An examination of factors associated with stigma towards people with depression: a communication's perspective

by

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Abstract

Stigma towards mental illness is a problem that runs deep in most societies, causing difficulties for the people who are ill, the people related to them, and the community (Papadopoulos, Leavey, & Vincent, 2002). Stigma is one of the most crucial reasons for depressed people to avoid seeking help. Numerous interventions and campaigns for reducing public stigma have been implemented with limited effect on mental health stigma. Previous studies have focused on effectiveness of anti-stigma messages, how they are communicated and on the use of contact strategies to strengthen campaign influence (Jensen, 2017). This study examined how the key elements of the attribution theory— locus of causality, stability, and controllability – contribute to public emotional reaction and discrimination towards people with depression. Other vital variables included the level of perceived stigma, level of contact with stigmatized persons, six dimensions of stigma, communication channels, the access to depression-related resources and demographic factors.

Data were gathered through an online survey that was distributed to a random sample recruited from M-Turk (N=533). Results showed negative associations between locus of causality and negative emotions (β = -.38, t = -9.47, p =.000), and discrimination (β = -.10, t = -2.41, p =.02), which means that the more participants believe the situation are responsible for the cause of depression, the more negative emotion and intention of discrimination they held. Among all information channels, Interpersonal Channel was the only significant predictor of discrimination (β = .21, t = 4.29, p =.000). Overall, this study shows that more empathy and more familiarity with depression do not lead to less discrimination. On the contrary, participants believed people with depression were easily controlled by the situation and did not put effort to change it.

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Dedication

To mom and dad,

I hope I live like a person you've expected -- kid with a good heart.

Chapter 1 - Introduction

Background

Stigma towards mental illness is a problem that runs deep in most societies, causing difficulties for the person with the mental illness, the people related to them such as family members, and the community (Papadopoulos, Leavey, & Vincent, 2002). In the U.S., mental health problems are a public concern because of its wide prevalence. According to Mental Health America (MHA) (2018), 1 in 5 adults has a mental health condition (over 40 million Americans). The Department of Health and Human Services (HHS) (2017) describe mental health as emotional, psychological, and social well-being, which affects our thoughts, feelings, and actions, and is essential at every stage of life, from childhood through adulthood. Mental health problems are common, but people can seek help, get better, or even recover completely. However, even with increased access to services, such as insurance and treatment, most Americans still do not receive proper care. Even for those with severe depression, 76% are left with no or insufficient treatment (MHA, 2018).

Mental health is an important issue, not just for America, but globally. A world-health report from the World Health Organization (WHO, 2001) announced that 1 in 4 people would be affected by mental or neurological disorders at some point in their lifetime. Currently, approximately 450 million people are suffering from mental health conditions, which is why mental disorders are among the leading causes of ill-health and disability worldwide.

Among mental health problems, depression is one of those most prevalent, both in America and worldwide. Depression is a common mental disorder that can manifest as depressed mood, feelings of guilt or low self-worth, decreased energy, loss of interest or pleasure, troubled sleep or appetite, and low concentration, and often comes with anxiety (National Institute of Mental

Health, 2018). Those problems may become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of their daily responsibilities, or worse, lead to suicide (Marcus, Yasamy, Ommeren, Chisholm, & Saxena, 2012).

In 2012, depression was the main theme for the 20th anniversary of World Mental Health Day. The WHO wanted to raise public awareness about depression because unipolar depressive disorders were ranked as the third leading cause of disability worldwide in 2004. WHO projects that by 2020, depression will become the second leading cause of disability worldwide (WHO, 2001), and then become the most significant contributor to disease burden by 2030 (WHO, 2001; WHO, 2008; World Federation for Mental Health, 2012). To date, around 350 million people are affected by depression in the world. A survey conducted in 17 countries found that about 1 in 20 people reported having an episode of depression in the previous year (World Federation for Mental Health, 2012).

Globally, there are many possible treatments for depression, but there are also many barriers to getting treatment (WHO, 2018). In a study about the treatment gap in mental health care, Kohn and colleagues (2004) found that approximately 50 percent of depression remained untreated worldwide. According to the Substance Abuse and Mental Health Services Administration (SAMHSA, 2017), in the U.S., approximately 37% of adults with a major depressive episode in 2016 did not receive any treatment, for instance, seeing a mental health professional or taking medication.

Stigmatization towards mental illness is one of the most important reasons for the lack of treatment (WHO, 2018). Goffman (1963) defined stigma as a discrediting attitude towards the judged subjects. Dudley (2000) explained stigma as stereotypes, negative or deeply discrediting perceptions attributed to a person or a group of people when their characteristics and behaviors

are perceived as tainted and discounted. There are two main streams of research in the sociological fields concerning stigma associated with mental illness conducted in the past few decades, including public stigma towards the ill (e.g., Peluso, & Blay, 2009; Weiner, Perry, & Magnusson, 1988) and self-stigma of the ill (e.g., Kleim et al., 2008; Rosenfield, 1997).

One area of study focuses on the experience of people who are living with mental illness. This type of research suggested that internalized, perceived stigma and experience of social rejection led to social withdraw and lowered social and economic well-being, which would worsen the symptoms of their mental health conditions (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). There are plenty of reasons for the lack of treatment concerning mental disorders, among which self-stigma towards their own mental health condition leads to difficulties within their everyday lives, including an unwillingness to seek help from professional services (Ahmedani, Belville-Robertson, Hirsch, & Jurayj, 2016; Crisp & Griffiths, 2014; Clement et al., 2015). According to a study, attitudinal barriers to treatment are the most commonly reported ones, mainly due to people's negative health beliefs (Andrade et al., 2014). Other than the social withdraw and unwillingness to seek help, people with mental illness and self-stigma often feel rejected by the public. For example, previous research shows perceived stigma and self-concept of people with mental illness are associated with their life satisfaction, self-esteem, and achievement (Markowitz, 2001; Moses, 2014),

The other area of research focuses on the public's attitudes towards people with mental illnesses. Studies show that although the public's understanding towards the nature of mental illness has improved since the 1950s, the inclination of avoidance and rejection from the general population still exists (Corrigan et al., 2003). Research shows that during the past decade, several groups have shown their concerns about how stigma causes harmful effects on people with

mental illness. To change public attitude, some effective campaigns have been undertaken and educational curricula developed, both requiring more effective design in future endeavors (Corrigan & Watson, 2004). Another perspective about the stigma towards mental illness is the public's negative attitude. Studies show that public endorsement of stigma impacts diverse groups of people. For example, it can affect people with mental illness through loss of fair life opportunities, such as being denied job opportunities, thus causing contempt for general health care services. Stigma also affects people who are closely associated with the patients, including their family members and treatment providers, among others, which has been called courtesy stigma (Goffman, 1963) and associative stigma (Mehta & Farina, 1988). Stigma from the public also harms society itself and impacts the most discussed type of subjects, which are the key power groups including landlords, employers, members of the criminal and civil justice system, insurance providers, legislators and policymakers (Corrigan, 2004).

Previous research has focused on understanding the factors that contribute to stigma toward mental illness. For instance, Jones's (1984) theory of stigma describes six dimensions generally associated with stigma, including concealability, course, disruptiveness, aesthetic qualities, origin, and peril. Other contributors were also discussed in previous studies, such as familiarity (Henderson, Evans-lacko, & Thornicroft, 2013) and responsibility beliefs (Corrigan, 2000). Information delivered by media has also been recognized as an important contributor to the stigma towards mental illness (Wahl, 2003).

A relatively large number of investigations have examined ways of reducing public mental-illness-related stigma and social discrimination, which can be categorized into three types of strategies, including protest, education, and contact (Corrigan et al., 2001). Protest efforts focus on sending messages to the media to prevent the reporting of inaccurate representations of

mental illness in an attempt to get the public to stop believing any negative connotations. However, compared to the education strategy, protest often fails to promote more positive attitudes. Education, which is the most investigated approach, strives to provide the public with more information that will allow them to make rational decisions about mental illness. In addition, opportunities for the public to connect with people diagnosed with mental illness were indicated as an effective strategy (Corrigan & Penn, 1999; Corrigan, 2000; Corrigan et al., 2014).

The question that remains is how to diminish mental illness stigma from a communications perspective. Health communication is an emerging, increasingly developing and prominent field in public health and the healthcare field, in both the nonprofit and private sectors. According to Schiavo (2013), as an extension of communication, health communication can be defined, based on the understanding of communication (exchanging of information, message, rapport, and access), as a study of strategic planning of how to pass valid and adequate messages and information to intended audiences and key groups effectively, through certain communication channels, regarding all aspects of health. Its goal is to improve health outcomes by enhancing knowledge and understanding of health consequences, while addressing biased judgment, or misconceptions, and motivating positive health attitude and behavior (Schiavo, 2013).

According to Schiavo (2013), health communication integrates multiple approaches to reach and inform different audiences with a goal of influencing, engaging and supporting individuals, communities, and the society to change health-related attitude and behavior, ultimately improve health-related outcomes. Under these circumstances, attitude changing related to stigma towards depression requires the understanding of how to reach the public, what

information they were exposed to and their cognitive process of stigmatization. This study seeks to use a health-communication perspective to examine the factors related to public discrimination, as well as the influence of different types of media and information sources on discrimination. Ideally, this research will aim to decrease the stigma towards people with depression, motivate a positive attitude towards mental illness, and improve both the well-being of depressed individuals and the development of society as a whole. This research will apply the understanding of factors related to stigma to elucidate the most effective way to communicate with audiences, including what kind of message to deliver, what are the target audiences, and through which channel to deliver the messages.

Stigma reduction requires understanding the flow of the cognitive process during stigmatization, including the factors causing stigma, people's emotional reaction and their actual discrimination behavior. However, in addition to the cognitive process, what is more important is examining how to apply the understanding of the process and communicate with target audiences using the right channel and delivering an effective message.

Problem statement

To address the stigma-reducing approaches from a health-communication perspective, several issues need to be examined in this study. First, it is critical to understand the factors contributing to stigma towards depression, such as the characteristics of depressed people. Next, explore how these factors cause emotional reactions and discrimination. Lastly, address the media's role in providing people with depression information so that we can understand the effective use of communication channels in the design and implementation of stigma-reduction interventions.

Interventions and campaigns for reducing public stigma have been implemented in the past, but mental illness stigma did not decrease significantly. Previous campaigns have focused on how stigmatizing messages are communicated, or how to use contact strategies to strengthen their campaign influence (Jensen, 2017). However, it is essential to understand the key factors that contribute to this stigma. Such understanding is necessary for determining the communicated messages and how to tailor them in stigma-reduction campaigns. From a health communication perspective, this study intends to find out what factors need to be emphasized by understanding how factors contribute to public affective reactions and discrimination towards people with depression, which are guidelines for message designing and delivering. Those factors include attributions, characteristics of mental illness, subjective norms, real-life contact, and significant information resources.

Stigma is a complicated term that means different things in different contexts, which includes stereotypes (beliefs), prejudice (emotional reactions), and discrimination (actual stigmatizing behavior) (Link & Phelan, 2001). To understand how to reduce stigma towards people with depression, it is important to understand which part of stigma needs to be reduced. Therefore, the first aspect we need to understand in this study is how the three layers of stigma relate and influence each other, mainly, how depression stigma works among the three layers.

Media is one main focus and needs to be examined in this project, not only as a critical source posing influence on the stigmatization towards mental illness (Hackler, 2011) but also as a resource for delivering depression-stigma reduction convention information. This study includes the investigation of the influence of media exposure on stigmatization, as well as other types of exposure. Media is also examined as part of the information resources for depression, along with other resources such as interpersonal communication.

In terms of perceptions related to depression, several aspects are associated with it. One example is the perceived responsibility of people with depression, meaning whether the person or the situation should be blamed for their depression condition. Another example involves characteristics related to depression and depressed people, such as the negative influence brought to the observer and society or perceived unpleasant behavior expressed by the people with depression. Other than the observers' own opinion and perception about depression, people's decisions are also influenced by social pressure; therefore, perceived stigma from other people is also taken into consideration as a contributor for their intent to discriminate.

Psychologists prefer the social-cognitive approach to understand the concepts of stigma and how stigma develops and impacts society (e.g., Ahmedani, 2011; Corrigan, 1998; Corrigan et al., 2001; Crocker & Lutsky, 1986). Social cognition is defined as a manner in which we interpret, analyze and remember information about the social world (Baron & Byrne, 2000). This study applies a social-cognitive approach by following the process from a signal to reaction, to behavior, which parallels the three layers of stigma.

This study is informed by Attribution Theory, a socio-psychological theory developed by Weiner and colleagues (1972; 1979;1988). The theory explains how the perceived responsibilities (locus of causality, stability, and controllability) towards people with depression leads to either negative, or pity, affective reactions, and consequently leads to the actual behavior. Other factors related to stigma are also examined in this study, such as characteristics of depression, perceived norms, familiarity, and related information resources, as signals that lead to affective reactions and intention of discrimination. The theory will be applied to understand how attributions and stereotypes about depression, including perceived responsibilities, characteristics, familiarity, related information resources, and perceived public

stigma, relate to affective reactions (prejudice) and behavior (discrimination) towards people with depression.

Significance of the study

Given the fact that depression has become one of the most burdensome diseases across the world, this study focuses on the reduction of depression-related stigma which remains a big issue. This study focused on public stigma because previous studies suggested that social stigma is the beginning or cause of other levels of stigma, such as self-stigma and stigma held by professional mental-care providers (Ahmedani, 2011; Corrigan, 2004).

Previous research has addressed attributions and stigmatization of mental health conditions; however, only a few of them focus on the depression. Studying the factors associated with the stigma towards depression will not only provides a better understanding of current public attitude towards depression and benefit future campaigns for reducing this public stigma but also help diminish self-stigma and promote help-seeking behavior for people with depression. More benefits for society can occur when the public stigma decreases, allowing valuable members with depression contribute to the community.

Vast knowledge about mental illness stigma reduction has accumulated through previous studies; however, these studies are mostly concentrated in the field of psychology and social psychology. It is important to develop this topic in the health-communication field. From a communication perspective, we need to find what messages to deliver, how to tailor different strategies to different ethnic groups, and the proper channel to reach them. Even though some studies have been done regarding the factors associated with depression, there is a dearth of research regarding how to effectively communicate with the audience about mental health and the channels to use.

This study focused on stigma conceptualization and the various aspects of stigma. It focused not only on the cognitive process of stigmatization inside people's minds, which was explained by the attribution theory and explored by previous attribution studies, but also bring concepts from sociological and psychological areas for understanding how other factors trigger stigma, such as stigma characteristics of mental illness, subjective norms, and personal contact level. By exploring a comprehensive system of factors related to depression stigma, this study is hoping to find which factors are relatively more important for reducing disease stigma, especially depression stigma.

This analyzed available resources for people seeking depression-related information, a research area that has not received adequate focus in the literature previously. According to previous research, media can have a significant influence on people's perception and action toward stigmatizing people with depression (Klin & Lemish, 2008; Wahl, 2003), because real-life experience can be limited, especially for mental illnesses such as depression. This study will investigate the information sources for depression, including main-stream media, internet-based media and interpersonal contact, and determine whether different types of resources pose differential influence on the discrimination towards depression.

When studying public stigmatization, some research focused on the psychological perspective, while some focused purely on the media perspective. However, this study is going to create a more comprehensive model for understanding why the public stigmatizes people with mental illness, especially depression, by focusing on both the characteristics of stigmatization in conjunction with the media's role.

The rest of the document is organized as follows: Chapter 2 reviewed the previous literature regarding stigma in general as well as in the context of mental illness, and how did health

communication do with mental illness stigma, followed by the adaption of the theoretical framework. The methodology used in the study is described in Chapter 3 and includes the method used for data gathering, sample selection, instruments development and adaptations, and data analysis procedures. Chapter 4 provided the study findings based on the stated hypotheses and research questions. Results include descriptive statistics, testing of hypothesis and research questions. Finally, this document ends with Chapter 5 including discussion of study findings based on the hypothesis and research questions, theoretical and practical implications, and conclusion.

Chapter 2 - Literature Review

This chapter reviews existing literature on the attribution process of stigmatization, social factors, and personal experiences associated with public discrimination. First, it introduces the conceptualization of stigma in general. Second, it moves onto the levels and structures of mental illness stigma. Then the impact of public stigma towards mental illness, including depression, is examined, followed by factors associated with discrimination, including characteristics of depression, personal experiences, and subjective norms. The media's role in shaping stigmatization towards mental illness is also discussed, followed by the interventions and campaigns that have been done previously for stigma reduction. Finally, the chapter reviews the literature on the development of attribution theory and how it is applied in this study.

Conceptualization of stigma

Social-science research on stigma has dramatically increased over the past few decades, particularly in the field of social psychology. Research has focused on exploring how people build cognitions of the categories of people and then associated them with certain stereotyped beliefs (Link & Phelan, 2001).

The most established and developed definition regarding stigma is proposed by Goffman (1963), who defined it as "an attribute that is deeply discrediting and reduces the targeted from a whole and usual person to a tainted, discounted one" (p.3). According to Goffman, society creates the process of categorizing people and makes the social attributes which define these categories seem ordinary and natural for people who fall into the categories. Then the process of categorizing is adapted by us to deal with strangers we encounter in social settings, and at first, appearances enable us to anticipate his (her) attributes and category, which is "social identity"

(p.2). In this case, the stigmatized are perceived as people with spoiled identity and a less desirable kind.

Goffman's (1963) definition inspired a sufficient amount of research on stigma, including conceptual refinement and negative impact on the stigmatized. Regarding conceptual refinement, previous research demonstrated that stigma is a characteristic of people that is opposite or conflicting to social norms, where the norm is defined as a shared belief that people should behave in a certain way, in certain situations, and at certain times (Katz, 2014; Stafford & Scott,1986). Regarding the application of the concept of stigma, researchers examined various social situations and phenomena, ranging from attitude towards homosexuals (Herek & Capitanio, 1996), to physical disorders (Sampson & Raudenbush, 2004), to HIV (Berger, Ferrans, & Lashley, 2001), to obesity (DeJong, 1980), and mental illness (Corrigan et al., 2003; Hayward & Bright, 1997; Rosenfield, 1997). In the domain of stigma towards mental illness, other scholars developed their theories for explaining it, which are consistent with Goffman's theory. For example, labeling theory demonstrates that once people's behavior is labeled as mental illness, negative stereotypes occur (such as dangerousness), which then lead to stigmatization such as social rejection (Scheff, 1966). So, in the labeling theory's view, stigma is generated because people try to categorize others into groups by linking their attributes into certain stereotypes.

Previous research also shows that the level of stigmatization attributed to mentally ill people depends on the severity of the perceived disorder. Stigma is first evoked due to disclosure of the stigmatizing condition, which is believed to be outside of the societal norm. Then, the level of stigma moves adjusted (Ahmedani, 2011; Angermeyer & Matschinger, 2005; Goffman,1963),

meaning the level of stigmatization can be influenced by different types of cognition, such as attribution process, familiarity to the mental illness, also knowledge of the mental illness.

Levels and structure of mental illness stigma

Under different circumstances, mental illness stigma can be sorted into different categories. It can be public stigma or self-stigma depending on the subjects. It can involve different concepts within the process of the stigmatization, including stereotypes, prejudice, and discrimination, so it is important to clarify the levels and structure of stigma (Link & Phelan, 2001). Additionally, viewing the components separately helps to clarify the social-cognition process and the linkages between social cognition, emotion, and interpersonal behavior (Hinshaw, 2007).

Based on the subjects investigated, such as the public or mentally ill individuals, two or three levels of stigma were discussed by previous studies. Some of the researchers such as Corrigan and Kleinlein (2005) divided the studies into two categories, including public and self-stigma, while Ahmedani (2011) added health-professional stigma to the discussion stating that social workers and other health professionals can also hold stigmatized beliefs towards clients.

Previous studies have shown that there are three components of public stigma towards people with mental health problems: stereotype, prejudice, and discrimination (Corrigan, 2004). Hinshaw (2007) explained that these three components are related processes that overlap at some point and understanding their distinctiveness may help with examining stigma more comprehensively.

As reported by social psychologists, stereotypes are beliefs and knowledge structures held collectively by most numbers of a social group (Augoustinos, Ahrens, & Innes, 1994; Esses, Haddock, & Zanna, 1994; Hamilton & Sherman, 1994; Hilton & Von Hippel, 1996). Stereotypes

are considered efficient because people can quickly generate impressions and expectations of individuals who belong to a stereotyped group (Hamilton & Sherman, 1994). As we can see, stereotype is used as a criterion for a quick categorizing process, which is why other factors can make some rational effects to this process, such as familiarity and contact with mental illness (Crespo, Perez-Santos, Munoz, & Guillen, 2008). Common stereotypes about people with mental illness include beliefs that they are dangerous (Brockington et al. 1993), maniacal, melancholic, and foolish (Schoeneman, Secerstrom, & Griffin, 1993), lack accountability (Rabkin, 1980), are incompetent, and have character weakness (Corrigan, 2004). Nearly all research conducted on the stigmatization of mental illness indicates those are considered to be conscious and controllable (Monteith & Pettit, 2011).

Even though some people hold knowledge of a set of stereotypes, it does not mean they agree with the stereotypes (Jussim et al.,1995), or that they will react based on the stereotype towards the targeted. For example, people can recall stereotypes about different racial groups but do not agree that the stereotypes are valid. Only when they overlook the factual information and stick to the negative notions of the stereotypes, do they become prejudiced, which leads to negative emotions such as anger or fear (Corrigan, 2004). Hinshaw (2007) explained that people's prejudices are defined as "unreasoning, unjustifiable, overgeneralized, and negatively tinged attitude towards others related to their group membership" (p.22). For example, previous studies show that some people believe that "all people with mental illness are violent!" and generate negative reactions like "They scare me!" (Devine, 1995; Hilton & Von Hippel, 1996; Krueger, 1996).

Discrimination is known as a behavioral reaction responding to prejudices, referring to the unfair treatment to others or harmful actions towards the stigmatized, which can be fomented

by individuals, families, communities or even whole nations or cultures (Hinshaw, 2007). Other research indicated that discrimination is also a behavioral response based on prejudice towards minority group, for instance, people with mental illness, which may result in harm, withholding help, or replacing the health care with services provided by criminal justice system to mentally ill people (Corrigan, 2005; Corrigan et al., 2003).

The impact of public stigma

Public stigma towards mental illness has been discussed by previous research as hurting different groups of people. For example, Corrigan (2005) indicated that the public endorsement of stigma influences many people, including people with mental illness, family members and mental health service providers, the general public, and key power groups (people in functional roles whose reactions can influence mentally ill people), such as landlords and employers (Crespo, Perez-Santos, Munoz, & Guillen, 2008).

Previous research has demonstrated that negative public attitudes towards people with mental illness is a critical mental-health and social problem, which interfere with the social integration of those mentally ill people, thus, harming their civic rights, self-esteem, family and social life, and fulfillment in their career (Klin & Lemish, 2008). Stigma not only damages people's life rights and opportunities, including employment and housing, which are especially related to the lives of people, it also influences the judgment of the criminal justice system towards the targeted people with mental illness, as well as the reaction of the general health-care system (Corrigan, 2005). Research shows that fear of public stigma may influence how long a person is in the denial stage and not willing to accept their issue and make behavioral changes. Perceived self-stigma also influence the mentally ill person's selection of help-seeking methods, such as whether they intend to seek help from professional health-care services (Cramer, 2016).

The stigma towards people with mental illness also impacts people around the individual, such as people who are close to them, for instance, their family members. This phenomenon reflects the idea that the prejudice and discrimination experienced by the stigmatized, also influence people associated with them (Corrigan, 2005). Goffman (1963) defined this kind of situation as "courtesy stigma," which means the stigmatized individual and people close to them are judged as a unit. As the people suffer from mental illness, their family member may also be harmed by public and self-stigma. For example, research shows that family members reported that friends, neighbors, and coworker often blamed them for their relatives' mental health condition and failure of recovery (Corrigan, Druss, & Perlick, 2014). Previous research shows that parents of children with ADHD experience courtesy stigma as well (Wiener et al., 2012). Public stigma also affects the society as a whole, as it is possible for people with mental illness to contribute the community; however, injustices and stereotypes towards them prevent their valuable contribution because they are not treated as an equal member (Corrigan, 2005).

Like other mental illness, depressed people also suffer from the stigmatization towards their health condition. A previous case shows that an accomplished Australian academic and professor was denied income protection insurance because she had a history of depression, and told that it was the "company policy" to always refuse applicants who have a history of depression (Johnstone, 2001). Public stigmatization leads to denial of help-seeking. Research shows that perceived stigma about depression and other mental health problems reduces the likelihood of help-seeking from professional services (Barney, Griffiths, Jorm, & Christensen, 2006). One study found that working women who reported symptoms of depression are often stigmatized and blamed for their illness by coworkers, employers, even family members, and perceived as

lacking personal strength. Because of the fear of being stigmatized, women participants are less willing to disclose their mental health problems at work (Selix & Goyal, 2015).

Public stigma towards depression

As one of the most prevalent mental illnesses globally, depression has been a topic of research and discussion particularly in relation to the perceived stigma against depressed people, as well as the public stigma towards them. Generally speaking, public attitude and perception about depression are harmful and have been hard to change over the decades. For instance, a survey in Turkey revealed that most respondents held a negative attitude towards depression (Ozmen et al., 2004). A twenty-year follow-up research study in Germany showed that the German public's attitudes towards people with depression remained virtually unchanged (Angermeyer, Matschinger, Carta, & Schomerus, 2014). Additionally, Moses (2014) reported that the public tends to view youth with depression and bipolar disorder in an unfavorable way, expressing social distance towards these youths.

As a mood disorder, there are certain stereotypes related to people with depression, which are commonly negative. The common stereotypes about depression indicate that depression is a sign of personal weakness (Wang, Fick, Adair, & Lai, 2007; Wang & Lai, 2008) and that people with depression are unpredictable, dangerous, or violent (Crisp, Gelder, Goddard, & Meltzer, 2005; Wang & Lai, 2008). Former research also shows that stereotypes of depression include the belief that they are responsible for their mental disorder (Barney, Griffiths, Christensen, & Jorm, 2009) and supposed to help themselves out of this condition (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000).

More negative emotions (e.g., anger) and less pity are shown towards mental-behavioral disorders (Monteith & Pettit, 2011), including depression. Research conducted in Turkey shows

that sentiment is widespread that people with depressive disorder are dangerous. More than half of the participants reported that they would not marry a person with depression, and nearly half of the people who responded were not willing to rent their house to a depressed person. Even one-quarter of the interviewees suggested that people with depression should not be free in the community (Ozmen et al., 2004; 2005). Interestingly, research shows that depression is associated with less negative attitudes when compared to other mental disorders such as Schizophrenia, mania and eating disorders (Norman, Sorrentino, Windell, & Manchanda, 2008; Roehrig & McLean, 2010; Wolkenstein & Meyer, 2008). Studies also revealed that individuals showed more willingness to get connected with people experiencing depression rather than schizophrenia, substance dependence, or alcohol dependence (Marie & Miles, 2008; Norman et al., 2008; Phelan & Basow, 2007).

In short, as opposed to other mental disorders, depression is associated with different negative beliefs (Monteith & Pettit, 2011), which tend to be more concentrated on the individual's weakness, while still bearing discrimination to a great extent.

Factors associated with depression stigma

There are two kinds of elements described in this part which includes six dimensions of stigma as well as factors related to personal experiences and subjective norms.

Factors related to the six dimensions of stigma

Several studies have focused on the factors causing mental illness stigma. For example, some studies have indicated that general public stigma towards mental illness is caused by four cues: psychiatric symptoms, social-skills deficits, physical appearance, and labels (Corrigan, 2000; Corrigan, 2004; Penn & Martin, 1998). Similarly, Jones (1984) followed Goffman's insights and developed a conceptual framework of six dimensions related to stigma, referred to

as “marks.” Six characteristics of mental-illness causing stigma include concealability, course, disruptiveness, aesthetic qualities, origin, and peril (Jones, 1984; Yang, Link, & Phelan, 2008).

Concealability. As one dimension of stigma, concealability indicates how detectable the characteristic of mentally ill individuals is to others (Jones, 1984; Link, Yang, Phelan, & Collins, 2004). Crocker and colleagues (1996) explained that stigmatized attributes such as race can be easily identified and are less concealable, providing people with a visible excuse to discriminate and stigmatize targeted people. Regarding mental illness, previous research indicated that the symptoms of severe mental illness, such as bizarre behavior, language irregularities, and talking to oneself aloud, are some of the visible appearances that predict public stigmatizing reactions (Corrigan, 2005). In this regard, if people believe the depressive symptom is obvious and bring bad mood influences on them, they are more likely to express negative emotions.

Course. This is how reversible the depression condition is over time, specifically how possible the depressed ones can be treated and recover (Jones, 1984). Yang and colleagues (2008) indicated that people’s beliefs about the alterability of their mental illness in the future are likely to affect their attitude towards the degree of stigma. Similar to the stability factor in the attribution theory, the less treatable the depression condition is perceived to be by people the more negative emotions are directed towards the depressed individuals. Jones (1984) demonstrated that belief that people can recover from mental illness was associated with positive emotions.

Peril. Another dimension of stigma is peril, which refers to the danger posed by the mark of mental illness and how serious it is (Jones, 1984). Danger, in this sense, can either refer to fear of actual physical danger or experiencing uncomfortable feelings. In the case of depression, peril refers to the danger of becoming depressed by association, as well as uncomfortable feelings of

being around depressed people. Many studies have documented that depressed people might elicit social distance and active dislike from others (Liekens, Smits, Laekeman, & Foulon, 2012; Ouellette‐Kuntz, Burge, Brown, & Arsenault, 2010; Schomerus & Matschinger, 2013). One of the most specific reasons is that, in general, it is believed that depressed people create an adverse effect on others, and at best, the effects are ambivalent and mixed (Weiner, 1995). Previous research shows that people become more depressed when communicating with depressed people (Coyne, 1976). A more recent study shows that people living with a depressed spouse reported significantly more depressed mood than others (Benazon & Coyne, 2000). Maybe this is due to beliefs that depressed people are followed by negativity and sadness, which can cause bad mood in others, making them react negatively and try to avoid the unpleasant influence (Winer, Bonner, Blaney, & Murray, 1981).

Disruptiveness. These specific attributes about mental illness can also lead to certain negative results in their social interaction, which can cause people to think less of them. This factor was pointed out by Jones (1984) as one of the dimensions of stigma, called disruptiveness. This term means how much a mental or behavioral disorder may impact relationships or success in society, such as an increased chance for poverty and lower levels of education. Previous research found that disruptiveness is a significant predictor of stigma towards mental illness, along with personal responsibility, treatability, dangerousness, etc. (Feldman, 2007).

Aesthetics & origin. Another dimension is aesthetics, which refers to the extent that depression makes a patient's appearance ugly. The last dimension is origin, which refers to how depression came to be, including the causes, and the depressed ones' responsibility to their current condition (Jones, 1984).

Personal experience and subjective norms

Even though the overall perception of the attributes that depressed people bring to others can be negative, there are other social and interpersonal factors may make a difference on this attitude; for example, exposure or familiarity (Corrigan et al., 2003). A previous study showed that participants with lower levels of exposure to depression (those who had not previously experienced depression, who reported no depression among family members, or who had not provided treatment or services to depressed people) reported a higher level of stigma (Griffiths, Christensen, & Jorm, 2008). Other research indicated that respondents who are familiar with a mental disorder, such as having personal experience of mental disorder or having personal contact with people suffering from mental disorder, are more prepared to make social contacts with mentally ill people. Results from that study showed that one's own depressive symptoms were related to a more positive attitude, and familiarity with someone suffering from a mental problem also significantly added to people's readiness to engage in social situations involving mental illness (Aromaa, Tolvanen, Tuulari, & Wahlbeck, 2010). Another study showed that people who reported knowing someone with depression, or panic and phobias, were less likely to have stigmatizing opinions about people with corresponding disorders, but that reaction did not apply to other disorders (Crisp, Gelder, Goddard, & Meltzer, 2005).

According to the theory of planned behavior (TPB), subjective norm can also be an influential factor for forming their attitude towards certain behavior (Ajzen, 1988; 1991). For the stigma towards mental illness, how others, or society as a whole, perceive mentally ill people can also influence people's attitude towards the depressed. There are two types of perceived stigma being examined in the previous studies. One is how patients perceive opinions from others about their own health condition, while the other angle of perceived stigma is how the public perceives

others' opinion about mentally ill people (Griffiths et al., 2008). The perceived stigma of the public is the perspective concerned in this research. The perspective from TPB about subjective norms means the leading opinion towards mental illness among society has an influence on people's perception of mental illness. Research shows that ever since antiquity, insanity has been defined by experts, but discovered by laymen. This means that, even though the academic world has rigorous definitions for mental illness, the public has their own mainstream understanding or stereotypes, which are used by physicians and lawyers who work their cases (Schoeneman et al., 1993).

Another social norm about people with mental illness is associated with gender. Gender plays a significant role, where depression among males is perceived as a sign of weakness because traditional masculine norms in U.S. society believe that man should be mentally strong and able to control their feelings (Vogel, Edwards, & Hammer, 2011). Cultural background also plays a significant role in people's beliefs about mental illness. For instance, people from different ethnic groups have different perceptions about mental illness, which may lead to a different level of stigmatization towards mental illness (Yang, Link, & Phelan, 2008). Other demographic factors such as age and education status also can influence stigma (Griffiths et al., 2008).

Media's role in shaping stigmatization towards mental illness

Over the last few decades, a large amount of research has shown that the media, combined with the frequency it is used, provides one of the most significant influences on society (Edney, 2004; Smith, 2015). This is especially true when it comes to shaping the understanding of mental illness; the power of the media cannot be overlooked (McGinty, Webster, Jarlenski, & Barry, 2014).

For those who do not have real-life experience of mental illness like depression, the media can be seen as one of the most important sources for forming people's perception. Wahl (2004) indicated that mass media is an important source of information about mental health and has an important role in shaping perceptions and stigma towards the ill. Research has shown that the images of mentally ill presented consistently over time in the mass media, such as newspaper, magazines, and television, are overwhelmingly negative and often inaccurate. People with mental illness were often portrayed to be different from normal people, as well as being described by terms such as dangerous, dirty, unintelligent, unpredictable, unsociable, unemployed and transient and often is related to violent crime (Angermeyer & Schulze, 2001; Sieff, 2003).

A study conducted by Diefenbach and West (2007), which viewed prime-time programs from the four major networks (ABC, NBC, CBS, and FOX) for a total of 84 hours of programming found that mentally ill characters in shows were ten times more likely to be violent criminals than those who were not mentally ill. Klin and Lemish (2008) analyzed two decades of research concerning the role mass media played in shaping, perpetuating and reducing the stigma of mental illness, and results showed that the media perpetuates misconceptions and stigma by delivering inaccuracies, exaggerations, or misinformation. People with mental illness were presented not only as peculiar and different but also dangerous (Klin & Lemish, 2008). Another stereotype related to mentally ill individuals is that those with mental illness cannot be productive and valuable members of the community and society, and are usually portrayed as alienated without a family, job, or social identity (Smith, 2015). Relatively few stories of recovery or accomplishments by people with mental illness exist (Wahl, 2003)

Previous research has consistently noted that media depictions on mental illness are biased, and some studies have also demonstrated that the messages delivered by the media can influence people's attitude towards mental illness. In history, early studies showed that the representations of mentally ill people in the media sometimes overpower their own life experiences (Philo et al., 1994). More recent studies were conducted to demonstrate the influence of the media on people's perception of mental illness. A previous study about recalling media representations of mental illness and social stigma shows that participants' descriptions of mentally ill media characters were characterized into stereotypes, including violent behavior, angry outbursts, childlike behavior, as well as other severe symptoms. In this study, results showed that higher media usage predicted more prevalence of mental illness perceived by the participants (Quintero Johnson & Riles, 2018). Recently, another study examined the perceived influence of news coverage of the Virginia Tech shooting on self and others' attitudes about mental illness and showed that people perceived fear as the influence of the news coverage, especially for people without mental illness experience. Overall, the perceived news influence on self was related to less willingness to disclose any personal mental health treatments (Hoffner, Fujioka, Cohen, & Seate, 2017).

It is well recognized that the media can play a positive role in encouraging attitudes towards good health (Philo et al., 1994). Research showed that visual methods have been found to be more powerful than verbal forms because messages delivered visually can carry much influential information, including emotions, thoughts, feelings, and events, all of which can bring positive effects to an individual's well-being and positively affect their cognition (Gillies et al., 2005). However, stories portraying people with mental illness making any positive contribution to their communities were outnumbered two to one by stories that showed them in a negative

way (Wahl, 2003). To examine the influence of positive, neutral and negative journalism articles, results from a study that examined articles mental illness showed significant differences associated with stigma; articles about recovery reduced stigma and increased affirming attitudes, while the dysfunctional public mental health system articles increased stigma (Patrick, Corrigan, Powell, & Michaels, 2013).

In sum, previous literature shows that media messages play a partial role in influencing public stigma towards mental illness, with media messages related to positive effects being much less significant than those with negative effects. As previous research indicated, mental illness stigma is exceptionally prominent in the media and occurs in many different forms, including television shows, movies, news media, magazines, and the internet.

Role of health communication in the reduction of depression stigma

It seems that the depth and breadth of mental illness stigma make challenging it an overwhelming task; however, advocates and researchers for the past few decades have contributed lots of effort to reduce the mental illness stigma (Byrne, 2000; Corrigan, 2005). Here are some examples of interventions that were produced to reduce mental illness. A campaign based on similar national initiatives in New Zealand and Scotland was launched in England, using celebrities' help to take the stigma and shame out of mental illness (Eaton, 2009). With funds from the Mental Health Services Act, the California Mental Health Services Authority funded a series of statewide mental illness prevention and early intervention, using educational and contact-based strategies to reduce stigma (Cerully et al., 2015).

When it comes to identifying media context, tailoring proper messages, and choosing effective channels for a stigma-related campaign, implications from a health communication perspective is indispensable. In the past few years, researchers in the field of health

communication have put increasing interest in reducing mental illness stigma, targeting the various components of stigma, and targeting different groups of people.

Some studies have demonstrated the media influence on mental illness stigma. For example, Gaumer (2014) focused on the negative influence of television on public perceptions, implying that the media industry needs to change this situation in order to contribute to reducing the public stigma towards mental illness. Previous communication research has also paid attention to the role that narratives told in families about mental illness plays in shaping stigma, through a narrative sense-making approach, which found that those shared stories by a family member have an important influence on the participants' understanding of mental illness (Flood-Grady & Kellas, 2018).

In addition, by applying health communication in changing mental illness stigma, Michaels, Kosyluk, and Butler (2015) conducted a study regarding message tailoring and delivery following the principles of contacting audiences by capturing and maintaining their attention, actively thinking about messages, having emotional appeal and making the material relevant to each person. The study gave recommendations regarding message processing components and message tailoring guidance, and also provided examples of context. Although health communication research has addressed mental health stigma in general, few studies have explicitly focused on depression stigma. A recent study using tablet-based education to reduce depression-related stigma showed that, compared to print education, tablet-based multimedia education significantly increased depression literacy and reduced depression stigma (Lu, Winkelman, & Shucheng, 2016).

Attribution theory

The development of the attribution theory

The focus of attribution theory is the recognition of causality. In other words, attribution theorists investigate why certain incidents or behavior occurred (Weiner, 1972). Created by psychologist Heider (1958), from simple internal and external attributions, attribution theory has been developed and refined by other scholars. One of the most frequently used theories is Weiner's attribution theory for achievement (Weiner, 1972). Weiner applied this theory to the study of the educational process and examined how causal beliefs influence teacher and pupil behavior, like rewards and punishments, and the effects of attributions on achievement striving. Three central dimensions of causality were identified as perceived reasons for success and failure in the achievement setting, including locus of causality (internal and external), stability (stable and unstable), and controllability (controllable and uncontrollable). Attribution theorists and researchers use these dimensions to categorize the causal factors for certain incidents that can be identified in daily life. Each of the three dimensions of causality has a primary psychological function, or linkage, along with some secondary effects. For example, perceived controllability by others leads to helping, evaluation, and liking (Weiner, 1979).

Weiner and colleagues (1982) demonstrated that these three dimensions are linked with emotions and feelings such as pity, anger, and guilt. Regardless of the locus of the cause, uncontrollable causes of negative events give rise to pity, while, as long as the associated causes were perceived as controllable and internal, the feelings of anger and guilt occurred. In this process, stable causes only affect the magnitude of emotion, rather than the direction (Weiner, Graham, & Chandler, 1982). Directed by Weiner's attribution model, McAuley and colleagues

(1992) developed and revised a scale called the Causal Dimension Scale (CDSII) as a measurement of how individuals perceive causes along the three dimensions of causality.

Weiner and colleagues (1988) indicated that the attribution process not only affects self-perception but also has been documented in the perception of others. For example, a teacher may perceive a pupil's failure as due to low aptitude, which gives rise to pity along with a low expectation. This may lead to a teacher's concerned counseling to have this student change career goals. As a social psychological approach that focuses on perceived causality, attribution has been extended to the study of social stigma and reactions to the stigmatized in the health domain, through the process of perceived causality, affective reactions (e.g., pity and anger), expectancy (e.g., the likelihood of recovery), and intent or action. In the attributional analysis, stigma is considered as a negative or unwanted outcome.

Attribution theory application in stigma studies

Two dimensions, including controllability and stability, were extended in studying causes to social stigma (Weiner et al., 1988). Schwarzer and Weiner (1991) demonstrated that both the origin of a problem (controllability) and its solution (stability) are needed to be considered when examining others' reactions towards the target person. This means the responsibility for causing a blemish and the responsibility for maintaining it need to be examined separately because, for a given situation, uncontrollable causes might give rise to pity, while lack of effort to cope with this situation can cause anger.

Started from Weiner, attribution theory has become the most frequently used perspective to understand how stigma develops (Ahmedani, 2011). By including depression and schizophrenia, the discussion of reaction towards stigmatized people was applied for the first time in studies of common mental illness stigma (Weiner, 1995). Public understanding and implicit categories of

mental illness, conveyed by labels such as depression and schizophrenia, depend partly on whether the onset of the mental illness was controllable, and whether the mentally ill person was responsible for the illness (Schoeneman et al., 1993). When explaining and understanding the concept and causes of stigma towards mental illness, Corrigan and colleagues also prefer the perspective of attribution theory. They took two dimensions from Weiner's attribution theory, stability, and controllability, in terms of attribution towards these disabilities, both mentally and physically, and they found that public stigmatization towards mental and behavioral disorders was on a greater degree than physical disorders. Research also showed that among mental health disabilities, participants rated most negatively in terms of controllability for cocaine addiction, and stability for mental retardation (Corrigan et al., 2000). Another dimension from Weiner's attribution theory, which is the locus of causality (internal and external), also applies to the examination of the reaction to the depressed people, depending on whether they attribute the responsibility to the person, or situation (Karasawa, 1995).

In this present research, three dimensions of attributions for depression were examined separately as perceived responsibility, including locus of causality, controllability, and stability, consistent with previous studies about mental illness stigma. Taking perceived responsibilities into consideration, this study examines how it causes certain affective reactions, including pity and anger, and eventually actual stigmatizing actions.

Weiner (1995) indicated that he has limited his analysis inside the connection between responsibility and affective reaction, as well as actual action, and there are other factors out there in the larger social system and other cultural factors associated with stigmatization that need to be discovered.

Theory application

The first factor related to the attribution of responsibility is the perceived causes (locus of causality) of the emotional states, as depression is believed to be a mood disorder. Three studies were conducted for an attributional analysis of reactions to negative emotions. Study 1 found that one's own negative emotions were attributed to situations they experienced, more than to personal dispositions, while other's emotions were attributed almost equally to situation and disposition. Study 2 showed that observers' affective reactions, such as intent to support, were more negative when they attributed others' negative emotion to their disposition (Karasawa, 1995). This research means that when judging other's negative emotions, people tend to attribute more responsibility to other's disposition than judging their own, and correspondently led to more negative affective reactions and intent of negative behavior. Results from another research also indicated that, when judging a negative emotion, the impact of perceptions of disposition increased, while situation and mood causing judgment decreased (Liu, Karasawa, & Weiner, 1992).

Regarding the attribution of responsibility and judgment about depressed people, Weiner (1995) demonstrated that the observer tended to impute the feelings, such as unhappiness and sadness displayed by depressed people, to something about the person who is expressing these emotions. They think the depressed person causes their own sadness and should solve their own emotional problem. Thus, a negative reaction occurs. The hypothesis sequence here is like causal attribution, to responsibility inference, to emotion, and then to action.

Stability attribution is another factor contributing to the attribution of responsibility. In this case, two perspectives can be related to stability. On one hand, effort has been discussed as an important factor related to the stability of a problem; previous research demonstrated that if help

is required because the needy person had not put in an effort to change the problem, negative reactions occur and help behavior withheld (Weiner et al., 1988). For example, if people believe the depressed people can fix their emotional problems by going out to have some good time, then their failure of solving that problem can be seen as lack of effort, which will lead to a negative reaction. On the other hand, stability referring to how much the disorder will change or be improved over time through treatment reflects the expectations about the changeability of a disorder and the possibility for recovery. Research showed that if people believe the depressed will not change over time, nor benefit from the treatment, they expressed a negative attribution (Corrigan et al., 2000). Overall, stability is related to how changeable the perceived causes for depression are and whether it can be treated. If people think that the causes for a person's depression condition lasts over time and are hard to change, or that depression symptoms are hard to recover, negative emotions occur and will lead to negative actions (Corrigan et al., 2000).

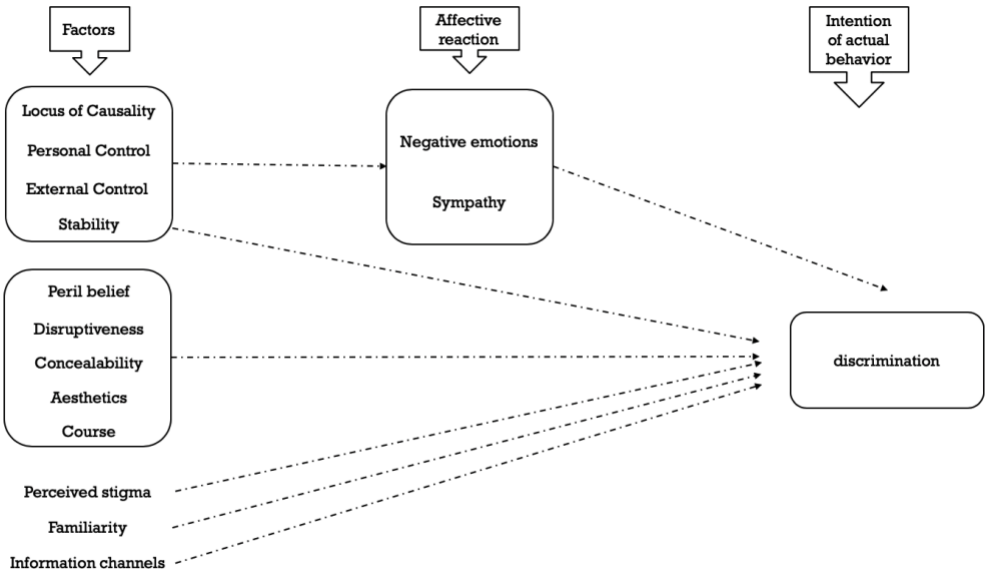
Controllability is another element of attribution theory for studying public stigma towards mental illness. Previous research demonstrated that controllability is one of the most important factors that contribute to participants' stigmatization towards illness, including mental illness (Crespo, Perez-Santos, Munoz, & Guillen, 2008). Previous research showed that perceived controllability is related to avoidance and withholding help (Corrigan et al., 2003), meaning that if the respondents believe the people with depression have more personal control over the external cause of their depression, they are more likely to have negative reactions and more likely to hold the intention of discrimination.

However, according to a recent study, the attribution about general mental illness was not as negative compared to the 1950s. People's understanding of the conception of mental disorder are

better reported by Americans (Phelan, Link, Stueve, & Pescosolido, 2000), and another study showed that they are more likely to attribute the cause of mental illness, such as depression, to chemical imbalances, genetic factors, and stressful life circumstances, than just blaming the afflicted for their own dispositions (Corrigan & Watson, 2004; Pescosolido, 2013; Katon, 2003).

Conceptual framework

Figure 1. This figure illustrates the conceptual framework for this research.



Hypothesis and research questions

Based on a review of the literature, the hypotheses and research questions addressed in this study are as follows.

H_{1a}: The more the causes are attributed to the person instead of the situation, the higher the negative emotions.

H_{1b}: The more the causes attributed to the person instead of the situation, the more discrimination.

H_{2a}: The higher chance of recovery (less stable), the less negative emotion.

H_{2b}: The higher chance of recovery (less stable), the less discrimination.

H_3: The more personal controllability, the more discrimination.

RQ1: What types of information resources for depression information and images are significant predictors for discrimination?

RQ2: Are there any factors other than attribution factors and information resources related to the six dimensions of stigma, perceived stigma, and familiarity that predict discrimination?

Chapter 3 - Methodology

This study examined the factors associated with discrimination towards people with depression, public affective reactions towards them, and media's influence in this cognitive process. Information was gathered from participants through an online survey conducted using Qualtrics, an online survey system and distributed to participants nation-wide. Participants were asked questions regarding attribution factors (causality, controllability, stability), characteristics of depression causing stigma (concealability, peril, disruptiveness, aesthetics), perceived stigma, familiarity, affective reactions (negative and sympathy), and intention of discrimination. This chapter introduces the method of this research, including the dependent and independent variables and measurement, sample selection, data collection, as well as the data analysis procedures.

Scope of study

The current study focused on the adults in the U.S. Data was gathered from a research sample purchased from Amazon Mechanical Turk (MTurk). Two versions of the survey were conducted. One survey described a story describing a woman with depression (Version 1), and the other version with a man with depression (Version 2), because according to previous research, stigma may vary based on gender (Griffiths et al., 2008; Vogel, Edwards, & Hammer, 2011). About 600 participants were recruited for this survey, and the two versions of survey were distributed to this sample evenly, which means 300 of participants will get Version 1 and the rest of them will get Version 2. An online survey was conducted through a secure online survey Web site named Qualtrics, an alternative and more robust Internet data collection method compared to the other survey tool such as SurveyMonkey (Patrick et al., 2013).

Sample selection

The target population for this study is American adults, nation-wide. In order to reach this scope of participants, this study recruited participants from Amazon Mechanical Turk (MTurk). MTurk, operated by Amazon, is a widely used crowdsourcing internet marketplace where provides service for soliciting participants for social science research. The demographics of the population on MTurk match the US population, which means it can provide a rational sample for random population modeling (Corrigan, Bink, Fokuo, & Schmidt, 2015).

Instrument development

A quantitative research approach, more specifically a survey is taken in this study because according to previous research, surveys of constructs of mental illness stigma can be carried out rapidly and repeatedly globally (Seeman, Tang, Brown, & Ing, 2016). Informed by Attribution Theory, this online survey is designed to measure public beliefs about depression, sources of depression related information, emotional reactions, and intention of discrimination towards depressed individuals. The measurement of independent variables includes four categories including attribution related variables (e.g. locus of causality, stability, personal control and external control, stability), characteristics of depression (e.g. peril belief, disruptiveness, concealability, aesthetics), perceived stigma, and familiarity. Three outcome variables, including negative emotions, and social distance (familiarity) are also demonstrated as follows.

Depression condition

A description of depression condition was presented at the beginning of this questionnaire, which is adapted from previous research (Day, Edgren, & Eshleman, 2007)

> "Please read the following paragraph about depression. Depression is an illness with symptoms that include feelings of sadness and gloom. People with depression lose pleasure and interest in their usual activities, such as work, friends, and hobbies. A loss or increase in appetite and a lack of interest in sex can often occur. People with depression might cry for long periods of time, listen to sad music, watch sad movies, or sleep for days on end. Some might even lose interest in living altogether and entertain thoughts of suicide. People with depression might become less active and might even move and talk more slowly. Other common symptoms of depression include feelings of guilt, inadequacy, helplessness, and hopelessness about the future. We are interested in your opinions about depression and people with depression in general." (p. 2216)

Attribution-related variables

A vignette presented in front of the scale was adapted from previous research and will describe a person with depression, based on criteria from authoritative handbooks for psychologists (DSM-IV and ICD-10) for a Major Depressive disorder (Griffiths et al., 2008). Half of the participants responded a survey with a male version of the vegetate and the other half a female version.

Locus of causality, stability, personal control and external control. Responsibility scale was adapted from the attribution measurement scale called Revised Causal Dimension Scale (CDSII) (McAuley, Duncan, & Russell, 1992) developed based on Weiner's (1985) attributional model of achievement motivation and emotion as a measurement of how individuals perceive causes. This is a revision of the original Causal Dimension Scale (Russell, 1982), which take into consideration the concerns of the following researchers (e.g. McAuley & Gross, 1983; Russell et al., 1987; Vallerand & Richer, 1988). The CDSII examines attributional leanings about one's personal behaviors or performance, which assesses four dimensions, including Locus of Causality, Stability, Personal Control and External Control(McAuley, Duncan, & Russell, 1992).

In order to adapt the personal attribution model into the examination of perceived responsibilities of others' condition, the wording was slightly changed to fit this study, and three dimensions related to perceived responsibility were included, except stability. The measurement of the stability factor in this scale will not be used.

Empathy and negative emotions. Affective reactions which are measured by negative emotions and empathy from the Attribution Questionnaire- 27 (Corrigan et al., 2003), informed by attribution theory, an important framework for explaining the relationship between stigmatizing attitudes and discriminatory behavior. Attribution theory explains behavior in a cognitive-emotional process from inference about responsibility to emotional reactions such as pity or anger, then to the likelihood of helping or punishing behaviors (Weiner, 1995). Brown (2008) adapted this scale and presented pity and anger from AQ (Corrigan et al., 2003) as empathy and negative emotions respectively (Brown, 2008). The empathy and negative emotions were both placed under the first scale, using the same vignette.

Variables related to six dimensions of stigma

Variables related to six dimensions of stigma towards depression were measured by the Day's Mental Illness Stigma Scale, a Likert-scale explicitly developed to assess the general public's attitudes towards people with mental illness including depression (Day, Edgren, & Eshleman, 2007). This questionnaire was guided by the six dimensions of stigma demonstrated by Jones (1984). Factor analysis conducted seven main stigma dimension including Interpersonal Anxiety factor parallel to Peril dimension, Relationship Disruption factor parallel to Disruptiveness dimension, Hygiene factor parallel to Aesthetic dimension, Visibility factor parallel to Concealability dimension, Treatability, Professional Efficacy, and Recovery factors parallel to the dimension of Course (stability).

Anxiety factor items (α = .90; 7 items) examine the participants' anxiousness, nervousness, uneasiness, and fear of physical harm or depressive emotional influence around a depressed individual, such as "I feel anxious and uncomfortable when I'm around someone with depression". Relationship Disruption factor items (α = .84; 6 items) examine the participants' concerns about disruptions to normal, daily, meaningful relationships can be caused by the depressive condition, such as "It would be difficult to have a close meaningful relationship with someone with depression". Hygiene factor items (α = .83; 4 items) examine beliefs related to the appearance and self-care of the people with depression, such as "People with depression tend to neglect their appearance". Visibility factor items (α = .78; 4 items) examine the beliefs related to how visible the participants think about the symptoms of depression, such as "It is easy for me to recognize the symptoms of depression". The Treatability factor items (α = .7;13 items) examine beliefs about treatments for depression, such as "There is little that can be done to control the symptoms of depression". The Professional Efficacy factor items (α = .86; 2 items) examine beliefs in the ability of mental health care providers treating people with depression, such as "Mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for depression". The Recovery factor items (α = .75; 2 items) examine beliefs about the possibility, potential and time for recovery from depression, such as "People with depression will remain ill for the rest of their lives." (Day, Edgren, & Eshleman, 2007). Five factors are adapted in the present survey, which includes peril belief, disruptiveness, concealability, aesthetics, and course (stability). Perceived stigma was measured by the scale adapted from the Depression Stigma Scale, which is designed to measure stigma associated with depression. It has two subscales including two different types of stigma: personal and perceived stigma. The perceived stigma sub-scale is what is going to be adapted in this study, which measures the

participants' perceptions about the attitudes of other people towards depression by asking them nine items to indicate what they think of other people think about depressed ones. Three studies were conducted for developing the original five Likert-scale, assessing the nine items from strongly disagree (1) to strongly agree (5), with a test-retest reliability (r=0.67), internal consistency in three studies respectively (α = 0.82, 0.77 and 0.75) (Griffiths et al., 2006; Griffiths, Christensen, & Jorm, 2008; Griffiths, Christensen, Jorm, Evans, & Groves, 2004).

Familiarity

The assessment of familiarity of depression was measured by a scale adapted from Level-of-Contact Report (LCR), a 12-item scale developed by Holmes et al. (1999) and assesses the previous familiarity of mental illness. The items in this scale describe a varying level of contact, ranging from "I have a mental illness" to "I have never observed a person that I was aware had a serious mental illness". This scale was adapted from the situations of other scales used in stigma research (Link et al. 1987; Penn et al. 1994) and ranked in terms of intimacy of contact by three experts in severe mental illness and psychiatric rehabilitation, the mean score was 0.83 (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999). This scale was tested by previous research and has been proved to offer increased statistical power over categorical measures (Corrigan, Green, Lundin, Kubiak, & Penn, 2001; Hackler, 2011). In order to adapt the scale into the context of depression, "mental illness" of the scale was replaced by "depression". Checkbox is going to be used for this scale with 1) yes and 2) no. Participants need to check the mark next to each item, and the final score for their level of contact is the highest score of their most intimate contact to mental illness. For example, if someone checked the item "I have a depression (rank order score= 12)", "I have observed worked with a person who had a severe depression at my place of

employment (rank order score= 6)", this participant would receive a score based on the highest rank order score chosen, which is 12 point.

Resources of depression related information and images

Resources of depression knowledge and images were adapted from a previous study examining sources from where the participants get their mental illness knowledge. Respondents were asked to rank three sources that they consider as their primary information source (1), frequently used source (2), and occasional information source (3) (Gaumer, 2014). More media sources were added into this current survey for balancing the options capering to real-life sources such as parents, siblings, etc. For example, the most used social media platform according to the Pew Research Center (2018) among US adults were added into the list of sources, such as Facebook, Pinterest, Instagram. On a scale of 1-5, participants are going to indicate how important the sources listed are for them getting knowledge and images about depression.

Discrimination

Stigmatizing behavior was measured as respondents' willingness to accept people with depression in various roles (e.g., as a landlord; as a coworker) by the adaption from Social Distance Scale (SDS) (Link et al., 1987). The SDS (Link et al., 1987) consist of 7 items and uses a 4-point scale ranging from 1(definitely unwilling) to 4 (definitely willing). The items measured the participants about their willingness to interacting with a person with serious mental illness. This scale was used and proved valid by previous research with internal consistency $\alpha = .76$ (Corrigan et al., 2002). The wording in the items was slightly altered, where mental illness is replaced by depression. In the current study, items are like "How would you feel about renting a room to a someone with depression?" and "How would you feel about having someone with depression as your neighbor?"

Demographics

According to previous researches, demographics such as sex, education, ethnicity (Byrne, 2000), age, marital status, income (Richards et al., 2015) might cause a difference to people's opinion related to stigma regarding mental illness. In order to control the influence of the demographics. Basic demographics questions are also included in the survey as well, after the main sections of the main variables. Six questions are listed in the demographics section, including age, sex, ethnicity origin (or race), level of education, household income, marital status.

Data analysis procedures

Data analysis was performed using Statistical Package for the Social Sciences (SPSS) version 24. The detailed analyzing procedure is as follows. SPSS was sued for cleaning data and recoding variables. The first step was data cleaning. Responses were removed such as those with too short duration and uncompleted one. Those who failed the attention check were deleted as well. The next step was correcting the data type, and then recoding certain items.

After cleaning and recoding data, internal consistency was performed for all the interval variables, including attribution related factors, six dimensions related factors, familiarity, perceived stigma, negative emotions, empathy, and discrimination. Based on the relationship among the items inside the factors, new variables were computed by calculating the means. Categorical variables such as demographics were recoded using the method of dummy coding. The variable for familiarity was coded by taking the score of the item selected with the highest score.

Descriptives of demographics and the main variables were explored. Multiple hierarchical linear regressions were performed to examine the hypotheses regarding relationships

among the factors related to attribution theory, including locus, controllability, stability, emotional reaction, and discrimination.

SPSS was also used for performing regression analysis to examine the two research questions regarding whether there were factors including the main independent variables other than attribution related factor, and dummy coded demographic factors and resources of information significantly contribute to the discrimination towards people with depression. In order to analyze the association between resources of information and discrimination, three factors were coded based on three categories of resources of depression information including interpersonal contact, traditional media, and internet-based media.

Chapter 4 – Results

This chapter presents the results of hypothesis testing and findings of research questions of the current study formulated from Attribution theory, six dimensions of stigma and reviewed literature. The first thing described in this chapter is descriptive statistics, including demographic characteristics, followed by descriptives of main study variables, depression information resources, and overall media usage. Multiple hierarchical linear regression analyses were performed to test the hypotheses and answer research questions.

Descriptive statistics

Demographic characteristics

A total of 616 MTurk workers responded to this survey. A criterion was established to eliminate the invalid responses from the sample. We excluded participants who did not finish the survey; the participants whose time on task was below the minimal cutoff to complete the survey; the participants who failed the attention check question. After clearing the invalid data based on the criterion, 533 usable data were left for the following data analysis. Overall, the acceptance rate for the responses was 86.5%.

The sample was distributed across age groups with a mean age of 35.95 years old (*SD*=11.16), ranging from 18 to 70. The majority (53.3%) of participants were young adults (*N*=284) ranging from 18 to 33 years, then 32.6% were in the 34-49 age group (*N*=174), and about 12.4% were 50-65 years old (*N*=66). The rest of the sample is the elders' group which captained 9 (1.7%) participants who are above 65 years old. The sample has more males (*N*=294, 55.2%) than females (*N*=239, 44.8%). About 74.9% of the participants were white (*N*=399). Respondents were distributed in different education level, among which bachelor's degree counts for almost half of the sample (*N*=228, 42.8%). The reported income of the responses was mostly

located in 40,000-59,999 (*N*=166, 31.1%) and 20,000-39,999 (*N*=127, 23.8%). The majority of the responses were reported married or domestic partnership (*N*=277, 52.0%) and single (*N*=215, 40.3%). See Table 1 for more details.

Table 1. Participant Demographic Characteristics

Measure	*n*	%
Age (M=35.95; SD=11.16)		
18-33	284	53.3
34-49	174	32.6
50-65	66	12.4
65 above	9	1.7
Gender		
Male	294	55.2
Female	239	44.8
Ethnicity		
American Indian or Alaska Native	6	1.1
Asian	39	7.3
Black or African American	72	13.5
White	399	74.9
Other	17	3.2
Education		
High school	66	12.4
Some college credit, no degree	80	15.0
Trade/technical/vocational training	20	3.8
Associate degree	52	9.8
Bachelor's degree	228	42.8
Master's degree	62	11.6
Professional degree	13	2.4
Doctorate degree	12	2.3
Income		
<20,000	59	11.1
20,000-39,999	127	23.8
40,000-59,999	166	31.1
60,000-80,000	87	16.3
>80,000	92	17.3
Marital status		
Single, never married	215	40.3
Married or domestic partnership	277	52.0
Widowed	2	.4
Divorced	32	6.0
Separated	6	1.1

Table 2 shows the frequencies of the reported familiarity with depression. The majority of the participant in this study reported a high contact level with depression, in which 73.8% of them reported they either "have a relative who has depression" (21.6%), or "live with a person who has depression" (12.4%), or "have depression" (39.8%).

Table 2. Frequencies of contact familiarity

Measure	*level*	*n*	%
I have never observed a person that I was aware had depression.	1	10	1.9
I have observed, in passing, a person I believe may have had depression.	2	0	0
I have watched a movie or television show in which a character depicted a person with depression.	3	27	5.1
I have watched a documentary on television about depression.	4	22	4.1
I have observed people with depression on a frequent basis.	5	6	1.1
I have worked with a person who had depression at my place of employment.	6	18	3.4
My job includes providing services to people with depression.	7	4	0.8
My job involves providing services/treatment for people with depression.	8	13	2.4
A friend of the family has depression.	9	40	7.5
I have a relative who has depression.	10	115	21.6
I live with a person who has depression.	11	66	12.4
I have depression.	12	212	39.8

Descriptives of main study variables

The main variables tested in this study were related to Attribution theory (locus of causality, internal control, external control, stability, negative emotion, and empathy). Other key variables were based on the six dimensions of stigma (interpersonal anxiety, relationship disruption, hygiene, visibility, treatability, professional efficacy, and recovery), perceived stigma, familiarity, resources of information and discrimination. Familiarity was measured by the highest contact level a participant reported in a scale of 1 to 12. Each variable other than familiarity and resources of information was measured with two or more items based on a 5-point Likert-scale, with a Cronbach's alpha more than 0.70, indicating acceptable internal

consistency within these items. See more information about the properties of the variables in table 3.

Table 3. Properties of key variables

Measure	*items*	*M*	*SD*	α
Attribution related variables				
Locus of causality	3	3.39	1.00	.70
Internal controllability	3	2.46	.94	.82
External controllability	3	2.17	.84	.72
Stability (Recovery)	7	3.82	.77	.81
Negative emotion	3	1.95	1.11	.92
Sympathy	3	3.74	.86	.74
Six dimensions related variables				
Interpersonal Anxiety	7	2.53	1.03	.91
Relationship Disruption	6	2.83	.99	.88
Hygiene	4	3.03	.97	.89
Visibility	4	3.28	.89	.75
Treatability	3	3.82	.88	.70
Professional Efficacy	2	3.92	.87	.77
Recovery	2	3.71	1.18	.86
Perceived stigma	6	3.35	.75	.84
Familiarity		9.81	2.87	
Media as information channels				
Interpersonal Channel		3.21	.97	
Traditional Media Channel		2.81	.95	
Internet-based Channel		2.32	1.03	
Discrimination	7	3.51	.91	.90

Attribution related variables. As Table 3 shows, participants perceived that the locus of the cause of depression was located more in the personal side instead of the situational side (*M*=3.39, *SD*=1.00), which means they believed that people are more responsible for causing themselves depression. In addition, participants reported a higher level of internal controllability (*M*=2.46, *SD*=0.94) than external controllability (*M*=2.17, *SD*=0.84), which suggested the participants thought that people have more control over their depression condition than the environment. Results showed that stability, which is measured by the possibility of recovery is reported at an above moderate level (*M*=3.82, *SD*=0.77), which suggested that participants

believed that the depressed ones had a big chance of recovery from their depression condition. Participants reported an above moderate level of empathy (*M*=3.74, *SD*=0.86) to the person described in the story with depression, while the negative emotion (*M*=1.95, *SD*=1.11) is relatively low. Among the attribution related variables, there are statistically significant mean differences in internal controllability, external controllability, stability (recovery), negative emotion, and sympathy between males and females. Results show that males reported a lower level of stability (recovery) and sympathy than did females, while reported a higher level of the rest. (See Table 4.)

Table 4 Results of t-test and Descriptive Statistics for main variables by Sex

	Sex				95% CI for Mean Difference		
	Male (n=294)		Female (n=239)				
	M	SD	M	SD		*t*	df
Locus of causality	3.34	1.01	3.44	.99	-.28, .07	-1.21	531
Internal controllability	2.55	.92	2.34	.96	.05, .37	2.60*	531
External controllability	2.24	.81	2.10	.88	.01, .29	2.06*	531
Stability (Recovery)	3.70	.75	3.97	.76	-.40, -.14	-4.08***	531
Negative emotion	2.13	1.19	1.72	.96	.22, .60	4.32***	531
Sympathy	3.65	.89	3.88	.82	-.38, -.08	-3.10**	531
Interpersonal Anxiety	2.64	1.03	2.41	1.02	.05, .40	2.57*	531
Relationship Disruption	2.97	.95	2.66	1.00	.14, .48	3.63***	531
Hygiene	3.11	.97	2.92	.96	.03, .36	2.35*	531
Visibility	3.28	.91	3.27	.88	-.15, .16	.10	531
Treatability	3.69	.86	3.99	.87	-.44, -.15	-3.93***	531
Professional Efficacy	3.83	.88	4.04	.85	-.35, -.06	-2.72**	531
Recovery	3.59	1.21	3.88	1.12	-.50, -.09	-2.83**	531
Perceived stigma	3.37	.76	3.34	.74	-.10, .15	.39	531
Familiarity	9.47	3.07	10.23	2.55	-1.26, -.28	-3.10**	531
Interpersonal Channel	3.18	.99	3.24	.94	-.23, .10	-.75	531
Traditional Media Channel	2.83	.96	2.78	.93	-.11, .21	.64	531
Internet-based Channel	2.36	1.06	2.29	1.00	-.10, .25	.80	531
Discrimination	3.48	.93	3.55	.90	-.22, -.29	-.83	531

Note. * p < .05, ** p <.01, *** p < .001

Variables related to six dimensions of stigma. As Table 3 shows, Interpersonal Anxiety (*M*=2.53, *SD*=1.03) and Relationship Disruption (*M*=2.83, *SD*=0.99) are reported in a moderate level, which indicated that the participants did not have much anxiety around the depressed people, and they did not think having depression cause many problems to the social life of the people with depression. Treatability (*M*=3.82, *SD*=0.88), Professional Efficacy (*M*=3.92, *SD*=0.87), and Recovery (*M*=3.71, *SD*=1.18), which are related to stability or the possibility of recovery were reported in an above moderate level, which means that participants believed people with depression had a good chance of recovery. Participants reported a moderate level of concerns about Hygiene issue for people with depression (*M*=3.03, *SD*=0.97), and the Reported Visibility (*M*=3. 28, *SD*=0.89) indicates perceived moderate level of agreement that they could recognize a person with depression. There are statistically significant mean differences in all of the six dimensions factors between males and females, other than visibility. Results show that males reported a higher level of interpersonal anxiety, relationship disruption and hygiene than did females, while reported a lower level of treatability, professional efficacy, and recovery. (See Table 4.)

Perceived stigma and familiarity. Table 3 indicates that participants reported a moderate level of perceived stigma (*M*=3.35, *SD*=0.75), which means that they believed that others held a moderate level of stigma towards people with depression. For familiarity, which is level of contact, this sample had a very high level of contact (*M*=9.81, *SD*=2.87) with depression, on a range of 1 to 12. Results show a significant mean difference in familiarity between males and females. Females reported a higher level of familiarity than did males. (see Table 4.)

Channel type of depression related information. Interpersonal channel (*M*=3.21, *SD*=0.97) was perceived as the most important channel for information and images of

depression, followed by the traditional media channel (*M*=2.81, *SD*=0.95). Participants in this study reported Internet-based channel (*M*=2.32, *SD*=1.03) as the least important channel for depression related information and images. (See table 3)

Discrimination. Discrimination (*M*=3.51; *SD*=0.91) measured by Social Distance, asking participants' willingness to accept people with depression in various roles (e.g. as a landlord; as a coworker, etc.) indicated that participants hold an above moderate level of discrimination towards people with depression. (See table 3)

Media usage and information resources

Participants were asked two questions about media usage. One was their overall media use habit about the frequencies of using different kinds of media, including traditional media such as Television, Radio. The other media question was about how important they think about the channels including media and interpersonal contact for them to get information and images about depression.

Results showed that for daily media usage, Internet (Websites) (*M*=4.27, *SD*=1.30) was the highest used media, followed by YouTube (*M*=3.33, *SD*=21.24), and Television (*M*=3.09, *SD*=1.30) and Facebook (*M*=3.04, *SD*=1.38) (see Table 5). As for channels of exposure to depression information, interpersonal contacts were reported as the main channels, such as Close Friend with Diagnosable Depression (*M*=3.42, *SD*=1.21), Parent with Diagnosable Depression (*M*=3.37, *SD*=1.31), Sibling with Diagnosable Depression (*M*=3.36, *SD*=1.29), and Self with Diagnosable Depression (*M*=3.24, *SD*=1.35) (see Table 5).

Three variables were created including Interpersonal Channels, Traditional Media Channels, and Internet-based Channels for further examination. Participants reported that

Interpersonal Channel was their most important channel for information and images of depression (*M*=3.21, *SD*=0.97) (see Table 3).

Table 5. Overall media usage & Channels for depression information

	Media Usage		As Resources	
Channels	*M*	*SD*	*M*	SD
Parent with diagnosable depression			**3.37**	1.31
Sibling			**3.36**	1.29
Close friend			**3.42**	1.21
Extended family			**3.12**	1.21
Working with someone			**3.05**	1.18
An acquaintance			2.88	1.18
Self *			**3.24**	1.35
Television	**3.09**	1.30	**2.79**	1.23
Radio	2.27	1.16	2.43	1.23
Movies/Films	**2.88**	1.13	**2.60**	1.25
Printed media (books, magazines, newspapers, etc.)	**2.65**	1.17	**3.08**	1.18
Coursework or schoolwork			**3.15**	1.28
Internet (Websites)	**4.27**	1.30	**3.50**	1.09
Facebook	**3.04**	1.38	2.39	1.33
Pinterest	1.99	1.19	2.03	1.27
Twitter	2.35	1.33	2.15	1.26
Instagram	2.45	1.38	2.14	1.30
YouTube	**3.33**	1.24	**2.72**	1.28
Snapchat	1.95	1.28	2.02	1.25
LinkedIn	1.79	1.18	1.92	1.21
WhatsApp	1.95	1.46	2.04	1.35

Testing of hypotheses and research questions

Hypotheses were made for testing the relationships among the factors derived from attribution theory (causality, controllability, and stability as well as reactive emotion, and discrimination. As shown in Table 2, 39.8% of the participants reported a level 12 (I have depression) of contact/familiarity with depression, which might influence the associations in the hypotheses. In order to test if the attribution related variables explain variances in reaction and discrimination after controlling for the familiarity, multiple hierarchical linear regression

analyses were performed (See Table 6-10). Two research questions were asked in this study regarding the predictors of Discrimination towards people with depression, including one question about channel differences and another one about the factors of six dimensions of stigma. A hierarchical linear regression analysis was performed to examine these two research questions (See Table 11).

Attribution related factors and discrimination

The first set of hypotheses (H_1) predicted the relationships among locus of causality as IV (independent variable), and reactive emotion, and discrimination as DV (dependent variable).

H_{1a}: The more the causes are attributed to the person instead of the situation, the higher the negative emotions. This hypothesis was not supported.

Analysis composed of two blocks, the familiarity level of "I have depression" was entered in the first block (R^2=.01), then locus of causality was entered in the second block (R^2=.15, F (2,530) =25.46, p< .001). After controlling for the familiarity, the locus of causality (β = -.38, t = -9.47, p =.000) was a significant contributor to negative emotion. Results suggested that participants who reported to believe the cause of depression located more to the situation side had more negative emotion towards people with depression, which was opposite to the expectation of H_{1a}. (See Table 6)

Table 6. Linear regression analysis on Locus predicting Negative Emotion

Predictors	Model 1 *β (t)*	Model 2 *β (t)*
Depressed	.09(2.04)*	.05(1.35)
Locus of causality (Personal)		-.38(-9.47)***
R^2	.01	.15

Note. 1. β values are standardized coefficients with t values in parentheses
2. * p < .05, ** p <.01, *** p < .001

H_{1b} predicted that the more the causes attributed to the person instead of the situation, the more discrimination, which was not supported.

In the first model, the familiarity level of "I have depression" explained 9.0% variance of the discrimination(R^2=.09). Locus of causality was entered in the second model after the entry of the familiarity level of "I have depression" in the first model, the total variance explained by these two predictors in the second model was 10% (R^2=.10), F (2,530) =21.21, p< .001. After controlling for the familiarity that reported "I have depression", the locus of causality (β = -.10, t = -2.41, p =.02) was a significant contributor to discrimination, as well as the familiarity of "I have depression" (β = .28, t = 6.849, p =.000). Results suggested that, people who reported that they had depression was a significant predictor to higher level of discrimination. Results show an opposite direction for the relationship predicted, which suggested the more the participants believed that the cause located on the side of the situation, the more discrimination they might hold against people with depression, which was opposite to the H_{1b}. (See Table 7)

Table 7. Linear regression analysis on Locus predicting Discrimination

Predictors	Model 1 *β (t)*	Model 2 *β (t)*
Depressed	.29(7.06)***	.28(6.85)***
Locus of causality (Personal)		-.10(-2.41)*
R^2	.08	.09

Note. 1. β values are standardized coefficients with t values in parentheses
2. * p < .05, ** p <.01, *** p < .001

Overall, the more participants reported that they perceived the depression caused more by the situation, they held more negative emotion and more discrimination towards people with depression. Therefore, the results did not support the first set of hypotheses.

The second set of hypotheses (H_2) was about the relationship among stability which was measured by recovery (IV), negative emotion (DV), and discrimination (DV). H_{2a} predicted that the higher the chance of recovery, the less negative emotion. This was supported by the results. Stability (recovery) was entered in the second model after the entry of the familiarity level of "I have depression" in the first model, the total variance explained by these two predictors in the second model was 39% (R^2=.39), F (2,530) =126.19, p< .001. After controlling for the familiarity that reported "I have depression", the stability (recovery) (β = -.62, t = -18.03, p =.000) was a significant contributor to negative emotion, which suggested that the more the participants believe the people with depression are able to get better, the less negative emotions they held such as anger. (See Table 8)

Table 8. Linear regression analysis on stability predicting Negative Emotion

Predictors	Model 1 *β (t)*	Model 2 *β (t)*
Depressed	.09(2.04)*	.01(.21)
Stability (Recovery)		-.62(-18.03)***
R^2	.01	.39

Note. 1. β values are standardized coefficients with t values in parentheses
2. * p < .05, ** p <.01, *** p < .001

H_{2b} predicted that the higher chance of recovery (less stable), the less discrimination, which was not supported by the results.

In the first model, the familiarity level of "I have depression" explained 8.6% variance of the discrimination(R^2=.09). Stability (recovery) was entered in the second model after the entry of the familiarity level of "I have depression" in the first model, the total variance explained by these two predictors in the second model was 11% (R^2=.11), F (2,530) =23.61, p< .001. After controlling for the familiarity that reported "I have depression" (β =.31, t = 7.53, p =.000), the

stability (recovery) (β =.15, t = 3.51, p =.000) was a significant contributor to negative emotion, which suggested that the more participants believe the person with depression is able to recover, the more discrimination they reported. (See Table 9)

Table 9. Linear regression analysis on stability predicting discrimination

Predictors	Model 1 *β (t)*	Model 2 *β (t)*
Depressed	.29(7.06)***	.31(7.53)***
Stability (Recovery)		.15(3.51)***
R^2	.09	.11

Note. 1. β values are standardized coefficients with t values in parentheses
2. * p < .05, ** p <.01, *** p < .001

H_3 predicted that the more personal controllability, the more discrimination. Not enough evidence shows any significant correlation for this hypothesis. However, results indicated that "I have depression" was a significant predictor (β =.29, t = 6.92, p =.000) to discrimination in the second model (R^2=.09) (See table 10)

Table 10. Linear regression analysis on controllability predicting discrimination

Predictors	Model 1 *β (t)*	Model 2 *β (t)*
Depressed	.29(7.06)***	.29(6.92)***
Controllability		-.04(-1.04)
R^2	.09	.09

Note. 1. β values are standardized coefficients with t values in parentheses
2. * p < .05, ** p <.01, *** p < .001

Information channel as predictors of discrimination

The first research question (RQ1) sought to examine whether the perceived importance of communication channels as sources of information and images of depression could predict discrimination. To answer this research question, a hierarchical linear regression was performed.

Analysis composed of two blocks, the demographic attributes were entered at Step 1, explained about 5.2% of model variance (R^2=.052). After entering the factors related to information channels including Interpersonal Channel, Traditional Media Channel, and Internet-based Channel at the step 2, the predictors added at the second model explained an additional 3.5% of the variance in Discrimination, after controlling for demographic attributes, *R* square change= .035, *F* change (3, 515) = 6.66, $p < .001$. The total variance explained by the predictors was 8.7% (R^2=.087), *F* (14, 515) =3.51, $p < .001$, in the second model.

Results shows that, in the second model, among all the other information channels, Interpersonal Channel was the only significant predictor to discrimination ($\beta = .21$, $t = 4.29$, $p = .000$), which means the higher a participant reported the perceived level of importance of Interpersonal Channels regarding getting depression related information and images, the higher reported level of Discrimination. (See table 11)

Predictors of discrimination other than attribution factors

The second research question (RQ2) sought to examine whether there were factors other than attribution factors and information channels predicted discrimination, such as six dimensions of stigma, perceived stigma, familiarity. In order to answer this research question, a hierarchical linear regression was performed. Analysis composed of three blocks, the demographic attributes were entered in the first block (R^2=.052), then information channels were entered in the second block (R^2=.087). Finally, predictors such as factors related to six dimensions of stigma, perceived stigma, and familiarity were entered in the third model. The predictors added in the third model explained an additional 28.5% of the variance in discrimination, after controlling for demographic attributes and information channels, *R* square

change= .285, *F* change (9, 506) = 25.54, *p*< .001. The total variance explained by the predictors was 37.2%, *F* (23, 506) =13.04, *p*< .001. (See table 11)

Table 11. Hierarchical Regression Analysis on Predictors of Discrimination

Predictors	Model 1 *β (t)*	Model 2 *β (t)*	Model 3 *β (t)*
Age	-.16(-3.30)**	-.15(-3.15)**	-.05(-1.24)
Income	-.08(-1.56)	-.08(-1.65)	-.09(-2.23)*
Asian	-.02(-.50)	-.02 (-.46)	.02(.63)
Black	-.04(-.88)	-.05 (-1.17)	-.01(-.15)
Race is other	-.03(-.59)	-.03(-.68)	-.05(-1.29)
High school	.02(.48)	.02(.47)	.05(1.25)
Junior college	-.07(-1.38)	-.08(-1.60)	-.05(-1.13)
Master & above	.09(1.79)	.08(1.78)	.10(2.43)*
Single	-.07(-1.37)	-.06(-1.22)	-.03(-.71)
No more married	-.08(-1.68)	-.07(-1.43)	-.01(-.27)
Male	-.05(-1.07)	-.04(-.90)	.07(1.80)
Interpersonal Channel		.21(4.29)***	.11(2.64)**
Traditional Media Channel		.03(.47)	.00(.04)
New Media Channel		-.11(-1.60)	.07(.10)
Treatability			-.13(-2.21)*
Recovery			-.19(-3.70)***
Relationship Disruption			-.43(-6.50)***
Visibility			.06(1.52)
Anxiety			-.16(-2.51)*
Hygiene			-.10(-2.16)*
Professional Efficacy			.24(5.60)***
Perceived Stigma			.06(1.48)
Familiarity			.19(4.84)***
R^2	.05	.09	.37

Note. 1. β values are standardized coefficients with t values in parentheses
2. * p < .05, ** p <.01, *** p < .001

In the final model, factors related to demographic attribution such as income, education level of master and above were statistically significant. The interpersonal channel is the only significant predictor of discrimination among other channels, as discussed above in the first research question. Among other main factors, treatability, recovery, professional efficacy, relationship disruption, anxiety, hygiene, and familiarity were statistically significant. As shown

in Table 11, relationship disruption (β = -.43, t = -6.50, p =.000), and professional efficacy (β = .24, t = 5.60, p =.000) had higher beta values than other, followed by familiarity (β = .19, t = 4.84, p =.000), recovery (β =-.19, t = -3.70, p =.000), anxiety (β = -.16, t = -2.51, p =.012), treatability (β = -.13, t = -2.21, p =.028) and hygiene (β = -.10, t = -2.16, p =.031). Results mean that relationship disruption, recovery, anxiety, treatability, and hygiene contributed negatively to discrimination, while professional efficacy and familiarity contributed positively to discrimination. (See table 11)

Chapter 5 - Discussion, Implications, and Conclusion

This chapter includes the discussion based on the testing of hypothesis and research questions. The theoretical implication and practical implication were drawn from the study findings. The chapter also includes study limitations and suggestions for future studies, which is followed by the conclusion.

Discussion

Association of attribution related factors and discrimination

Results suggested that stability measured by the perceived possibility of recovery had the highest mean among all the other factors in this section, which suggested that generally speaking, participants believe people with depression had a high chance of recovery. Results also showed that participants in this study believe that people with depression were slightly more responsible for causing themselves depression condition (M=3.39, SD=1.00). The difference between reported mean of personal controllability (M=2.46, SD=0.94) and external controllability (M=2.17, SD=0.84) was little, which suggested that participants believed that people with depression had a bit more control over their depression condition.

Overall, results suggested that causes for depression and the responsibility of controlling the causes leaned slightly more towards the personal side. In addition, participants held more sympathy than negative emotion such as anger towards people with depression. That was consistent with the previous studies that attributions about general ill was not very negative, and people's understanding are better than before; mental illness such as depression were getting more likely to attribute to the situation such as life circumstances, genetic factors than just blaming the person with depression (Corrigan & Wastson, 2004; Katon, 2003; Pescosolido, 2013; Phelan, Link, Stueve, & Pescosolido, 2000). This result might also because that the

familiarity of depression in this study is very high, with 39.8% of the participants reported that "I have depression". It is possible that the participants who reported depression attribute their depression condition to the situation, which leads to a result that was moderate regarding the responsibility for the cause and controllability. This can be explained by a previous study that people tend to attribute their own negative emotion to the situation (Liu, Karasawa, & Weiner, 1992).

Hypothesis testing focused on the relationships among attribution factors, emotional reaction, and discrimination. Based on the first set of hypotheses H_{1a} and H_{1b}, the more people believe that the situation or environment is more responsible for the cause, the angrier or aggravated they felt for the person with depression, and the more likely to discriminate a person with depression. This finding is inconsistent with what other studies (e.g. Karasawa, 1995; Liu, Karasawa, & Weiner, 1992; Weiner, 1995) that stated that when judging other's negative emotion, people tend to attribute more responsibility to their disposition, which led to more negative emotion and intention to negative behavior towards those depressed. This might suggest that participant got angry or irrigated not just because they believe people are responsible for becoming depressed, but also because the person with depression got influenced by the situation easily. In addition, this result can be explained by the conceptualization of stigma (Ahmedani, 2011; Angermeyer & Matschinger, 2005; Goffman,1963), which indicated that stigma was first evoked by exposed to the condition, then the process varies because of different types of cognition. The attribution factors only composed one dimension of the whole cognitive process. Especially in this study, stigma was operationalized as discrimination which was a behavioral level of stigma. It took more than attribution to explain the behavior.

The results for the second set of hypotheses, H_{2a} and H_{2b}, suggested that with beliefs of more chance of recovery, participants held less negative emotion against people with depression. This is consistent with the majority of the studies about stigma towards people with a mental issue. For example, previous research suggested that if people believe the condition of depression is hard to change, negative emotion occurs. On the contrary, if people believed the condition of depression can be improved in the future, positive emotion occurs (Corrigan et al., 2000). This study also shows that with more chance of recovery, the participants reported a higher level of discrimination, which seems opposite to the study mentioned above (Corrigan et al., 2000). However, this result can be explained by the early study about attribution theory. Weiner and colleagues (1988) indicated that effort is as an important factor that is related to the stability of a problem. In this case, effort lead to the possibility of recovery for people with depression. In addition, the participants of this current study reported a high level of perception of recovery. This statement suggested that, if participants believed that the people are able to recover and get rid of depression, while they were still struggling with the consequences from being depressed, they would rather hold back helpful behavior. This is also can be explained by the previous research from Schwarzer and Weiner (1991). The study indicated that the origin of problem (responsibility causing a blemish) and solution (whether putting effort into changing it) need to be examined separately, because the uncontrollable causes might give rise to positive reaction, while the lack of effort to cope with this condition can cause negative behavior.

In brief, the relationships among the attribution factors suggested that, participant might hold less negative emotion towards people with depression, however, when they were asked about some more questions related to their real behavior, in this case, discrimination questions, which might involve with their real life, their family, they indented to avoid connection with

person with depression, who they believe are able to recover while still struggle in their depression condition.

Predictors of discrimination other than attribution factors

Participants reported a relatively high level of recovery of people with depression regarding treatability, professional efficacy, and recovery. In addition, participants reported a low concern about the disruption that depression might cause to depressed people's daily lives. They did not show much concern about being anxious around depressed people, or concern about the hygiene issues, either. These results might because that familiarity in this study is high (M=9.81, SD=2.87), on a range of 1 to 12. The levels of familiarity with 9 and more than 9 points include "A friend of the family has depression"; "I have a relative who has depression"; "I live with a person who has depression"; "I have depression". With the knowledge of depression from the people who were close to them, the participants might have been used to depression, held a comprehensive understanding and sympathy of people with depression. However, what worth mention is that when examined the hypotheses, I found that people who reported that they have depression was a significant predictor of more discrimination. This statement means that people with depression themselves held higher discrimination towards depression than regular people.

Results for research question two (RQ_2) explained whether factors related to six dimensions of stigma, perceived stigma, and familiarity predict discrimination. Results show that lower relationship disruption, anxiety, and hygiene, predicted a higher level of discrimination. A higher level of professional efficacy and familiarity predicted a higher level of discrimination as well. This result might suggest that, even though the participant reported a lower level of the factors on the stereotype or prejudice level of stigma, they did not want to get involved with a

person with depression when asking about their actual behavior, which is discrimination. This can be explained by previous studies that stigma was composed of different components (Corrigan, 2004; Hinshaw, 2007), which means that stigma in different steps, stereotype, prejudice, and discrimination are not always consistent.

Among these factors, recovery, treatability and professional efficacy are all considered as factors related to stability, which measured the possibility of recovery for persons with depression. However, the results for RQ_2 showed that recovery and treatability, and professional efficacy have an opposite contribution to discrimination. This is probably because recovery and treatability were measured by the participants' confidence towards the patients, while professional efficacy was more about the confidence towards the health care providers, which means, if participants had more confidence towards the patients themselves, they were less likely to discriminate the person with depression. This also can be explained by Weiner and colleagues' study about the Attribution Theory (1988) that if they put more effort to make themselves getting better, less intention for punishment will occur.

In RQ_1, different kinds of channels for depression information and images were examined as predictors of discrimination. Results show interpersonal channel is a significant predictor of discrimination, which indicated that the more participants considered interpersonal channels as important for depression information resources, the more discrimination towards people with depression. This is consistent with the relationship between familiarity and discrimination, which indicated that the more familiarity reported by the participants, the more discrimination they held against people with depression. In RQ_2, results showed that the more familiarity the more discrimination was reported. This is the opposite of the finding of a previous study that people who experienced less depression reported a higher level of stigma (Griffiths,

Christensen, & Jorm, 2008). The reason for the difference is probably because, in this study, the final outcome was measured by discrimination, which is a behavioral level of stigma. This might suggest that participants who were more familiar with people with depression in real life and got more information about depression through interpersonal contact, were less willing to get involved with people with depression in real life. For example, if they got relied on by people with depression close to them, they might know the burden, and try to avoid in the future.

Generally speaking, even though in the prejudice level of stigma, participants did not perceive much stigma towards people with depression, on the behavioral level, primarily related to their daily life and family, people intend to avoid connection with people with depression. More familiarity and interpersonal contact lead to more discrimination.

Theoretical implications

This study applied the Attribution theory in order to understand how the public attribute the responsibilities of depression towards patients with depression. Three components from Weiner's (1979) development of attribution theory including locus of causality, stability, and controllability were examined in this study. As the most frequently used perspective to understand how stigma develops (Ahmedani, 2011), the theory has been applied to understand the attribution of responsibility towards persons with mental illness. However, in examining the responsibility for causing stigma, previous research (e.g. Corrigan et al., 2000; Schwarzer & Weiner, 1991) took only two dimensions including controllability and stability into consideration. However, as one of the three central dimensions of causality were overlooked by those studies. In this current study, results suggested that all three central dimensions of causality were significantly linked to the emotion and discrimination to some extent, which aligns well with the Weiner's Attribution theory (1979).

In the case of attributing responsibility towards people with depression, the current study indicated that the locus of causality leaned more to the situation side, which leads to more negative emotion (e.g., anger) and expected discrimination behavior. For controllability, participants reported a higher mean of interpersonal control than the mean of external control. However, not enough evidence showed any association among internal controllability, emotion, and discrimination. As for stability, this study indicated that the chance of recovery led to less negative emotion, and more discrimination, which can be explained by lack of effort causing holding back helpful behavior.

In the previous research, effort usually discussed within the parts regarding stability. But it was barely examined separately in those studies nor in this study. However, it might be important for explaining the public discrimination intention toward people with depression. Thus, other than the three dimensions of attribution theory, which are locus, controllability, and stability, effort should be included in future study to examine stigmatization cognitive process. It is because that in a case of mental illness such as depression, stability is usually measured by recovery, which is different from effort.

In addition to the components of Weiner's (1979) attribution theory, additional factors were examined in this study for enriching the cognitive process of stigmatization, and some of them were proved to be significant contributors to discrimination, such as interpersonal channel, familiarity, and some of the six dimensions of stigma. As a theory using cognitive approach, when applied to examine the process of stigmatization, not only should we include the influence of the attribution cognition, factors regarding other parts of the cognition process should also be included into consideration. For example, based on the results of this study, familiarity of

depression is highly recommended to be examined as a main factor predicting one's cognition process of stigmatization.

Practical implications

The overall implication for health communication research and practice is that people's perception and their behavior was not always aligned. Especially regarding stigmatization towards people with mental illness, the participants might hold a lower level of cognitive stigma while a higher level of behavioral stigma towards them. Therefore, researchers or campaign planners who work on stigma need to examine how to communicate with the public regarding different levels of stigma.

Even though gender was not a significant predictor of discrimination, it caused significant differences for some of the main factors regarding discrimination. Men held less hope for recovery of the people with depression, which suggested that for campaign practitioners to design messages targeting male audiences, more information need to be included regarding the recovery of depression. Male participant reported a higher level of anxiety and relationship disruption around people with depression. In order to address this issue, more messages need to be designed to inform men how to deal with people with depression in their real life. For example, message designers can use scenarios regarding real life situations to educate audiences the way of deal with people with depression around.

Communication channels as one of the main factors examined in this study play a vital role in designing an intervention. Findings from this study have some implications for designing an anti-stigma intervention, including channel selection and message establishment. Some insights regarding channel selection are as follows. First of all, results show that the majority of the responses considered interpersonal channels such as parents, siblings, friends, and self, were

important for them to get depression related information. In addition, interpersonal channel predicted more discrimination. This finding suggests that interpersonal contacts have more influence as information resources of depression and the images, but the information people get from them is probably negative, which contributes to people's perceptions and discrimination towards a person with depression. Therefore, in order to address stigma and change perceptions regarding stigmatization towards people with depression, interpersonal channels would be more effective for delivering relevant information.

The current study also indicates that the public have a high familiarity with depression, and the images they get from their life contacts are real to them and hard to change, which suggests that we need to establish useful messages for the public in the campaign. By useful messages I mean information that can actually help people with dealing with depression situation in real life, other than just calling for sympathy towards the depressed.

What's worth mentioning here is that people who reported that they have depression were more likely to show discrimination towards the depressed. This might suggest that the life of a person with depression is difficult and they did not get enough confidence from the society, which cause them trying to avoid get involved with any of their own kind. Thus, delivering useful information of dealing with depression condition is not only useful for the public and people having close contact to depression, but also useful for people who are depressed. With the confidence of dealing with depression related situations, the public might will have more confidence in people with depression.

The second insight is about media selection. If we take a look at all kinds of information resources examined in this study, even though interpersonal channels were reported the most important for getting information and images about depression, traditional media such as

Movies/Films, Printed Media, Coursework or Schoolwork, and new media such as the Internet (websites) and YouTube shouldn't be neglected as useful channels when designing a campaign. Mass media such as Movies, Website, and YouTube can be seen as proper channels to reach out to a wide range of audiences. Coursework and Schoolwork can also be considered as good channels for people to learn more information from their young age about depression because people probably will pay more attention to that. In addition, Coursework and Schoolwork might bring the useful information into contact with people at their early age, which might prepare them in advance and able to deal with depression either for the depressed they might encounter in their life later, or able to deal with the situation if they get depressed. Most of the campaigns in the past used traditional media such as television and magazine as message channel for delivering stigma intervention, and the effect of them were limited. Thus, in order to reach out for more audience effectively, a strategy of using combined channels are essential for carrying on a campaign.

Limitations and recommendation for future research

The current study has some limitations need to be considered in future studies. First, the sample of this study is not diverse enough. Even though a nation-wide population was reached through Amazon Mechanical Turk (M-Turk) with good diversity in demographics such as ethnicity, this sample reported a high familiarity or level of contact with a person with depression, as well as a high level of education. As shown in the results (see Table 2), over 70 percent of the participants reported a high level of contact with people with depression, either a relative, or living with one, or have depression themselves. Almost half of the participants reported that they have depression themselves, which might be problematic to the study since the purpose of the study is to examine the public stigma towards people with depression. It is unclear

that whether the overall population in the U.S. has a high familiarity for depression or just the sample from the M-Turk who participated in this study has high level of contact. For future study, more platforms for sampling need to be concluded for a more diverse sample.

The questions regarding information resources are rather general in this study. Questions only asked the participants how important for them to get information and images about depression through different channels. However, none of those questions asked the details about how they used the channels and what kind of information they got from that channel. Due to self-reporting, there might be issues related to external validity as well. In addition, none of those questions were designed for people who were never involved with any kind of depression information. In this case, here are some suggestions for future studies. For those who are familiar with depression, questions such as how important for them to get information from different channels can still be included. More questions can be included such as their perception of the images they get from the channels being negative, positive, or natural towards people with depression; or the circumstances they have contact with the channels. For those who are not familiar with depression or can't recall any channel involved with depression information before, a scenario of several questions can be included to walk them through a situation to get an idea of their media usage habit of getting information regarding mental health issues. For example, "What would you do if I ask you something about depression? What kind of channel would you search for this kind of information? What kind of channel for this information would you trust? What kind of information would you be more interested in?"

Conclusion

The purpose of the study was to understand how public stigmatizes people with depression, by examining the cognitive process of stigmatization regarding the characteristics of

stigma and media's role in it. Overall, in this study participants believed that people with depression were more responsible for causing and controlling their depression condition. Even though participants reported more empathy than anger to people with depression at the emotional level, discrimination was above a moderate level at the behavioral level. Regarding the factors related to six dimensions of stigma, participants held a relatively mild attitude towards people with depression in the perception level, while the discrimination towards people with depression was high. For example, the negative beliefs about depression were relatively low including interpersonal anxiety, relationship disruption, and hygiene issues, and the positive beliefs about the confidence for recovery were high including treatability, professional efficacy, and recovery. However, participants still held a relatively high level of discrimination or social distance towards which is on a behavioral level of stigma. Briefly, it means even though stigma towards people with depression was low in the perception level, the actual discrimination behavior can be high.

In previous studies that used Attribution theory to examine the factors associated with stigma, researchers demonstrated that if the person is more responsible for the situation, more negative emotion occurs, which leads to more negative actual behavior. However, the current study suggests that even though the public believe that the person is not responsible for the depression, negative emotion might also occur, then leads to discrimination. Even worse, more sympathy might also lead to more discrimination. In addition, this study also indicated that more familiarity with depression and the higher importance perceived for interpersonal channels as information resources, the more discrimination is reported.

Overall, this study shows that more sympathy or more familiarity does not lead to less discrimination. On the contrary, participants believed people with depression were easily

controlled by the situation and did not put effort to change it. Even though people feel more empathy towards persons with depression, and don't judge them in a perception level, but with a high level of contact with them, they intend to stay away from them, which leads to more discrimination.

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Appendix A - Questionnaire

An Examination of Factors Associated with Stigma Towards People with Depression:
A Communication's Perspective

This survey is being conducted by a graduate student at the A.Q. Miller School of Journalism and Mass Communications at Kansas State University for a master's thesis. The purpose of the study is to examine the factor associated with the public perception of depression, especially stigmatization. We also want to understand your use of different kind of media to get information about depression. The information you provide is confidential. The information you provide will be useful in making recommendations for better health communication and stigma reduction campaigns and interventions. We encourage you to respond all the questions but feel free to stop if any of the questions make you feel uncomfortable. Please answer all the questions honestly. Thank you for taking the time to answer these questions.

Depression Condition

Please read the following paragraph about depression.
Depression is an illness with symptoms that include feelings of sadness and gloom. People with depression lose pleasure and interest in their usual activities, such as work, friends, and hobbies. A loss or increase in appetite and a lack of interest in sex can often occur. People with depression might cry for long periods of time, listen to sad music, watch sad movies, or sleep for days on end. Some might even lose interest in living altogether and entertain thoughts of suicide. People with depression might become less active and might even move and talk more slowly. Other common symptoms of depression include feelings of guilt, inadequacy, helplessness, and hopelessness about the future. We are interested in your opinions about depression and people with depression in general.

How old are you? (Please input numerical number in the box, for example, 20)

Please read the vignette describing a person (John or Mary) with depression (two version of survey will be distributed automatically)

John (Mary) is 30 years old. He (she) has been feeling unusually sad and miserable for the last few weeks. Even though he (she) is tired all the time, he (she) has trouble sleeping nearly every night. John (Mary) doesn't feel like eating and has lost weight. He (she) can't keep his mind on his (she) work and puts off making decisions. Even day-to-day tasks seem too much for him (her). This has come to the attention of his (her) boss, who is concerned about John's (Mary's) lowered productivity.

One: This section is about your attributions towards the situation describing a person with depression. Think about the vignette above and your personal experience. The items below concern your impressions or opinions of the condition and the causes of the condition above. Circle one number for each of the following questions.

Q1 For each row, please indicate how much you agree with the statement on the left side or on the right side by select the box closer to that side.

	(5)	(4)	(3)	(2)	(1)	
A. That reflects an aspect of John (Mary)						reflects an aspect of the situation
B. Manageable by John (Mary)						not manageable by John (Mary)
C. John (Mary) can regulate						John (Mary) cannot regulate
D. Over which others have control						over which others have no control

E. Inside of John (Mary)						outside of John (Mary)
F. Under the power of other people						not under the power of other people
G. Something about John (Mary)						something about others
H. Over which John (Mary) have power						over which John (Mary) have no power
I. Other people can regulate						other people cannot regulate

Q2 Please indicate your level of agreement with each of the statements about your emotional reaction to John (Mary) by selecting only one choice.

	(1)	(2)	(3)	(4)	(5)
A. I would feel aggravated by John (Mary).					
B. How angry would you feel at John (Mary).					
C. I would feel pity for John (Mary).					
D. How irritated would you feel by John (Mary).					
E. How much sympathy would you feel for John (Mary)					
F. How much concern would you feel for John (Mary).					

Two: This section is about your opinion about people with depression.

Q3 Please select one of the following options after reading the statements:

(hidden: six dimensions of stigma)

1) Strongly disagree; 2) Somewhat disagree; 3) Neither agree or disagree; 4) Somewhat agree; 5) Strongly agree

	(1)	(2)	(3)	(4)	(5)
A. There are effective medications for depression that allow people to return to normal and productive lives.					
B. I don't think that it is possible to have a normal relationship with someone with depression.					
C. I would find it difficult to trust someone with depression.					
D. People with depression tend to neglect their appearance.					
E. It would be difficult to have a close meaningful relationship with someone with depression.					
F. I feel anxious and uncomfortable when I'm around someone with depression.					
G. It is easy for me to recognize the symptoms of depression.					

H. There are no effective treatments for depression.					
I. I probably wouldn't know that someone has depression unless I was told.					
J. A close relationship with someone with depression would be like living on an emotional roller coaster.					
K. There is little that can be done to control the symptoms of depression.					
L. I think that a personal relationship with someone with depression would be too demanding.					
M. Once someone develops depression, he or she will never be able to fully recover from it.					
N. People with depression ignore their hygiene, such as bathing and using deodorant.					
O. Depression prevents people from having normal relationships with others.					
P. I tend to feel anxious and nervous when I am around someone with depression					
Q. When talking with someone with depression, I worry that I might say something that will upset him or her.					
R. I can tell that someone has depression by the way he or she acts.					
S. People with depression do not groom themselves properly.					
T. People with depression will remain ill for the rest of their lives.					
U. I don't think that I can really relax and be myself when I'm around someone with depression.					
V. When I am around someone with depression, I worry that he or she might harm me physically.					
W. Psychiatrists and psychologists have the knowledge and skills needed to effectively treat depression.					
X. I would feel unsure about what to say or do if I were around someone with depression.					
Y. I feel nervous and uneasy when I'm near someone with depression.					
Z. I can tell that someone has depression by the way he or she talks.					
AA. People with depression need to take better care of their grooming (bathe, clean teeth, use deodorant).					
BB. Mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for depression.					

Three: This section is about your familiarity about depression (level of contact).

Q4: Please read each of the following statement carefully and check the statement that is true for you.

	Yes	No
A. I have watched a movie or television show in which a character depicted a person with depression.		
B. My job involves providing services/treatment for persons with depression.		
C. I have observed, in passing, a person I believe may have had depression.		
D. I have observed persons with depression on a frequent basis.		
E. I have depression.		
F. I have worked with a person who had depression at my place of employment.		
G. I have never observed a person that I was aware had depression.		
H. My job includes providing services to persons with depression.		
I. A friend of the family has depression.		
J. I have a relative who has depression.		
K. I have watched a documentary on the television about depression.		
L. I live with a person who has depression.		

Four: This section is about your beliefs about other people's opinion about depression.

Q5. Please indicate your level of agreement with each of the statements below by selecting only one choice. (Hidden: perceived stigma)

1) Strongly disagree; 2) Somewhat disagree; 3) Neither agree or disagree; 4) Somewhat agree; 5) Strongly agree

	(1)	(2)	(3)	(4)	(5)
A. Most people believe that people with depression could snap out of it if they wanted.					
B. Most people believe that depression is a sign of personal weakness.					
C. Most people believe that depression is not a medical illness.					
D. Most people believe that people with depression are dangerous.					
E. Most people believe that it is best to avoid people with depression so that you don't become depressed yourself.					
F. Most people believe that people with depression are unpredictable.					

G. If they had depression, most people would not tell anyone.					
H. Most people would not employ someone they knew had been depressed.					
I. Most people would not vote for a politician they knew had been depressed.					

Five: Sources of information of depression

Q6 Please indicate how important the sources are for you to get depression knowledge and images. (1) Not at all important (2) Slightly important (3) Moderately important (4) Very important (5) Extremely important)

	(1)	(2)	(3)	(4)	(5)
A. Parent with diagnosable depression					
B. Sibling with diagnosable depression					
C. Close friend with diagnosable depression					
D. Extended family member with diagnosable depression					
E. Working with someone with diagnosable depression					
F. An Acquaintance with diagnosable depression					
G. Television					
H. Radio					
I. Internet (website)					
J. Facebook					
K. Pinterest					
L. Twitter					
M. Instagram					
N. YouTube					
O. Snapchat					
P. LinkedIn					
Q. WhatsApp					
R. Movies/Films					
S. Print media (books, magazines, newspapers, etc)					
T. Coursework or schoolwork					
U. Self (personal diagnosed with depression)					

Six: This section is about your intention of discrimination towards people with depression

Q7 Please answer the questions below, indicating the extent of your willingness or unwillingness to engage in the scenarios described, using the following scale: I am willing to…
(1) Definitely Unwilling (2) Probably Unwilling (3) Neither willing nor unwilling (4) Probably Willing (5) Definitely Willing)

	(1)	(2)	(3)	(4)	(5)
A. I am willing to rent a room in my home to someone with depression.					
B. I am willing to work with someone with a mental illness.					
C. I am willing to have someone with a mental illness as my neighbor.					
D. I am willing to have someone with depression as the caretaker of my children.					
E. I am willing to have my children marry someone with depression.					
F. I am willing to introduce someone with depression to my friends.					
G. I am willing to recommend someone with depression for a job working with someone I know.					

Seven: Demographics

Q8 Gender:

A. Male
B. Female

Q9 Ethnicity origin (or Race): Please specify your ethnicity:

A. White
B. Hispanic or Latino
C. American Indian or Alaska Native
D. Asian
E. Native Hawaiian or Pacific Islander
F. Other

Q10 What is the highest degree or level of school you have completed? If currently enrolled, highest degree received.

A. High school graduate, diploma or the equivalent (for example: GED)
B. Some college credit, no degree
C. Trade/technical/vocational training
D. Associate degree
E. Bachelor's degree
F. Master's degree
G. Professional degree
H. Doctorate degree

Q11 Household income:

A. < 20,000
B. 20,000-39,999
C. 40,000-59,999
D. 60,000-80,000
E. >80,000

Q12 What is your marital status?

A. Single, never married
B. Married or domestic partnership
C. Widowed
D. Divorced
E. Separated

Appendix B - IRB Approval

KANSAS STATE UNIVERSITY | University Research Compliance Office

TO: Dr. Nancy Muturi
Journalism and Mass Communication
217A Kedzie Hall

Proposal Number: 9416

FROM: Rick Scheidt, Chair
Committee on Research Involving Human Subjects

DATE: 09/04/2018

RE: Proposal Entitled, "An Examination of Factors Associated with Stigma Towards People with Depression: A Communication's Perspective"

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written – and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §46.101, paragraph b, category: 2, subsection: ii.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

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