'s research of Factors Influencing the Adoption of LINE Application. It resulted in the level of the opinion of Line application users in social networks. The researcher proposes that the use of the Line application is substantially to communicate with friends, acquaintances, and important people because of its easy-to-use and accessible function. It is a two-way communication offering rapid interaction and a modern communication style.

3) To discuss in which format users need the content of health communication for depression prevention to be presented via the Line application the most.

The study shows that users prefer to have healthy communication of depression prevention issues via Line application in formats of text messages, images, infographics, and videos. The methods of presentation are 1) A variety of media formats to follow 2) Updated news 3) A communicable feature through channel 4) Links to other websites. Further explanation is discussed below

According to the study of the methods of presenting health communication of depression prevention issues via Line Official Account application. The overview of all sample groups consisting of 15 participants shows interest in the method of the presentation via infographics and videos at the highest level. The

sample group of 20-30 years old engages the most with the presentation with infographics and videos, followed by the presentation using images subsequently. While among the group of 31-40 years old and 41-65 years old are also interested in the same direction, the presentation with infographic, videos and lastly texts and images respectively.

The data also supports the research findings from Songsit Samguansak. (2016). The study focused on Attitudes and Behaviors towards Line Application through Online Social Network: The Case Study of Undergraduate Students from the Faculty of Political Sciences and Law, Burapha University. The research outcome reveals that most students have an objective in using Line application to communicate as the application is predominantly developed for communication. It also depends on in which format users select to communicate such as communication by typing messages, audio communication, and video communication. Besides, users can select between a group conversation and a private conversation. This corresponds to the research findings provided by Jongkolnee Jongpornchai (2016) who studied infographics and its application in health and pharmacy. The result is concluded that in the scope of health and pharmacy, infographics are extensively used and rapidly spread. The application of infographics performs a more significant role in medicine as they help improve efficiency in communication, are easy to be published in multiple channels, and acquire the ability of the method to increase the willingness to change the attitude or behavior of audiences. These are solid advantages. Regarding the benefits of infographics and the application in health and pharmacy, some studies compare media using infographic formats and media using conventional formats, for example, solely using texts in communication. Consequently, the study found that most receivers prefer media using infographics as it affects the level of interest in further reading, improving understanding, persuading patients to change behavior, and affecting long-term memory.

From the study of formats presenting health news highlighting depression prevention issues through Line Official Account application, all 15 participants from the sample group are interested in the presented formats where they can communicate through the channel and are provided with links to visit other websites at the highest level.

The above survey responds to the research done by Nattapat Cholvanich. (2013). who investigated usage behaviors and public opinion towards Line application among Bangkok residents. Among 300 participants from the sample group, it is found that most of them use Line applications every day. The most common format is to communicate with friends, followed by contact families. In terms of functions, most sample groups respectively use the application to send messages, emojis-emoticons-stickers, and lastly, images.

It is also consistent with the research from Ketpreeya Kaewsanmuang (2016) studying Behaviors and Gratifications After Using LINE Application of People Who Are 25-45 Years Old. It presents that users of 25-45 years old choose to use the Line application as a communication channel as the application is developed and improves its function to respond and fulfill users' needs. Therefore, the key features attract people to increasingly use Line application correlating to the theory of applying media for advantages and gratification, presented by Katz et al. The study explains that most humans apply interpersonal communication to acquire the need for information from others. This leads to the expectation to receive news, create interpersonal communication, and gratification eventually. (Pira Jirasopon, 1992) It is also relevant with the research of Phaphat Cherdchoosin (2014) examining the subject of "Usage behavior of "line" social application of which affects complacency and utilization," of Sripatum University's Students" It shows that gratification and utilization through the service of Line application are at very high gratification levels. To elaborate, the feature with the highest gratification rate is the format of utilization while the design of the application and service are rated at very high levels.

4) To discuss what content of health information related to depression prevention users need to be presented via the Line Official Account application

Sample groups are consisting of 15 participants at 3 different age ranges. Starting from 20-30 years old, 31-40 years old, and 41-65 years old. All participants show their interest in content involving screening and evaluation forms for depression, recommendations for self-health care, recommendations for prevention and surveillance, advice of treatment, recommended psychiatrists and psychologists, contact channels for hospitals and other medical institutions at the highest level.

The survey correlates with the research from Phichaporn Poomphayung. (2018). investigating the influence of thought leaders in social networks towards perception, attitudes, decision-making process in mental health services. It discovers that the genre of content that the sample groups admit most is about self-improvement in psychology as well as information guiding on how to provide self-health care, how to prevent and surveil, treatment options, recommended psychiatrists and psychologists, the contact information of hospitals and institutions treating depression, etc. Due to the current trend in mental health care with a shifted tendency in positive psychology, each individual is encouraged to prevent themselves through proper mental health care instead of waiting until being diagnosed and receiving treatment. It is also recommended to recognize personal emotions and thoughts. Therefore, mental health information particularly on self-improvement is widely accepted by the public.

5.2.4 Part 4 To Design the Line Official Account Application as a Health Communication for Depression Prevention Tool

The result of the study points out that the sample groups request various content relating to health news focusing on depression prevention to present via Line Official Account application. Their outlined preferences are screening and evaluating forms assessing depression, recommendations on personal mental health care, recommendation on prevention and surveillance, advice on contact information of hospitals, and medical institutions specializing in depression cases at the highest level, followed by the factors causing depression and recommended lists of hospital and medical institutions at a high level, and the requirement of the definition of depression and symptoms at a moderate level respectively.

This collected insight corresponds to the research led by Arpassorn Aonviset (2013) studied “Exposure, the Use, and gratification of People at the Somdet Chaopraya Institute of Psychiatry of Health Magazine in an Organization.” It reflects that the sample groups are interested in various categories of health news. The research outcome indicates that health news reporting dietary and nutrition acquiring highest interest, followed by, health news reporting illnesses and also news presenting health and beauty. As most sample groups are women, they are likely to have interest

and awareness in diet and nutrition as influences towards their health and beauty. While news advertising medications, supplements, medical equipment, medical clinics, and health institutes are placed at a moderate interest level. It is possible because most sample groups maintain healthy conditions which decrease their interest and acceptance of information suggesting medications, supplements, or listed medical clinics. The observation is also confirmed by the exposure theory that receivers choose to be informed based on their interests.

It is also congruent with the research Krittik Boonrattanaprapha and Rossarin Buathong (2007) who studied the evaluation of depressive disorder among schizophrenia patients and healthy people. The study presents that it can be evaluated in several methods. At this stage, 3 methods are mentioned which are self-evaluation, the evaluation assessed by specialists, and measurement of external behaviors. The process of evaluation is vital to screen depressive disorder, help prevent, and timely treat patients. As depression is a mental health problem that can potentially occur to anyone of all genders and ages. It is a threat that patients might not be aware of or recognize having depression. There is also a possibility that close people are also unable to notice and assume that stress feelings are inflicted by work or situations occurring in daily life until depressive symptoms are exacerbated, negatively affect their lives, and eventually decide to end their lives by committing suicide.

The relevant findings are also found in the research conducted by Aphisara Watcharakan. (2006). who help explain that the implementation of mass media to meet the needs is varied depending on the ages of sample groups. As a way of living in common societies, humans generally want to be updated with current situations and obtain a variety of news that they can benefit from or highly meets their needs. This also relates to the author's research proposing that the elements that sample groups required are screening and evaluating assessment for depression, recommendations on personal mental health care, recommendations of prevention and surveillance, suggested contacts for hospitals and medical institutes treating depression are then at the highest level, followed by causes and factors of depression and recommended hospitals and medical institutes. This can be explained that sample groups want to receive news and knowledge to improve themselves and to keep up with others

aiming to create self-confidence in health and self-development in health care as a way of living and solutions to solve health problems.

5.2.5 Part 5 To Test the Line Official Account Application as a Health Communication Tool

The research examines gratification and utilization from the Line Official Account application as a tool for communicating health, particularly on depression prevention issues. Once sample groups watched sampled video clips of a platform simulating the overview of the Line Official Account application's features as a health communication tool for depression prevention issues, the outcomes can be concluded below.

1) To discuss the gratification of the Line Official Account application as an innovative tool for health communication related to depression prevention

Among all 15 participants from sample groups, they have the highest gratification on the modernity of the communication channel, convenience in assessing depression evaluation forms, interesting methods of presentation, information highlighting prevention, and surveillance. Following by, gratification towards the convenience of functions and accessible sources, simplified function, and information about mental health, mostly found in the group of 20-30 years old. While gratification towards information outlining causes and factors, treatment information, and listed medical institutions treating depression are agreed to be highly satisfied, mostly found in the group of 41-65 years old.

It is coherent with the research of Kritsanee Suayai (2016) who studied usage behavior of Line application, gratification, and utilization for Bangkok people. The researcher did a survey inquiring about gratification and found that the majority is satisfied using the application which includes having a conversation with friends, exchanging news and information among friends and groups of friends. The application can be utilized anywhere and at any time. Moreover, it helps save communicating time. It is also consistent with the theory of utilization and gratification from media which once said that receivers implement mass media to respond to personal needs for several purposes such as for learning, for accompanying, for forgetting what disturb their minds, for excitement, for relaxation,

for the creation of the personal virtual world, etc. The sample groups have high gratification towards the utilization of Line application because of its easy-to-use function and the ease of communication.

It also responds to the research done by Phaphat Cherdchoosin (2014) inquiring students what satisfied them most in regards to gratification and utilization of Line application service. The study reveals that the highest gratification and utilization of the Line application is towards its function, while key features on Line application are satisfied at a high level. Most of them use the application to send messages via chats to friends or a group of friends that they want to have a conversation. It is relevant to the theory of gratification and utilization proposed by Kanjana Kaewthep (2000) who suggests that generally, receivers need to individually fulfill personal needs i.e. the need in the news that is beneficial to themselves, the need in news relating to personal beliefs, attitudes, and value, or the need to gain new experiences, and lastly the need in convenience and speed in message receipt.

The study correlates with the research conducted by Arpassorn Aonviset (2013) studying Exposure, the Use, and Gratification of People at the Somdet Chaopraya Institute of Psychiatry of Health Magazine in an Organization. It is found that most of them are satisfied most with the content of health magazines that best meet their interest and needs. Following by information about illnesses that respond to the theory of exposure by Pornthip Worakitpokatorn (1986, pp. 292-293). To explain further, the theory considers that receivers select news based on their interests and needs and up-to-date information at a moderate level. This links to the proposed idea of Wilbur Schramm, 1966 pointing out that communication helps connect society through sharing health-related news and information and educating audiences. Meanwhile, the public moderately reacts to the gratification of advertisements for medications, supplements, medical equipment, hospitals, or other medical institutions. It is assumed that because 80% of sample groups obtain healthy conditions and work in health-related professions i.e. doctors, nurses, patient assistance staff, etc. In comparison with demographic characteristics and gratification towards the content of health magazines, it is mostly found that there is a gratification of the content presented in every aspect. The information of illnesses reaches the highest gratification, followed by, dietary and nutritious to apply knowledge to

prevent and cure themselves of diseases regularly and to reduce any risk that possibly occurs to personal health and prevent the spread to other patients. It is also consistent with the theoretical approach of the utilization and gratification describing that humans intend to seek news provided by mass media and choose media of their interest to fulfill their personal needs. (Nongnooch Siriro, 2000, p. 50; Suparat Thitikulcharoen, 2000, p. 215)

2) To discuss the uses of the Line Official Account application as an innovative tool for health communication related to depression prevention.

It is found that all 15 participants from the sample groups use for receiving news and information the most, followed by creating social interactions, and daily application respectively. To consider uses in each aspect, the uses for receiving news and information is the most commonly found among the group of 41-65 years old to mainly use news and information for mental health care and solutions to solve depression issues. Regarding the utilization for social interactions, it is the most common for the group of 21-30 years old, frequently to use gained knowledge to exchange conversations with others.

Lastly, the utilization in the application of daily lives is mostly found among the sample group of 21-30 years old by sharing information and recommending to others.

The study corresponds with the research from Kritsanee Suayai (2016) who investigated the Usage of LINE Applications, Gratification, and Capability for Bangkok Citizens. The study of user behavior of Line applications in utilization and communication discovers that sample groups use the application to communicate and exchange information among others within societies to enhance self-understanding and maintain one's identity. In addition, utilization is applied into communication in several ways as the use of Line application can be maximized in multiple benefits and many areas i.e. in communication, in timing, in social context and expression, in entertainment, in the profession, in developing interpersonal relationships, and in communicating the process to share news and information to help save time and to reflect relationships with others. It becomes a setting hosting discussion among groups of friends. Besides, the Line application is also used to track news and information related to work. As the application can be abundantly utilized in

numerous ways, the usage behaviors shown on the application significantly relate to the utilization, considering the popularity and constantly increasing numbers of Line application users. Additionally, it is consistent to Kanjana Kaewthep and Nikhom Chaikhunpol (2012)'s work surveying rationale and need in using media and discovering that there are 35 replies reflecting needs which can be categorized into 5 groups which are need in knowledge and understandings, need in emotions and feelings, personal need, social need, and need to relax and reduce stress.

5.3 Research Recommendations

1) According to the research outcome studying the subject of needs and interests in using Line Official Account application for health communication highlighting depression prevention issues, it shows that most users have interest at the highest level because of easy-to-use and accessible function, and also highly responsive two-way communication.

Therefore, it is recommended that there should be support from governmental and private agencies for further collaboration and promotion in developing an innovative and functional tool to concretely prevent and monitor depression. It suggests that a self-screening assessment for depression is necessary to conduct an early stage of prevention for depression. The proposed idea will accommodate the public by avoiding time spent on doctor visits and will respond to the lifestyle of people within society. To elaborate, this is because the individual characteristics do not want to indicate that they have problems and are likely to refuse to receive treatment. Also, it is important to underline that members are entitled to free assessments without any extra charge.

2) Referring to the research outcome proposing the presentation methods of health news in depression prevention issues, it reflects that most users prefer having it presented via text messages, images, infographics, and videos with features linking to other websites. Consequently, it is recommended that health communication in Thailand should adjust new formats of communication and make them more interesting to engage with a variety of receivers. Everyone is expected to have full access to depression-related information easily and conveniently, anywhere and at any

time. Thus, many organizations are as well encouraged to implement social media as an innovation for health communication underlying depression prevention issues to more actively respond to the lifestyle of people in the society.

3) The result of the study of formats and content communicating depression prevention issues shared via Facebook and Twitter points out that the 2 social media are not suitable platforms promoting health. The media can potentially generate anxiety and stress as available information relating to depression is presented in a more negative sense rather than a creative one. It may wrongly support imitation of self-harm and cause mental health problems in a later stage.

The study then advises providing more restrictions in controlling information with more creative content.

5.4 Recommendations for Further Studies

1) For a further study, developing a tool implementing Line Official Account should be realized and experimented with by applying it as a tool for health communication for depression prevention issues.

2) A further study is recommended to include a comparison of gratification and utilization from Line Official Account application as a communication tool and also acquiring additional data from other applications promoting health care with the objectives to highlight differences in user's preferences and prospectively to enhance the tool to accurately respond to the user's needs.

3) This research collected data through in-depth interviews interrogating and discussing between an interviewer and a limited number of 15 interviewees who are in the working-age group living in Bangkok. Shortly, it is encouraged to conduct a more extensive study with a larger number of participants. It can be a quantitative survey distributed to other provinces as a guideline in developing communication for mental health in Thailand.

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