DOCTORAL THESIS

Understanding Mental Help-Seeking: Stigma, Psychological Factors, and Media Effects

KONG, Hanxiao

Date of Award:
2021

HONG KONG BAPTIST UNIVERSITY

Doctor of Philosophy

THESIS ACCEPTANCE

DATE: July 26, 2021

STUDENT'S NAME: KONG Hanxiao

THESIS TITLE: Understanding Mental Help-Seeking: Stigma, Psychological Factors, and Media Effects

This is to certify that the above student's thesis has been examined by the following panel members and has received full approval for acceptance in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

Chairman:	Prof Guo Steve Z S Professor, Department of Journalism, HKBU (Designated by the Dean of School of Communication)
Internal Members:	Dr Chang Leanne Associate Professor, Department of Communication Studies, HKBU (Designated by the Head of Department of Communication Studies)
	Dr Tsang Stephanie Jean Assistant Professor, Department of Communication Studies, HKBU
External Examiners:	Dr Chen Liang Associate Professor School of Journalism and Communication Tsinghua University
	Dr Guo Yu Associate Professor Faculty of Humanities and Arts Macau University of Science & Technology
In-attendance:	Dr Shi Jingyuan Assistant Professor, Department of Communication Studies, HKBU

Issued by Graduate School, HKBU

Understanding Mental Help-Seeking: Stigma, Psychological Factors, and Media Effects

KONG Hanxiao

A thesis submitted in partial fulfilment of the requirements

for the degree of

Doctor of Philosophy

Principal Supervisor:

Dr. Shi Jingyuan (Hong Kong Baptist University)

July 2021

DECLARATION

I hereby declare that this thesis represents my own work which has been done after registration for the degree of PhD at Hong Kong Baptist University, and has not been previously included in a thesis or dissertation submitted to this or any other institution for a degree, diploma or other qualifications.

I have read the University's current research ethics guidelines and accept responsibility for the conduct of the procedures in accordance with the University's Research Ethics Committee (REC). I have attempted to identify all the risks related to this research that may arise in conducting this research, obtained the relevant ethical and/or safety approval (where applicable), and acknowledged my obligations and the rights of the participants.

Signature: 

Date: **July 2021**

ABSTRACT

This thesis empirically investigated the influencing factors that influence individuals' mental help-seeking and draw an overall summary of how people presented mental illness on social media platforms plus how former studies have done regarding the study object. First, I conducted a meta-analysis based on three major theories in behavior change prediction to explore the effect size of cognitive factors such as attitudes, self-stigma, motivation, public stigma, perceived norms, and perceived severity in predicting individuals' professional mental help-seeking. According to the analysis of 69 papers, it provided a comprehensive summary of studies. For example, they found that attitudes were the most significant factor in leading individuals to seek mental help, following by education level, income, experience, descriptive norms, and self-stigma. Additionally, I also found that most of the existing studies investigating the mechanism behind mental help-seeking focused on stigma and cognitive factors instead of the influence of social media. However, exposure to social media significantly influenced individuals' cognitive factors based on existing studies. Therefore, this thesis first found that research gap and thus further decided to explore social media exposure on individuals' mental help-seeking.

To better investigate the influence of social media exposure, a clear understanding of social media platform presentation is necessary; I used content analysis to summarize the environment of social media regarding mental illness, taking Xiaohongshu, one of the major social media platforms in China, as the study site. Results indicated that most of the contents were about commercial promotion, movie advocation, and other groups that make use of the concept of mental illness but were selling courses that have no scientific evidence. Moreover, among the messages that strictly describe mental illness, stigma is much less than what former

studies had presented. However, stereotypes remain a large ratio of all the posts that strictly describe mental illness. Social media serves as a place that provides lots of encouragement and support because I found a large volume of social support provision among the messages. The most prevalent type was informational social support, followed by emotional, social support provision, and instrumental social support provision. Additionally, I also found that although there were about one-third of the messages described specific treatment, very few of the messages mentioned completely recovery or situation turning better. I also included other findings such as that relatively few messages by professional sources and different causal attributions detail within the thesis.

Meanwhile, I adopted the theory of planned behavior (TPB) as the theoretical framework and conducted a survey to empirically test the relationship between TPB constructs, self-stigma, and mental help-seeking. Different from former studies, I also included social media exposure as the antecedents of the whole process. By conducting the structural equation modeling (SEM), I found that self-stigma significantly mediates social media exposure on attitudes towards mental help-seeking. Social media exposure also significantly increased self-stigma, attitudes, descriptive norms, and injunctive norms. At the same time, self-stigma significantly decreased individuals' attitudes towards mental help-seeking. Therefore, when in the face of social media, people with higher self-stigma tend to have negative attitudes towards mental help-seeking compared with individuals who have lower self-stigma. Moreover, attitudes, injunctive norms, and self-efficacy significantly explained 39% of the variance of the intention of mental help-seeking. The limitations and strengths are at the end of the thesis.

ACKNOWLEDGEMENT

During the past three years, the person I would appreciate the most is my principal supervisor: Dr. Jingyuan Shi, who is both a "tiger teacher" and also "sheep friend," she is the one who guided me from a total newbie to graduate as an independent scholar, and yet she is also the one told me thousands time to hold on to my dreams and never quit. Meanwhile, I also sincerely appreciate Prof. Huang Yu, Prof. Steve, Prof. Kineta Hung, Dr. Stephanie Jean Tsang, Dr. Xiaohui Wang, and Dr. Liang Chen, they not only taught me basic and advanced theories and methods but also encouraged me and offered me great numbers of opportunities to collaborate and engage into different sorts of projects. Their professions, abilities, and patience deeply inspired me.

Then I want to give my family members a beloved kiss for their support during the most challenging three years of my study. Thanks, mom's loving words and ways to stay focus; thanks to papa's unique philosophy on how to balance life and studies; thanks to Alex's (my darling!) all-round knowledge on chemistry, statistics, grammar, medicine, psychological counseling, as well as cooking skills; thanks Rifle's (my little kitten) furry belly. It is their understanding, tolerance, and patience (never push me to get married or so) that accompany me all the time.

Lastly, I want to hug all my dearest friends, are Xumiao (the best flatmate and classmate), Zhang Yiyuan (Coolest girl), Liu Sicheng (Too young to get married), Dr. Vincent Huang (Sexy philosopher), Hu Zizhe (New mommy), Wang Jingyuan (Talented painter), Su Youzhen (Biggest fan of BTS), Xiong Yindi (Born to love), Tangshi (Dobutamine), Liu Weiyi (Spiritual therapist), Teresa (Overseas love)! I would never make it on time without the help of any of you.

Well, I also want to appreciate myself for sticking to the end; well done! Keep going!

TABLE OF CONTENT

LIST OF TABLES

CHAPTER 1: INTRODUCTION

Preamble

Nowadays, mental illness has become a well addressed public health topic. Numbers of research have indicated that mental illness will cause severe problems such as low production efficiency, maladjusted daily schedule, and even lead to suicide without proper intervention or early treatment. In the United States, depression has influenced 17.3 million citizens (National Institute of Mental Health [NIMH], 2019). World Health Organization (WHO) posted global health data about mental disorders in 2019; in the report, death caused by mental disorders increased magnificently in the recent twenty years. The mental disorder also has been found to influence 125,311,322 individuals' daily routine and make them suffer from disability-adjusted life for years. According to another newly issued report in China on March 1st, 2021, among young adults aged from 18 to 25, their mental health situations were significantly worse than other age groups.

Additionally, there is not enough incentive for people to actively get mental help-seek even though 94% of all the participants agree with the importance of mental health problems. Therefore, there is a significant need for both researchers and practitioners to have a thorough understanding of mental illness-related issues, such as individuals' help-seeking behavior, people's perception of mental illness, and their concerns regarding seeking help. Although access towards professional mental help facilities such as counseling, professional treatment, and medicine have been well developed compared with several years ago (Eisenberg et al., 2007; Chung & Epstein, 2014; Hunt & Eisenberg, 2010), individuals could reach them via different kinds of accesses (i.e., apps, hotline, social media, offline private clinic or public hospitals). The rate of people seeking mental help remains relatively low.

Existing studies have long explored how various factors influence individuals' mental help-seeking. Results vary from perceived risk, attitudes, income, stigma, knowledge. Among them, stigma has always been notified and listed as one of the biggest inhibitors when individuals seek help. Stigma towards mental illness is the biased negative perception that considers mental illness dangerous, incurable, and uncontrollable. Additionally, stigma towards seeking help for individuals who might experience mental illness issues refers to the passive evaluation of individuals lacking ability, having moral defects, embarrassing or shameful.

However, individuals engage in different communication nearly every day, despite the frequency of usage, the content presented on the platform, or the quality of the conversation. Due to the increasing prevalence and existence and the development of social media, there are more and more information and discussion about mental illness in various forms. For example, official accounts, newspapers, and some news feeds still tend to report mental illness in the form of stigmatization and accuse it of a personality flaw, lack of control, or negative functioning. Additionally, online or other media, among the social support groups, happens almost every second and everywhere but describes mental illness in another way, which could decrease individuals' stigma. For example, studies have found that experience exchange among people with mental illness encourages individuals that enhance individuals' self-confidence and decreased their stigma in seeking help. Last but not least, as social media have other attributes that allow audiences to receive the messages presented and have the chance to interact with other audiences, it has enormous potential to influence individuals' perception towards mental illness help-seeking.

According to the brief introduction above, I found the following research gaps: First, to provide a thorough analysis of mental illness-related issues, mainly focusing on individuals'

help-seeking behaviors is important. Secondly, existing studies rarely explored the content about mental illness valence on social media, and there are several contradictory findings. The third point is that, although stigma is always the main block for individuals' help-seeking, according to Ajzen's theory of planned behavior, attitudes, norms, and perceived behavior control all significantly influence predicting individuals' behaviors. This theory is also significant in predicting individuals' behavior change widely and accepts significant validity. Existing studies rarely combine, compare or explore the relationship between stigma and TPB when the theme of the behavior change is not favorable, such as mental illness help-seeking, talking about HIV curation, cyber-bullying solution-seeking, and so forth.

Research Objectives

First, due to the prevalence of general mental illness such as anxiety and depression caused by stress from work, society, and economy, scholars paid many efforts in exploring how to encourage and lead individuals who have mental troubles to seek help, no matter they are professionals or from ordinary people. Their findings indicated that many factors could influence the final behavior intention, such as individual characters, beliefs, skills, available effort, and experiences (Gifford & Nilsson, 2014; Gist & Mitchell, 1992; Bandura, 1986, p. 198). In the context of mental help-seeking, a plethora of existing research has investigated several factors to explain the outcome (e.g., Beck et al., 1979; Chen, 2012; Costas-Muñiz et al., 2017), including attitudes (e.g., attitudes about treatment, Abe-Kim et al., 2007; Alegría et al., 2007), the perceived need for treatment (González et al., 2010; Vogel et al., 2011), and self-efficacy (Shi & Kim, 2020). Demographic variables such as age, gender, education, income, former experience, mental health status, race, and culture all impact individuals' mental help-seeking (e.g., Gesinde & Sanu, 2015; Liu et al., 2017; Stewart et al., 2019). Only by having a thorough understanding of the research

results and the study trend can further studies develop more aligned and profound progress. Therefore, this thesis first analyzed existing studies in recent years and summarized the factors' effect size, study topics, underlined relationships, and descriptive data.

Nowadays, mental illness has raised the great awareness of the public, regardless of its damaging results, severe outcome, and potential damages to not only individuals but also the whole society. Governments, social warfare institutions, as NGOs in different countries also promoted relative caring and prevention campaigns to help adjust individuals' perception of mental illness and encourage individuals to seek timely help. At the same time, different media types play an important role in shaping people's ideas towards mental illness. With the most significant number of users, social media has significantly impacted audiences; perception compared with traditional communication channels. However, there are different sayings about the effects of social media exposure. For example, some scholars found that contents online about mental illness still tend to be stigmatized and describe the mental illness as dangerous, uncontrollable, and the symbol of harmful. At the same time, other scholars indicated that engaging in the online discussion about mental illness and related issues could enhance individuals' knowledge about mental illness and thus reduce their stigmatization. The contradicted findings might be due to the lack of thorough analysis of the content valence. As a result, I collected and analyzed data from significant and representative social media in mainland China by explicitly analyzing the online environment about mental illness, such as discussing mental illness treatment, attribution, experience, stigma, and stereotype.

The last research object of this thesis is that I tried to combine the social media exposure, stigma, and theory of planned behavior to analyze the influence on individuals' mental illness help-seeking. Because former studies rarely explored how general social media exposure influence

individuals' help-seeking intention, but instead, former studies paid much attention to specific targeted message exposure's influence. However, when audiences use social media, they might not have specific attention to the persuasive messages, numbers studies have indicated that most of the online users (around 20% to 50%) are glance over the contents or watch other users' conversations (e.g., Han et al., 2012; Mo & Coulson, 2010; Setoyama et al., 2011). Although professionals in health communication have explored deeply how health campaign messages have significant effects, the validity of the results remains on a limited scale. Even some of the message's design resulted in boomerang effects. According to Lienemann and Siegel (2016), individuals with higher levels of depression have stronger resistance towards some public service announcements. As a result, I aimed to explore how exposure to social media influenced individuals' ideas about general mental illness and their intention to seek help. Former studies have distinguished the difference between stigma and negative attitudes; according to a review on nursing professions (Ross & Goldner, 2009), negative attitudes found in existing studies referred to fear, hostility, and blame, while stigma towards nurses has mental illness are defined as negative judgment such as 'horizontal violence,' or, demeaning, contemptuous and shunning reactions (Farrell, 2001). In another study conducted by Wrigley, Jackson, Judd, and Komiti (2005) results indicated that perceived stigma showed a significantly more substantial influence on individuals' help-seeking intention compared with the positive attitudes towards help-seeking. However, other findings indicated that attitudes have a more substantial impact on individuals' help-seeking intention. Contradict findings still existed and there is other opportunities to investigate more on the relationship among different factors as well as the message exposure for social media users. Thus, in this thesis, I put stigma and attitudes together, with media exposure as the predictor, to find out their relationship.

Research Design

Meta-analysis is the statistical method that combines the results from different independent studies considered to be "combinable," and Gene Glass introduced its initial definition in his 1976 presidential address to the American Educational Research Association as "the analysis of the results of statistical analyses to draw general conclusions" (p. 3). To be more specific, it could combine different hypothesis tests or estimations by conducting a meta-analysis, more objective evaluation and conclusion of the evidence compared with traditional narrative summary, provide a more convincing and accurate estimate effect, and also explore the heterogeneity between the results of independent studies.

According to Downe-Wamboldt, (1992), "Content analysis is a research method that provides a systematic and objective means to make valid inferences from verbal, visual, or written data in order to describe and quantify specific phenomena." Krippendorff (2019) had a more precise definition--content analysis--is defined as a "research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (p. 24). In the existing studies of health communication, scholars often use content analysis to provide a detailed descriptive picture of the study object (e.g., Niederdeppe et al., 2014). Take a study from Chu and his colleagues as an example (2021). The authors precisely analyzed the social support and blame of the messages presented on an online forum about domestic violence. Apart from the themes, other demographic data could also be coded and categorized based on existing coding books. Because social media is full of opportunities for users to exchange opinions, former studies contradict conclusions on the social media environment. For example, Findings suggested that social media could probably be an effective tool in promoting mental health issues (Bargh & McKenna, 2004; Wreduce Denise Campbell, 2014). However, results

from Chan and Yanos's (2018) student biased social media priming directly causes individuals' perception that mental illness is associated with violence, and therefore caused a negative perception of mental illness. In the current study, I used content analysis to figure out the digital environment of mental illness on a significant social media in China called Xiaohongshu. The results could provide a clear and objective understanding of how social media biology is.

Last but not least, I conducted a convenience survey to explore the proposed model further by analyzing a total sample of 413 Chinese adults who are also users of the social platform Xiaohongshu, the statistical analysis among different sets of predicting factors provided insights for scholars better to understand social media exposure's influence on mental illness.

CHAPTER 2: BACKGROUND

Mental Illness

There are three approaches to define and analyze it (Thoits, 1999, p128). It refers to a disease or physical defect in the brain or body from the biological or medical level. At the same time, the psychological approach takes it as the sickness or abnormality in mind. In the sociological area, it always means the breakdown of tremendous stress from society. Only the sociological approach takes the mental illness due to external causes such as environmental accidents, stress, or social situation. At the same time, the biological and psychological approaches attribute the mental illness as an internal influence such as in the physical body or the mind. Therefore, in this study, the author analyzed mental illness from the perspective of the social level and explored the underlying influencing factors of mental illness-related behaviors. To be more specific, studies in the field of health communication usually paid attention to specific mental illness issues such as depression, anxiety or use the term "mental problems," "individuals' wellness" to describe the situation and the central focus of health communication scholars are to analyze the factors that predict individuals' belief or behavior changes. For example, in an article published on health communication entitled "Using Visual Metaphors in Health Messages: A Strategy to Increase Effectiveness for Mental Illness Communication," the author mainly took depression as the study object (Lazard et al., 2016). While in another paper published in computers in human behavior entitled "Avoidance or boredom: Negative mental health outcomes associated with the use of Information and Communication Technologies depend on users' motivations" also took depression as the most recognized and representative term for mental illness daily life. Based on the fact that depression and anxiety not only account for the most significant mortality rate worldwide, the combined syndrome might be more severe

compared with any of them (Fava et al., 2000; Eisenberg et al., 2007; Dobson, 1985; Stavrakaki & Vargo, 1986) and many of the existing studies analyzed individuals' mental status adopted the items to measure depression and anxiety. Therefore, I selected depression and anxiety as the primary objective and summarized them as mental illnesses in the current study context. However, rather than focus on people with serious mental illness (SMI), which refers to any psychiatric disorder experienced by people aged 18 years and older that substantially interferes with the ability to participate in major life activities (U.S. Department of Health and Human Services, 1999). I will study the sample in a relatively better situation and use social media and take the National Alliance on Mental Illness (2014), which conceptualizes mental illness as a medical condition disruptive to feeling, thinking, mood, relationships, or daily tasks.

According to a report published in 2017, mental disorders and substance use disorders rank a fifth of the burden of disease by cause worldwide, and nearly 122.76 million populations are suffering from it. Known as one of the most prevalent and long-lasting health problems among individuals, mental illness generally includes depression, anxiety, and stress in the existing communication studies (Ellerby & Gerry, 2011; Seehuus et al., 2019; Shi & Kim, 2020). Mental illness is becoming one of the biggest public health concerns worldwide (National Institute of Mental Health, 2017). It has accounted for 13% and will probably reach 15% by 2of of the diseases' load worldwide (Whiteford et al., 2015). Many individuals are suffering it due to the increasing pressure from school, work, family, etc. In Asia, individuals consistently have mental illness regardless of age and education level (P. Y. Kim et al., 2017);(H. Chung & Epstein, 2014). The situation is no better in Western countries, and reports indicated that the population there also suffers from mental health illness regardless of their social status (Blais & Renshaw, 2013; Elhai & Simons, 2007; Hunkin et al., 2020).

Mental illness influences not only people's daily life but also other various facets. For example, mental illness has accounted for 87% of those who attempt or die by suicide (Stack, 2005). In other studies, mental health illness significantly influenced work performance dysfunction (Corrigan & Penn, 1997; Elhai et al., 2020), eating disorders (Trojanowski & Fischer, 2018; Watson et al., 2016), and sleep disturbances (Gruber et al., 2009; Papadimitriou & Linkowski, 2005). Mental illness also damages individuals' self-esteem and lower self-acceptance which might cause self-injuries and self-criticism (Elhai & Simons, 2007; Knorr et al., 2016; Thomas et al., 2014).

Mental Illness Help-seeking

The feasibility for individuals to deal with mental illness or concern is increasing day by day. In detail, there is plenty of mental health promotion in schools, including teachers involvement (Franklin et al., 2012), use of motivational interviewing (Simon & Ward, 2014), and related intervention programs, all of them are effective in helping students to see themselves more positively, and as a result, their mental health status is improved more or less (Hoagwood et al., 2007). While in workplaces, systematic reviews from Proper and van Oostrom (Proper & van Oostrom, 2019) analysis 23 reviews and confirmed the evidence for significant effects of workplace interventions. What is more, the mobile self-compassion program for mental health is becoming famous for its effect and convenience (Milne-Ives et al., 2020; (W. W. Mak et al., 2018). To sum up, existing studies have confirmed that proper and timely psychological help such as therapy, counseling, clinical medicine as well as the enhancement of psychoeducation for service users have a significant effect for patients to recover from the mental health illness or prevent those without illness from suffering (Barry et al., 2013; Patel et al., 2007). Despite the adverse outcomes of mental health illness and the easy access towards professional help offered

for mental health illness, the rate of seeking professional help is relatively low due to individuals' mental health concerns and other factors (Brinded et al., 2001; The WHO World Mental Health Survey Consortium, 2004; Procter et al., 2018).

Mental Illness Help-seeking in China

According to a recently published report of Chinese mental health, the most prevalent mental diseases among Chinese are depression and anxiety, which has a portion of 6% of all the diseases (Global Burden of Disease Study 2017). Even though mental illness is causing severe adverse outcomes and the growing prevalence of mental help facilities, the ratio of people in Asian countries who have sought help is disparately low. Studies found that the unmatched support provision and use of mental facilities phenomenon exists among Chinese across various Asian regions, including Hong Kong (Wong et al., 2004; Rudowicz & Au, 2011), Taiwan (C.-C. Chang et al., 2018), Mainland China (D. F. Chang et al., 2005;(L. Li et al., 2007) Ow & Katz, 1999) and Singapore (Chong et al., 2012; Ng et al., 2003). Statistics showed that in China, 173 million adults have a mental disorder, but 91.3 percent of whom have never received professional help (Phillips et al., 2009), while among those who have tried the help-seeking, only 8 percent have ever sought professional help and only 5 percent have ever seen a mental health professional. Another problem found by scholars is that it took Chinese people a long time to decide to seek professional help. Finally, the notice of the mental disorder to go for help-seeking could last for 7 to 10 years (Wang et al., 2007; Ho et al., 2008). Scholars have examined the underlined factors that might inhibit individuals' mental help-seeking and found that their intention or behaviors are often influenced by stigma because of the shared importance of Asian cultural values like "fear of losing face" (Yakunina, 2012; Lee et al., 2014). Other reasons behind this are the lack of knowledge of mental health literacy, enabling individuals to reduce

the biased perception of mental illness and positive attitudes towards professional help-seeking (Wong & Li, 2014). Meanwhile, the Chinese population tends to attribute the illness as caused by ‘stress,’ ‘personality problems,’ ‘conflicts in ‘non-family relationships’ and ‘lack of will power’ and those negative attributions significantly decrease Chinese people’s possibility and acceptance of seeking mental help (Furnham & Chan, 2004).

CHAPTER 3: META-ANALYSIS

Theories and Models that Examine Mental Illness Help-Seeking Behaviors

Nowadays, scholars in health communication have explored different factors and developed various theories to explain behavior change and its mechanisms. Determining the situation of current studies and the distribution of each factor's effect can help scholars better investigate behavioral changes according to mental help-seeking. This thesis lists three major theories and models adopted in former research—the theory of planned behavior, the integrative model of behavioral prediction, and the health belief model.

Theory of Planned Behavior

Azjen raised the theory of planned behavior (TPB) in 1985. This theory has since emerged as one of the most influential and popular conceptual frameworks for studying human action (Ajzen, 2002). Originated from the theory on reasoned action (TRA, Fishbein et al., 1980; Ajzen & Fishbein, 1975), it is a widely applied theory to explain behavioral change, achieving high validity in health communication studies. It assumes that intention primarily determines individuals' behaviors; intention gains influence from four antecedents: attitudes, descriptive norms, injunctive norms, and self-efficacy. Existing studies have indicated that TPB is valid in explaining health decision-making, including seeking professional help, determining cancer information, or taking clinical treatment. Specifically, TPB effectively explains individuals' mental help-seeking in various contexts and sample types. For instance, Mo and Mak (2009) analyzed the intention of the Chinese population to seek help from mental health professionals by applying TPB; their results indicated that the model explained 57% of the variance in help-seeking intention. Other studies applying TPB in different samples, regions, and contexts also

attained a satisfying predictive validity (e.g., Wang et al., 2020; Muscari & Fleming, 2019; Shi & Kim, 2019).

Attitudes. The first factor involves attitudes towards behaviors, conceptualized as a factor that reflects individuals' positive or negative evaluation of behaviors. Attitudes typically represent the evaluation of the outcome of a given behavior, as influenced by attitudinal belief valence and strength. Individuals' beliefs come from their everyday life's observation and experience. In mental help-seeking, they may perceive mental help-seeking as both risky and beneficial. If they hold a relatively more robust stand, perceived as risky than beneficial, then they are more likely to evaluate mental help-seeking as unfavorable. In a word, attitudes towards mental help-seeking refer to how individuals cognitively and affectively perceive behavioral outcomes as positive (e.g., wise, important, valuable) or negative (e.g., stupid, unimportant, worthless). Existing studies have determined that negative attitudes towards mental help-seeking are significant barriers against people acting to seek help (Bayer & Peay, 1997; Vogel et al., 2005). Additionally, attitudes are the most significant predictors of intention in counseling psychological professionals (Bayer & Peay, 1997; Schomerus et al., 2009).

Subjective Norms. The second factor, known as the pressure of how significant others perceive individuals conducting behaviors, is termed subjective norms. Simply put, when individuals are about to conduct a behavior, support or disapproval from their significant others such as family members, they significantly influence their intention. However, measures of subjective norms collapse the perceived influence of significant others, instead of assessing their differential impacts separately (Johnston & White, 2003; Kuther & Higgins-D'Alessandro, 2003). Moreover, Armitage and Conner's (2001) meta-analysis indicated that the subjective norm-intention correlation is significantly weaker than the attitude-intention and perceived

behavioral control-intention correlations. In Ajzen's revision of the TPB (Ajzen et al., 2018, p. 173–206; Fishbein & Ajzen, 2011), he developed the normative component in theory to include descriptive norms (perceived prevalence of behavior) and injunctive norms (perceived approval or disapproval of performing the behavior). Both norms come from normative beliefs. As extensions and exemplifications from subjective norms in both the theories of reasoned action and planned behavior (Ajzen, 1991; Fishbein et al., 1980; Fishbein & Ajzen, 1975), descriptive norms toward mental help-seeking entail how prevalent do individuals perceive mental help-seeking among their peers and surroundings. Meanwhile, injunctive norms come from several salient injunctive normative beliefs that represent the integration of each significant referent group's approval or disapproval. In mental help-seeking, they denote how individuals perceive their significant others (e.g., family, close friends, or romantic partners) will support them in seeking mental help. Studies have indicated that both descriptive norms (e.g., Lueck, 2018; Shi & Kim, 2020; Tomczyk et al., 2020) and injunctive norms (e.g., Andoh-Arthur et al., 2015; Garriott et al., 2017) are significant predictors of mental help-seeking intention.

Perceived Behavioral Control. The last factor is perceived behavior control, denoted as "people's perception of the ease or difficulty of performing the behavior of interest" (Ajzen, 1991) and developed from self-efficacy. According to Azjen (2020), this factor should construe better as "perceived control over the performance of a behavior," signifying the expectation of how much an individual wishes a thing to happen. It can involve two parts. The first is controllability, referring to how much control (objectively) individuals think they have to make a behavior happen (e.g., Do I have the access of seeking professional help in general?). The other is perceived self-efficacy, denoting "people's beliefs about their capabilities to exercise control over their level of functioning and over events that affect their lives" (Bandura, 1993) (e.g., If I

have access to seek help, will I go there even if I am busy?). Meanwhile, Francis and his colleagues (2004) developed a PBC measurement that comprises both controllability and self-efficacy.

Armitage and Conner's (2010) meta-analysis indicated that standard TPB variables accounted for 27% of variance in behavior and 39% of variance in intention to perform such behavior. Meanwhile, another meta-analysis determined that the TPB model explained 23.9% of the variance of physical behaviors (McEachan et al., 2011). In recent studies, TPB can verifiably and suitably explain mental help-seeking behaviors. Using the TPB model, Schomerus, Matschinger, and Angermeyer (2009) identified that attitudes significantly predict German depressed adults' willingness to seek psychiatric help. Another study revealed that attitudes towards help-seeking significantly predict the intention to seek help from university counseling services (Sze, 2017). Mesidor and Sly (2014) determined that socio-cognitive factors (e.g., attitudes and behavioral control) significantly predict the intention to seek help on mental health. Moreover, Shi and Kim (2020) investigated a study that had confirmed TPB components' predictive validity regarding final help-seeking. Another study conducted among Asian samples by Mak and Davis (2014) further confirmed that the TPB model is efficient in predicting mental help-seeking intentions.

Additionally, in the meta-analysis, this thesis analyzed the estimated effect size of perceived self-efficacy instead of perceived behavioral control. It continued to measure self-efficacy in its survey. Perceived behavioral control refers to the perceived ease or difficulties over a behavior—both the control of the behavior itself and the control of the outcomes. On the other hand, self-efficacy from Bandura's theory refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given levels of attainments." As Ajzen

stated in his article in 2002, self-efficacy further represents control over behavior. Therefore, it can be a part of perceived behavioral control, with their measurements also alike. For perceived behavioral control, the measurement involves the "capability to perform a behavior or indirectly based on beliefs about ability to deal with specific inhibiting or facilitating factors." Meanwhile, self-efficacy also measures individuals' capability to conduct a behavior. In another article in 2006, Ajzen clarified the difference between self-efficacy and controllability. He stated that controllability emphasizes "the extent to which performance is up to the actor." Furthermore, he analyzed the difference between self-efficacy and controllability, thus confirming the findings from a meta-analysis by Cheung and Chen (2000). This analysis implied that self-efficacy measures accounted for additional variances in intentions and behaviors; contrarily, controllability predicted intentions only when combined with self-efficacy. Thus, self-efficacy is a more suitable predictor than perceived behavioral control due to its more potent effects.

Integrative Model of Behavioral Prediction

Based on the factors from the primarily used theories (TRA and TPB), scholars combined them as an Integrative Model of Behavioral Prediction (IMBP; Yzer, 2012; Martin Fishbein & Yzer, 2003; Robbins & Niederdeppe, 2015). IMBP summarizes the three factors (attitudinal, normative, and control) and the related measurements. In a study investigating individuals' sleeping behaviors (Robbins & Niederdeppe, 2015), the researchers found that direct and indirect measures presented varying results. In that study, indirect measures of attitude perceived control and descriptive norms were significant in predicting sleep-related intentions and behavior, while injunctive norms were not positively associated with those variables.

IMBP combines factors from various theories, such as self-efficacy from Bandura's (1986) theory of self-efficacy and TRA-related factors. Through this model, this thesis

anticipates concluding as enough antecedents as possible theoretically. Regarding direct measures, attitude and perceived control are the only significant predictors of behavioral intentions. Table 1 presents the examples of direct and indirect measures. Hence, this thesis specifically distinguishes the coding items as to whether they measure the beliefs or the direct factors. In IMBP, other distal variables like cultural background, demographic factors, and media exposure function as antecedents in influencing individuals' beliefs. How people's beliefs develop relies on their differences, including perceived risk, susceptibility, fear, and perceived self-efficacy. Various health communication studies have adopted IMBP, such as healthy sleep promotion (Robbins & Niederdeppe, 2015), media usage and choice (Wang, 2013), influenza prevention-related behaviors (Kim & Niederdeppe, 2013), and college women's contraceptive behaviors (Sutton & Walsh-Buhi, 2017). However, related studies have scarcely adopted IMBP to analyze individuals' cognitive help-seeking behaviors systematically, although the factors (attitudes, norms, and perceived behavioral control) embedded in this model have been frequently applied in the context of mental help-seeking.

Table 1

Direct and Indirect Measurements of the Variables in TPB

	Indirect (beliefs)	Direct
Attitudes	"My sleeping for between 8–9 hours at night most night per week will enable me to focus"	"Overall, I think sleeping for between 8–9 hours at night most nights per week is:"
Descriptive norms	"When it comes to matters of health, how much do you want to be like your parents?"	
Injunctive norms	"When it comes to matters of health, I want to do what X think I should do".	"People who are important to me think that I should ....," and "I feel social pressure to ..."
Perceived behavioral control	"Having less stress would enable me to sleep for between 8–9 hours at nights most nights per week"	"I am confident I can sleep for between 8–9 hours at night most nights of the week"

Health Belief Model

Health behavior research has adopted the Health Belief Model (HBM) since 1950. HBM explains the change and conceptual framework for behavior intervention. Initially developed by various psychologists (Hochbaum, 1958; Rosenstock, 1960, 1974), it later expanded to become prominent in predicting individuals' responses and reactions towards diagnosed diseases (Becker, 1974). In 1974, Health Education Monographs introduced the HBM using an entire issue. It specifically concluded the findings from a research adopting the HBM as a framework for comprehending individuals' engagement or noncooperation in various health-related behaviors.

HBM has four fundamental constructs: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. Perceived susceptibility represents the beliefs regarding the chance of having a specific disease or being under a particular condition. For instance, a man must be convinced that there is a likelihood of having a mental illness before considering counseling or professional mental help-seeking. Perceived severity refers to feelings and evaluations of the seriousness of an illness or its results if left without treatment. It includes both clinical and social consequences. Together, perceived susceptibility and perceived severity are the underlying threats. Perceived benefits refer to the perceived efficacy in the advised treatment, reducing severity and risk. From their superficial meaning, they represent the beliefs on the psychological and material costs of the advised treatment or actions.

HBM also includes other constructs like cues to action and self-efficacy. Cues to take action promote awareness of individuals to approach an advised action, while self-efficacy represents one's confidence in taking actions. Like IMBP, other demographic, sociopsychological, and structural variables may also influence the predictions.

HBM is deemed valid in various health-related behaviors, including breast cancer screening (Mikhail & Petro-Nustas, 2001; Lee et al., 2002; Wu & Yu, 2003), prevention of risky sexual behaviors (Wight et al., 1998; DiClemente et al., 2004), and influenza vaccination (Oliver & Berger, 1979; M.-F. Chen et al., 2011; Mo & Lau, 2015). Regarding mental help-seeking, studies applying HBM have also achieved significant effects in predicting individuals' behavioral change. For instance, in a qualitative study conducted by Castonguary and his colleagues (2016), individuals' uncertainties significantly increase the elements from HBM. According to participants' experiences, the primary barrier to seeking help is the fear of the unknown treatment process. Langley and his colleagues (2018) determined that HBM variables explained 51% of the intention to mental help-seeking for anxiety disorders, with perceived benefits as the strongest predictor. Another study applying the HBM explored similar findings, indicating that perceived benefits were more significant than perceived barriers in leading mental help-seeking (O'Connor et al., 2014).

Stigma

People with mental illness have to cope with syndromes like anxiety, inattention, and hallucinatory neuralgia; moreover, they are in the face of society's stigma due to limited comprehension and knowledge of mental illnesses (Penn & Corrigan, 2002; Rüsch et al., 2005). Among people with disabilities, people with mental illness have been considered the most devalued group, and stigma has been initially conceptualized as other social members wanting to keep distance from individuals with mental illness (e.g., Chubon, 1982; Gordon et al., 1990; Shears & Jensema, 1969; Yuker & Block, 1986). Stigma against people with mental illness involves three core misconceptions: they are lunatic people who should be feared; they are out of

control; or, they have naive perceptions of the world that ordinary people cannot understand (Wahl, 1995; Farina, 1998; Hyler et al., 1991).

Generally, stigma denotes a stigmatized perception or discrimination towards a specific concept, individual, or group, considered as a significant factor that influences individuals' cognitive help-seeking behavior (Goldman et al., 1999; World Health Organization [WHO], 2007; Bowers et al., 2013; Clement et al., 2015). Existing studies have indicated that stigma towards mental illness significantly impacts the stigma towards mental help-seeking, primarily due to individuals' concern of self-esteem (Corrigan, 1998, 2004; Holmes & River, 1998) and avoidance of being deemed abnormal (Corrigan & Matthews, 2003; Corrigan, 2016). Stigma has three categories: public stigma, personal stigma, and self-stigma (Corrigan et al., 2006; Fang et al., 2020). In personal and public stigma, individuals perceive general shared biased stereotypes of people with mental illness and evaluate such behavior as rare and abnormal, thus increasing adverse attitudes towards mental illness (Wrigley et al., 2005). Eventually, due to the human nature of belonging, individuals tend to refuse or hide perceived risky behavior like MHS to avoid potentially being excluded by their peers (Bowers et al., 2013). Moreover, personal discrimination towards MHS denotes the underlying negative judgments from peers and worsens social relationships if the diagnoses are known, decreasing their MHS intention to some extent (Ward & Besson, 2013).

Public stigma denotes a shared stereotype and biased evaluation of MHS behavior, perceiving MHS as a symbol of weakness and abnormality. Meanwhile, personal stigma refers to a subjective and personal perception and acceptance of little MHS comprehension. One means to distinguish public stigma and personal stigma is that public stigma describes shared biased attitudes towards MHS (e.g., Seeking mental help is not typical behavior.), while personal stigma

involves a more specific condition that individuals are concerned about (e.g., If my neighbor recently started counseling, I will not invite him/her to be my guest).

Finally, self-stigma is a relatively substantial factor that adversely influences MHS. It refers to internalized negative and biased attitudes of the self. Individuals with a self-stigma towards MHS think that seeking mental illness is a stigmatized behavior, resulting in their inadequate coping skills or low capability. Findings from existing studies indicated that individuals with high self-stigma tend to have lower self-esteem and confidence. Current studies on stigma's influence on MHS have determined that self-stigma significantly and fully mediates the effects of public stigma on MHS, entailing that self-stigma ultimately intervenes in the effects of public stigma (Vogel et al., 2013; Vogel et al., 2006; Bathje & Pryor, 2011). Furthermore, personal stigma significantly decreases future MHS intention or the need for professional assistance, irrespective of whether the population is generalized or depressed (Lally et al., 2013; Schomerus et al., 2012; Aromaa et al., 2011).

Aside from the causal relationship between stigma and MHS, the underlying reasons and mechanisms are investigated and explained further. As discussed, self-stigma, is related to how individuals perceive themselves when they face mental illness and make relevant decisions. Depending on the perceived severity of the symptoms, people with mental illness experience different levels of embarrassment and shame, thus decreasing the intention and willingness to seek professional help (Barney et al., 2006; Corrigan & Watson, 2002; Link & Phelan, 2001). Moreover, people with high self-stigma lack confidence compared to others. Studies have found that those with higher self-stigma result in lower self-efficacy and esteem, particularly in seeking help when suffering from mental misfunctions or disorders (Holmes & River, 1998). Similarly, studies have indicated that it is the negative perceptions of MHS from the Western society

significantly decreases individuals' self-efficacy towards MHS (Corrigan, 1998, 2004; Holmes & River, 1998).

Meanwhile, in some Asian countries like China and Japan, individuals attach great significance to "family honor" and are afraid of losing face (Yakunina & Weigold, 2011; Chen, 2012). It signifies that, with the extensively existing stereotype that individuals with mental illness are violent, dangerous, and uncontrollable (Chung et al., 1997; Ng & Chan, 2000), people perceive the possible diagnoses of mental illness and the corresponding treatment as a threat to family honor. In this case, individuals feel stressed about disclosing their MHS intention to their close family members, with the limited approval and family support hindering them from acting further (Wang et al., 2009; Barney et al., 2006; Keeler et al., 2014).

Based on the discussed theories and models, this thesis proposes research questions on how the selected factors influence individuals' mental help-seeking. Table 2 provides a detailed conceptualization of the factors from the original citations.

Table 2

Conceptualization and original citation of the main factors (apart from demographic) in the meta-analysis.

Variables	Conceptualization	Original Citation
Intention	"Indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior."	Ajzen, 1991
Self-stigma	"What members of a stigmatized group may do to themselves if they internalize the public stigma. "	Corrigan, 2004
	"The reduction in a person's self-esteem or sense of self-worth due to the perception held by the individual that he or she is socially unacceptable."	Vogel et al., 2007
Attitudes	"An individual's disposition to respond favorably or unfavorably to an object, person, institution or event, or to any other discriminable aspect of the individual's world. "	Ajzen, 1989
Perceived Behavioral Control	"People's perception of the ease or difficulty of performing the behavior of interest."	Ajzen, 1991
Perceived Self-efficacy	"The ease or difficulty of performing a behavior." compared to controllability which emphasized on "the extent to which performance is up to the actor.".	Ajzen, 2006
Perceived Benefits	"Beliefs regarding the effectiveness of the various actions available in reducing the disease threat."	Becker, 1974, 1984
Perceived Barriers	"The potential negative aspects of a particular health action may act as impediments to undertaking the recommended behavior."	Becker, 1974, 1984
Perceived Severity	"evaluations of both medical/clinical consequences (e.g., death, disability, and pain) and possible social consequences (e.g., effects of the conditions on work, family life, and social relations)."	Becker, 1974, 1984

Perceived Susceptibility	"One's subjective perception of the risk of contracting a condition."	Becker, 1974
Descriptive Norms	"Perceptions that others are or are not performing the behavior in question."	(Cialdini et al., 1990)
Injunctive Norms	"Perceptions concerning what should or ought to be done with respect to performing a given behavior."	Cialdini et al., 1990
Public Stigma	"What a naive public does to the stigmatized group when they endorse the prejudice about that group."	Corrigan, 2004
	"Public stigma is the perception held by a group or society that an individual is socially unacceptable and often leads to negative reactions toward them."	Vogel et al., 2006

RQ1: To what extend are the following factors: attitudes, descriptive norms, injunctive norms, perceived behavioral control, self-efficacy, perceived risk, perceived severity, perceived susceptibility, trustworthiness, experience, self-stigma, public stigma towards professional mental help-seeking associated with mental help-seeking.

RQ2: To what extend are the following demographic factors: age, gender, knowledge, education, income, race, and mental health status associated with mental help-seeking.

Moderators

Usually, the effect size in meta-analysis indicates the relationship between a specific independent variable (e.g., stigma) and the dependent variable (e.g., mental help-seeking) in a study. Therefore, "in meta-analysis, a relation between effect size and a moderator variable corresponds to an interaction between the independent variable (e.g., a treatment) incorporated in the effect size and that moderator variable." (Hedges & Pigott, 2004). A moderator variable is a discrete or continuous variable that have influence on the effect from one variable to another dependent variable. For example, existing studies have found that culture and ethnicity significantly moderate the relationship between mental help-seeking need and mental help seeking behaviors (Guo et al., 2015; Turner et al., 2015). Additionally, sampling method has been widely accepted as another significant moderator in meta-analysis (Skoric et al., 2016; Xiaohui Wang et al., 2020; Wang & Goh, 2017). Additionally, individuals' perceptions on different type of illness might also differ, so the mental illness type might also work as a significant moderator. Therefore, in this study, I also tested the moderation effect of culture and sampling method.

RQ3: How culture, mental illness type and sampling method moderate the relationships between the variables listed in RQ1 & RQ2.

Method

Meta-analysis

By accommodating the quantitative accumulation as well as analysis of descriptive statistics, meta-analysis is a technology that has been widely used to summarize diverse studies in order to provide credence to the validity of relationships between different variables (Schmidt & Hunter, 2004). As a result, I performed the meta-analysis by adopting the procedure in the studies of Hedges and Olkin (1985) to explore the relationships between mental help seeking (MHS) and its antecedents under different situations.

Literature Collection

To collect a database in order to understanding the relationship among MHS and its antecedents, results of various studies were combined. To reach the criterion, studies were selected based on those who have been to be reported in journal articles during 1999 to 2020 and including the empirical exploration of at least one relationship related to MHS. In major databases (PubMed, PsycINFO, and Google Scholar), I conducted a keyword search of items involved the combinations of "counseling/self-help/professional psychological/therapy," "seeking/processing /search/find," "mental," "health/disfunction/illness," and "adult/student/elders/participants". I meanwhile consulted the references of review papers under the situation of MHS (Arnaez et al., 2020; Livingston & Boyd, 2010) to better identify our search results.

Filter Process

I include literature based on the following criteria:

1. The articles need to focus on predictors of mental help-seeking, which is rather a general item. As a result, studies about seek professional help, psychological help, clinical help, treatment help, are all included in this meta-analysis.

2. To conduct a meta-analysis successfully, the data collected should be able to be computed or converted into effect size estimates. Additionally, original data should also contain other important measures such as means, correlations, sample sizes, odds ratios or regression.
3. If single study used two or above datasets, it will be considered as different studies including different sample size and measurements accordingly.

After acquiring 523 articles from an initial search, I discreetly went through the titles, abstracts, and instructions to make sure the research involved statistically testing MHS behavior. In the end, the process collected 69 articles in total.

Coding Procedures

Data Analysis

To start with, with the 69 selected articles, I confirmed descriptive data for each pairwise relationship in order to make sure the frequency and significance of each component in affecting peoples' MHS intention. I then calculated and transformed the ES of each pairwise relationship by conducting Fisher's r to z method (Hedges & Olkin, 1985) adopting a confidence interval of 95% to exam the significance of relationships in all the studies. As suggested, Kraemer and his colleagues (1982) mentioned that publication bias which represents that already published studies and articles might be biased to positive findings and to eliminate nonsignificant findings, is a nonignorable issue. Under this condition, I included the fail-safe N method, which was by Rosenthal (1979), it represents how many articles which have not been published with nonsignificant ES would be obtained to refute the standing conclusion, into analysis. I also used the Q value and index I^2 to analyze the homogeneity of variance in the corrected ES by using the Q value and index I^2. In addition, I discovered the Q value regarding to a chi-squared distribution

with k - 1 degrees of freedom (k is the total number of ESs). Then the significant Q value showed that it is necessary to conduct moderator analyses to explain the heterogeneous distribution of the ESs. The I^2 value was used as an supplementary statistic to further explain heterogeneity, based on the fact that an I^2 value exceeding 75% need moderator analysis (Huedo-Medina et al., 2006). To better understand the how contextual and methodological moderators play the roles in the relationships, I used weighted least squares regression analysis to exam the moderation with three moderator variables entered into the model at the same time (Steel & Kammeyer-Mueller, 2002). Weighted least squares regression analysis ensures the effect of each moderator could be scrutinized with the effect of others controlled compared with the bivariate moderator test, which make sure the determination of the approximate explanatory power of moderators (Schlaegel, 2015). All analyses in this study were conducted by R, and I used the *metafor* package (Viechtbauer, 2010).

Table 3

Articles Involved in the Meta-analysis (N = 69)

Publication	Sample Size	Country	Sampling Method	Sampling Type	Help-seeking Type	Mental Health Topic
Andoh–Arthur et al., 2015	270	Accra/Ghana	Convenience	College students	Professional	General
Arnaez et al., 2020	2,552	USA	Convenience	College students	Professional	General
Baams et al., 2018	25,116	USA	Convenience	College students	Professional	General
Baptista et al., 2017	275	Brazil	Convenience	College students	Professional	General
Yeshanew et al., 2020	964	Ethiopia	Multi-stage sampling	General	Professional	General
Blais & Renshaw, 2013	165	USA	Convenience	National Guard members	Professional	PTSD
Chen, 2012	1,440	China	Probability sampling	General	Professional	Distress
Cheng et al., 2015	1,682	Japan	Convenience	College students	Professional	General
Cole & Ingram, 2020	313	USA	Convenience	College students (Men)	Professional	General
Constantine & Gainor, 2004	61	USA	Convenience	College students (Women)	Professional	General
Constantine & Arorash, 2001	186	USA	Convenience	College students	Professional	General
Costas-Muñiz et al., 2017	265	USA	Convenience	Patients	Professional	General
Currier et al., 2017	251	USA	Convenience	Veterans	Professional	PTSD
Rafal et al., 2018	1,242	USA	Convenience	College students (Men)	Professional	General

Drapeau et al., 2009	27,913	Canada	CCHS-1.2	General	Professional	General
Eisenberg et al., 2009	5,555	USA	Convenience	College students	Professional	General
Elhai & Simons, 2007	600	USA	Convenience	College students	Professional	PTSD
Ellis et al., 2013	486	Australia	Snow-ball sampling	General	Professional	General
Fonseca et al., 2018	226	Portugal	Convenience	General	Professional	General
Fripp & Carlson, 2017	129	USA	Convenience	General	Professional	General
Gaddis et al., 2018	62,756	USA	Representative samples	College students	Professional	General
Garriott et al., 2017	610	USA	Convenience	College students	Professional	General
Gesinde & Sanu, 2015	300	Nigeria	Multistage sampling	General	Professional	General
Gum et al., 2011	144	USA	Convenience	>=65 years old	Professional	General
Han & Xu, 2020	66	USA	Convenience	College students	Professional	General
Heath et al., 2017	284	USA	Convenience	College students	Professional	General
Hechanova et al., 2013	365	Filipino	Convenience	Overseas Filipino Workers	Professional	General
Howell & Maguire, 2019	246	Ireland	Convenience	College students	Professional	General
Hubbard et al., 2018	564	USA	Convenience	College students	Professional	General
Hunkin et al., 2020	427	Australia	Convenience	General	Professional	General
Keeling et al., 2020	576	USA	Convenience	Patients	Professional	General

Komiti et al., 2006	300	Australia	Convenience	General	Professional	General
Kung, 2004	1,747	USA	Probability sampling	General	Professional	General
Lan, 2016	214	Taiwan	Purposive sampling	Disabled students	Professional	General
Langley et al., 2018	243	Australia	Convenience	Young adults	Professional	General
Lee et al., 2014	177	South Korea	Convenience	College students	Professional	General
Levin et al., 2018	200	USA	Convenience	College students	Professional	General
Li et al., 2013	177	USA	Convenience	College students	Professional	General
Liu et al., 2017	13,085	China	Convenience	College students	Professional	General
Lueck, 2018	153	USA	Convenience	College students	Professional	General
Lungu & Sun, 2016	572	USA	Convenience	College students	Professional	General
Mackenzie et al., 2006	206	Canada	Purposive sampling	General	Professional	General
Marsh & Wilcoxon, 2015	400	USA	Convenience	College students	Professional	General
Mojtabai et al., 2016	5,877	USA	NCS	15-24	Professional	General
Muscari & Fleming, 2019	282	USA	Convenience	Adults diagnosed as depressed	Professional	General
Nguyen, 2018	610	USA	Convenience	General	Professional	General
Ray et al., 2019	382	USA	Convenience	College students	Professional	General

Reynders et al., 2014	2,999	Finland/ Netherland	Systematic sampling	General	Professional	General
Schofield & Khan, 2008	11,201	Australia	Representative sample	General	Professional	General
Seehuus et al., 2019	2,280	USA	Convenience	College students	Professional	General
Segal et al., 2005	175	USA	Convenience	College students	Professional	General
Seidman et al., 2018	74	USA	Convenience	Student veterans	Professional	General
Seyfi et al., 2013	436	Turkey	Convenience	College students	Professional	General
Shechtman et al., 2018	196	USA	Convenience	General	Professional	General
Shi & Kim, 2020	232	Singapore	Convenience	Young adults	Professional	General
Song et al., 2019	630	China/USA	Convenience	General	Professional	General
Spengler & Ægisdóttir, 2015	140	USA	Convenience	LGBT	Professional	General
Stewart et al., 2019	1,272	USA	Convenience	College students	Professional	General
Seyfi et al., 2013	3,308	Japan	Convenience	General	Professional	General
Thomas et al., 2014	289	Australia	Convenience	College students	Professional	General
Tomczyk et al., 2018	207	Germany	Convenience	General	Professional	General
Tomczyk et al., 2020	791	Germany	Community sample	General	Professional	General
Tran et al., 2020	239	USA	Convenience	Patients	Professional	General
Tuliao & Holyoak, 2020	791	USA	Convenience	College students	Professional	General

Wigand et al., 2019	240	Germany	Convenience	Patients	Professional	General
Williston et al., 2020	171	USA	Probability-based sample	Female veterans	Professional	General
Wilson, 2010	109	Australia	Convenience	College students	Professional	General
Wilson & Deane, 2010	302	Australia	Convenience	College students	Professional	Suicide
Zhao et al., 2020	319	USA	Convenience	Young adults	Professional	General

Results

Descriptive Analysis

As listed in Table 3, there were 84% of the studies were from the Western cultural background. Among them, 81% of the studies adopted non-representative sampling method. Meanwhile, there are only 13 studies focus on Asian samples which the cultural value plays a significant role in influencing their behavior changes and adoption. Additionally, all of the studies did not distinguish whether the source is online or offline. What is more, the studies basically focus on social factors instead of media effects.

When it comes to the antecedents examined in studies on MHS, 28 of the studies involved examine the effect of attitudes on MHS, 20 of the studies involved examine the role of self-stigma towards mental help-seeking. Meanwhile, 18 of the studies tested the effect of efficacy, age and mental health status. Effects of other variables are also found to significantly influence the MHS such as former experience (n = 14), gender (n = 9), public stigma towards MHS (n = 7). The impacts of knowledge, race, income, education, injunctive norms, expectancy, descriptive norms, perceived severity, value, perceived risk, trustworthiness, motivation, susceptibility and public stigma on mental health on MHS are also tested based on the collected research. To sum up, results suggest that the factors in the social cognitive theory have received increasing interest from scholars. At the same time, studies on the effects of attitude, stigma, and self-efficacy on MHS are still on trend.

Correlation Tests

Table 4 reports the corrected mean correlations among all of the variables.

Table 4
Descriptive Statistics and Correlation Analysis.

						95% CI		Homogeneity		
Relationships	*k*	*N*	r^-	*ES*	SE	low	High	Q-value	I^2	$N_{fs.05}$
Self-stigma to MHS	20	84537	-0.22	-0.22***	0.03	-0.27	-0.17	511.17	95.99%	6084
Attitudes to MHS	28	15065	0.39	0.43***	0.05	0.34	0.52	824.09	96.21%	13700
Self-efficacy to MHS	18	10289	0.25	0.25***	0.04	0.18	0.33	313.36	91.81%	2541
Experience to MHS	14	15923	0.28	0.28***	0.03	0.22	0.35	66.42	86.90%	2648
Perceived severity to MI	3	3076	0.21	0.23	0.23	-0.23	0.68	333.79	99.29%	165
Response Efficacy to MHS	4	4764	0.10	0.10	0.07	-0.03	0.23	28.07	92.06%	91
DN to MHS	4	63329	0.27	0.26**	0.08	0.12	0.41	36.95	87.57%	503
IN to MHS	5	1707	0.12	0.12	0.07	-0.02	0.25	28.71	87.09%	36
Pub Stigma to MHS	7	74827	-0.11	-0.09***	0.02	-0.14	-0.05	39.25	92.03%	764
Age to MHS	18	74187	0.16	0.16***	0.03	0.10	0.23	591.52	98.14%	5282
Gender to MHS	9	21838	-0.22	-0.23***	0.05	-0.33	-0.13	952.15	97.36%	4662
Knowledge to MHS	6	2826	0.19	0.19***	0.03	0.13	0.26	10.99	50.83%	175
Education to MHS	5	2270	0.34	0.36***	0.08	0.20	0.53	28.40	90.37%	442
Income to MHS	5	30410	0.23	0.25***	0.08	0.08	0.41	178.62	97.47%	1327
Race to MHS	5	27272	0.19	0.19***	0.06	0.07	0.31	161.31	98.49%	523
HS to MHS	18	35218	0.16	0.15***	0.04	0.07	0.23	189.30	97.39%	1859

Notes: k = number of samples; *N* = Aggregate sample size; r^- = Observed average effect size. ES = estimated effect size; DN = descriptive norms; IN = injunctive norms; HS = mental health status; MI = mental illness; ** $p < .01$; *** $p < .00$

To start with, attitudes and education were the two most important factors, which were in correlation with MHS at a relatively moderate to large level (According to Cohen's (1969/1988) "categories of small < 0.41, moderate (0.41 to 0.70), and large > 0.70 to classify ESs"). At the same time, other correlations were at moderate level, which represents that the variables involved play significant roles in predicting individuals' MHS as well. However, although it is expected that the perceived severity of mental illness should have significant influence on the outcome according to the existing studies (Hechanova et al., 2013; Kung, 2004), results from the studies indicated that the perceived severity is not significant in our meta-analysis.

Results indicated that attitudes (*ES* = .43, $p < .001$), self-efficacy (*ES* = .25, $p < .001$), self-stigma towards professional mental help-seeking (*ES* = -.22, $p < .001$), and experience (*ES* = .28, $p < .001$) significantly influenced on MHS. In terms of demographic factors, age (*ES* = .16, $p < .001$), gender (*ES* = .22, woman = 1, $p < .001$), education (*ES* = .36, $p < .001$), income (*ES* = .25, $p < .001$), race (*ES* = .19, majority = 1, $p < .001$), mental health status (*ES* = .15, $p < .001$), and knowledge (*ES* = .19, majority = 1, $p < .001$) were significantly related to MHS. Bivariate results revealed that perceived risk (*ES* = .19, $p < .001$), susceptibility (*ES* = .46, $p < .001$), motivation (*ES* = .17, $p < .001$) and trustworthiness (*ES* = .25, $p < .001$) significantly related to MHS. Meanwhile, results found that descriptive norms (*ES* = .26, $p < .01$) and public stigma towards professional mental help-seeking (*ES* = -.09, $p < .001$) also significantly related to MHS.

Moderator Analysis

As can be seen from the findings, the heterogeneity tests showed that all of the relationships except for the injunctive norms–MHS, expectancy-MHS, and culture value–MHS relationships were influenced by the moderators (Table 5). As a result, I conducted weighted

least squares regression analysis to exam the moderators' effect. In the moderation analysis, I included culture, sample type, and mental illness type by conducting the following respective bivariate conditions: Western versus Eastern culture, non-representative and representative sampling method, and general mental illness versus specific mental illness (i.e. depression, anxiety, stress, and PTSD).

Table 5 indicated the moderation results. Firstly, culture significantly moderated twelve pairwise relationships. Attitudes, self-efficacy, self-stigma towards MHS, age, education, income showed stronger influence on MHS in Western cultural background while descriptive norms, race, mental health status, experience, knowledge and perceived severity have stronger influence on MHS in Eastern cultural background. Secondly, the type of mental illness they seek help about significantly moderated two pairwise relationships. Education and income have larger effect size in predicting the MHS when individuals are seeking help on specific mental illness compared with general mental illness. Last but least, sampling method moderated six pairwise relationship as well. Attitudes, public stigma towards MHS, self-stigma towards MHS, former experience, expectancy and risk resulted in stronger influence on MHS in the non-representative samples compared with representative samples. To the contrary, knowledge and perceived risk were more effective in predicting MHS in the non-representative samples instead of representative samples.

Table 5

Moderation Analysis.

Pairwise relationship	Moderator	Z-score	ES (number of studies)	
	Culture		Western	Eastern
Attitudes to MHS		3.80***	0.44*** (22)	0.39*** (6)
DN to MHS		5.35***	0.15 (2)	0.37*** (2)
Self-efficacy to MHS		3.27**	0.28*** (12)	0.21** (6)
Self-stigma to MHS		-2.13*	-0.24*** (22)	-0.19*** (2)
Age to MHS		1.99*	0.17 ***(15)	0.16(3)
Education to MHS		2.08*	0.43*** (3)	0.27** (2)
Income to MHS		1.99*	0.19*** (3)	0.29 (2)
Race to MHS		4.86***	0.12** (4)	0.38*** (1)
HS to MHS		2.20*	0.14** (15)	0.22*** (3)
Experience to MHS		4.22***	0.28*** (11)	0.31*** (3)
Knowledge to MHS		2.02*	0.19*** (5)	0.28* (21
Perceived severity to MHS		21.86***	-0.23*** (1)	0.48*** (2)
	Mental Illness Type		General	Specific
Education to MHS		2.98**	0.27*** (3)	0.50*** (2)
Income to MHS		5.41***	0.16*** (4)	0.54*** (1)
	Sampling Method		Non representative	Representative
Attitudes to MHS		4.05***	0.43*** (22)	0.41*** (6)
Public stigma to MHS		-2.21*	-0.07 (4)	-0.12*** (4)
Self-stigma to MHS		-6.38 ***	-0.21*** (16)	-0.27*** (8)
Experience to MHS		4.97**	0.31 ***(8)	0.25*** (6)
Expectancy to MHS		3.10**	0.16***(3)	0.15***(1)
Perceived risk to MHS		2.37***	0.20*** (1)	0.16*** (1)

Notes: ES = estimated effect size; DN = descriptive norms; HS = mental health status. * $p < .05$; ** $p < .01$; *** $p < .00$

Discussion

Interpretation of Meta-analysis

Bandura (1986) discussed that environmental and personal factors are the most influential predictors of the social cognitive theory's social behaviors. This expectation arises from the results, in which former studies primarily focused on personal factors, which generally indicated significant effects in predicting MHS irrespective of cultural value. Additionally, environmental factors, despite being injunctive norms, significantly influence MHS. By investigating the domain predictors, this thesis also analyzed the magnitude of the effects of these factors.

Generally, attitudes, former experience, descriptive norms, self-efficacy, education, and income are strongly associated with MHS, coinciding with studies adopting TPB in explaining MHS (Fishbein & Ajzen, 2011; Shi & Kim, 2020; Bohon et al., 2016). Attitudes, descriptive norms, and perceived behavioral control are positively related to MHS, while injunctive norms are not. One comprehensively accepted explanation is that seeking mental help is a relatively private behavior that is conducted personally, regardless of obtaining approval from significant others or otherwise (Bohon et al., 2016; Rimal et al., 2005; Mesidor & Sly, 2014).

According to the heuristic systematic model (Chaiken, 1980; Liberman & Chaiken, 1996), individuals tend to rely on their own experiences to make a decision when a topic is familiar and relevant to themselves, which may facilitate in explaining that those who have experience seeking help tend to react more positively regarding MHS. Meanwhile, self-efficacy beliefs primarily come from individuals' memories of their past experiences and performances (Bandura, 1993). In this case, attitude is the predictor with the most potent effect, meeting the conclusions of most studies regarding the relationship between attitudes and MHS (Constantine & Gainor, 2004; Skogstad et al., 2006; Shi & Kim, 2020). Therefore, this thesis proves the

validity of TPB in predicting MHS. Relative to this, public health departments must determine more ways to encourage individuals who opt not to seek help due to potentially unfavorable attitudes towards MHS. They must also consider providing more accessibility to help with individuals' self-efficacy.

The results serve as an insight for scholars who have proposed that stigma is the most robust predictor of MHS (Vogel et al., 2011; Vogel et al., 2010; Vogel et al., 2009). This thesis provides some support for other study foci on stigma. First, the stigma towards MHS instead of towards mental illness significantly influences the outcomes. However, former studies have indicated that stigma towards mental illness can significantly decrease individuals' MHS due to their fear of judgment of considering themselves as dangerous and incompetent. This finding can be explained by fear of diagnosis and the consequence of being regarded as having clinical mental illnesses and related repercussions (Keeling et al., 2020; Jamalamadaka et al., 2020).

Furthermore, the finding that self-stigma has a more substantial effect on influencing MHS than public stigma follows existing studies (Arnaez et al., 2020; Clement et al., 2015). Firstly, it can be that individuals with high levels of self-stigma have low self-confidence and self-esteem; thus, they are afraid of being exposed to therapists and proving their "weaknesses" (Vogel & Wester, 2003). Studies have also indicated that individuals with lower self-stigma tend to perceive a lower need for MHS (Eisenberg et al., 2009; Schomerus et al., 2009). Secondly, some scholars have indicated that self-stigma can mediate the path from public stigma towards MHS. They denote that, through self-stigma, the effects of public stigma decrease to some degree (Chen & Mak, 2008; Lauber & Rössler, 2007; Yang, 2007; Yang, 2007; Shi et al., 2020).

Finally, the results are as expected and observed in existing studies. For instance, studies have indicated that lack of background knowledge of mental illness and treatment, lack of mental

help facilities, high costs, and time inconvenience were determined more than barriers brought by cultural value and were significant factors in predicting MHS (Ho et al., 2008; Kung, 2004; Mo & Mak, 2009). High-level education and income signify that individuals have more accessibility to help, awareness of symptoms, and potential perceived risks (Gourash, 1978; Pescosolido & Boyer, 1999; Skogstad et al., 2006). However, older adults have more positive attitudes and trust towards psychological professionals than young adults, which is inconsistent with the existing findings (Pederson & Vogel, 2007). In other studies (Mansfield et al., 2005; Addis & Mahalik, 2003), males perceive more self-stigma than females due to their fear of being regarded as unable to handle things, with such sense of failure leading to the reluctance of MHS. Although the cultural value in the meta-analysis failed to predict MHS significantly, several existing studies already indicated a valid relationship . It may be because this thesis included only three related papers, which are far less sufficient in generalizing the extent of effect.

Limited studies were obtained; therefore, it is hard to generalize the results. However, the non-significant effects of perceived severity and expectancy on MHS are contrary to various other available evidence (Jorm et al., 2008; Suka et al., 2016; Kung, 2004). One potential explanation may draw from the dual processing model that decision-making is determined as a tool of "an experiential, affective system (system one) and/or an analytical, deliberative (system two) processing system." In this model, when individuals are seriously influenced by negative or positive attitudes (system one), they tend to take less consideration on the perceived severity of a mental illness or on the actual effectiveness of corresponding treatment.

Limitations

There are several limitations to the current study. First, I categorized each of the predictors into the three-factor settings in social cognitive theory based on their conceptualization similarities

without a more straightforward definition of each predictor and the evidence from existing studies. In addition, I collected and summarized most of the predictors well addressed in the related study field. That may cause unavoidable ignorance of some predictors which also influence MHS, such as the technology use and utility. At the same time, generalizability is limited due to the relatively insufficient antecedents. This limitation provides insight for future research that they could consider some of the niches but valuable theories to make the summary more reliable and generalized.

Moreover, data from some published studies are out of reach; neither the bivariate correlations nor the regression results were reported nor provided when I asked for help from the authors. That indicated that a more standard and generalized way of reporting data is encouraged in future research, which could help facilitate communication research and scholars' improvements.

Conclusion

Mental illness is now becoming a public health issue worldwide, which seriously influences individuals' mental health status and threatens their lives. The current study systematically analyzed the antecedents of mental help-seeking from the social cognitive approach. In detail, this research summarized 21 predictors of mental help-seeking and analyzed the effect size of them by meta-analyzing 69 empirical studies, which collected a total sample of 48,7854 participants, including 178 correlations. The average sample size was 2,482. Results indicated that attitudes, former experience, descriptive norms, self-efficacy, and education were the domain predictors of mental help-seeking. As for the moderator analyses, cultural background, sample type, and mental illness type significantly moderated the relationships between several specific predictors and mental help-seeking. By conducting a meta-analysis of

69 studies on MHS, this study contrast and compare findings from various studies to determine the domain predictors and their explanatory power in predicting mental help-seeking intention and behaviors. Specifically, attitudes, former experience, descriptive norms, self-efficacy, and education were the domain predictors of MHS.

What is more, I additionally analyzed three potential moderators: culture, sample type, and mental illness type to explain the difference between these predictors' magnitude effect across various studies. All three of the moderators showed significant effects which facilitate extra findings and comprehensive interpretation. To sum up, findings from this study present practical implications and thoughtful insights for scholars and future research.

CHAPTER 4: CONTENT ANALYSIS

Literature Review

Social Media Coverage

Social media, including social network sites (e.g., Facebook, Twitter, and Instagram) and mobile applications (e.g., WeChat, Weibo, and Snapchat), have gained billions of users worldwide and have occupied much of daily online usage (McColl et al., 2014; China Internet Network Information Center, August 2019). Conclusively, they are a powerful "tool" for understanding individuals' psychological state, health, and wellness (Culotta, 2014). Relatively, studies have explored how the frequency of use and the quality of content on social media influence audiences' perceptions of mental health (Davila et al., 2012). They have found that quality of content and exposure frequency influence individuals' mental health decisions. With the emergence of social media, different types of conversations and communication on mental illness can occur simultaneously. Apart from a large social media userbase, multifarious contents on mental illness like social support (Berryman et al., 2018), professional treatment, or clinical approaches (Stuart, 2006), as well as related cases, report suicide or self-injuries of celebrities, while ordinary citizens also enjoy social media representation (Kapusta et al., 2010; Niederkrotenthaler et al., 2012).

Due to social media features, interpersonal and mass communication can happen simultaneously (O'Sullivan & Carr, 2018). Early studies raised the notion that mass personal communication was different from conventional perspectives based on anticipated audience size or the sender's need, but more from a receiver-centered mode. Alongside other attributions of social media like user-generated content, public commenting areas, link sharing functions, and application programming interface (API), individuals can utilize different types of

communication channels to communicate irrespective of the platform or privacy. These channels include communicating with another via conventional mass communication channels, applying interpersonal communication channels for mass communication, or engaging in interpersonal or mass communication via both channels. Scholars have emphasized the significance of user-generated content, which helps with the adjustments and the decrease of individuals' stigma towards mental illness-related concerns (Betton et al., 2015). In social media, individuals can encounter a "public-yet-personalized communication" such as Facebook, wherein they can engage in personal interaction and receive information from mass communication (Taylor & Gibson, 2017). Amid growing population and interactive characteristics, social media's role in influencing audiences' stigma has also been examined. For instance, while individuals are surfing online help fora, they can read news reports from mainstream media, converse or contact posters directly, observe others' specific conversations, and engage at any time they prefer. These situations significantly decrease individuals' stigma towards mental illness-related issues (Betton et al., 2015). Related findings suggested that social media are potentially effective tools to promote mental health issues and reduce stigma (Bargh & McKenna, 2004; Whitley & Denise Campbell, 2014). Some bloggers and key opinion leaders also utilize social media to conduct interactive communication via public messages to reach members who need support and initiate consequent conversations (Tong et al., 2013).

Additionally, Naslund and his colleagues (2014, 2016) determined that, by providing hope and personal empowerment, approaching interventions for mental wellbeing as delivered through social media, and exchanging experiences and knowledge on mental illness, social media can reduce stigma and overcome social distance and isolation for individuals with or without mental disorders in online fora. However, Riles (2020) indicated that social media

consumption significantly influences individuals' communication with people diagnosed as mentally maladjusted, via the mediating role of attitudes instead of stigma. Livingston and his team (2014) further determined that public service announcements (PSA) on mental illness presented on social media significantly augmented young people's adverse attitudes towards mental illness issues. Meanwhile, the interaction facility and open online information resources, the social media environment, and how social media exposure affects individuals' cognitive and affective perceptions towards mental help-seeking remain understudied.

Stereotype

A stereotype is a concept different from stigma. It significantly influences individuals' perceptions of mental illness by increasing their stigmatized attitudes. A typical stereotype of mental illness includes considering it as the cause of patients' bad characteristics, and that patients must be responsible for those attributes, including expecting poor relationship results (Martin et al., 2000; Socall & Holtgraves, 1992). Nowadays, society is less likely to accept overly negative and direct stigmatized attitudes and expressions; instead, they are expressed relatively subtly since some evaluations and judgments automatically arise due to stereotypes and insufficient knowledge (Baumeister & Finkel, 2010; Gawronski & Bodenhausen, 2006; Nosek & Greenwald, 2009; Wittenbrink & Phil, 2007). Negative stereotypes are significantly associated with individuals' preference of social distance against people with mental illness (Angermeyer & Matschinger, 1997; Link et al., 1999; Martin et al., 2000). Indeed, it may be the stereotype rather than the stigma that influences individuals' perception of mental illness and help-seeking; according to Link's modified labeling theory (1989), individuals experiencing potential mental illness are expected and presumed to be rejected and aligned. Hence, they act accordingly to avoid such a thing from occurring. Link and his colleagues mentioned two aspects

of stigmatization—coping orientation and experience (Link, 1987, 1989). In this case, even if individuals are not treated with stigma, their self-identity may labeled with negative descriptions, and the "imagined" stigmatized outcome stops them from seeking real help.

Specifically, there is a process on how stigma generates: labeling –> stereotype –> discrimination (Phelan et al., 1997). According to its conceptualization, stigma is not a term, but a process. "(1) People distinguish and label human differences; (2) dominant cultural beliefs link labeled persons to undesirable characteristics that form the stereotype; (3) labeled persons are seen as an out-group, as 'them' and not 'us'; and, (4) labeled persons experience status loss and discrimination that lead to unequal outcomes" (Link & Phelan, 2001, p. 367). Since the perceptions of negative stereotypes and the fear of consequences related to stereotypes may be the underlying factors that influence individuals' perceptions, and that most studies primarily focus on the presentation of stigma, this thesis additionally codes stereotype apart from stigma to understand better the coverage of social media content regarding mental illness.

Social Support

Back in 1970, there was an increased interest in studying social support and in exploring the treatment, program, and intervention strategies associated with social support. According to Turner and Brown (2010), social support refers to "one's social bonds, social integration, and primary group relations." It originated from Thoits' (1986) conceptualization that defined social support as the initial participation of significant others in a caregiver's endeavors to handle stress. Tardy (1985) defined social support as the perception from others' general or specific supportive behavior initially or acted on from contact with their social network, helping them better function and buffering themselves from adverse outcomes. It has been proved valuable and reliable in helping individuals with mental illness to seek help or apply self-help by reducing the

severe outcomes of mental health like depression and anxiety (Kessler et al., 1985; Cohen, 1985; Pa, 1995; Coker et al., 2002).

Several studies have illustrated how social support enhances individuals' self-confidence and decreases their stigma towards mental help-seeking (Moorhead et al., 2013; Berkman & Kawachi, 2000; Cutrona & Troutman, 1986; Gracia & Herrero, 2004; Lakey & Scoboria, 2005). Specifically, social support affects individuals' mental health through two models (Rodriguez & Cohen, 1998): the stress-buffering model, from which people can obtain protection from potential damage induced by stress; and, the direct effect model, from which people gain higher resistance amid stress and potential threats to their mental health. Donchi and Moore (2004) determined that interpersonal communication with known others via email increases the measures of social support and the participants' mental wellbeing. Jung, von Sternberg, and Davis (2017) further found that social support significantly increases positive attitudes towards mental help-seeking and decreases stigma. In a study by Mickelson (2001), perceived support availability of family members significantly influences individuals' perceived stigma. Other studies likewise found that social support increases participants' resistance to stigma of mental illnesses and decreases their adverse stereotypes (e.g., Crabtree et al., 2010; Major & O'Brien, 2005). Even social support provided by volunteers who are strangers to the recipient significantly enhances individuals' wellbeing (Davidson, 1999; Solomon, 2004).

Typically, social support is measured under circumstances of socially supportive structures or the functions that network members may provide (Benyamini et al., 2015). Structural measurement includes networks and relationships, including family, friends, and colleagues, while functional measurement focuses on how social support practically works. Since the content analysis has limited access to users' social networks, this thesis codes only

social support using structural measurements. According to Malecki and Demaray (2003), functional social support has four main types: emotional, informational, appraisal, and instrumental. Emotional support refers to support consisting of feelings like trust, care, and understanding. Informational support includes advice and suggestions pertaining to the issues. Instrumental support is more associated with sources like time, energy, money, and residence. Appraisal support involves feedback such as evaluations and assessments. Generally, scholars analyze the influence of social support as an integrated term instead of separating them into specific types. However, some scholars suggested that different support types may come from different sources and influence individuals' perceptions. Additionally, among the studies on mental illness and help-seeking, most of them are focused on three social support types (Helgeson, 2003). Thus, this thesis specifically codes three types of social support in the content analysis—emotional, instrumental, and informational social support.

Causal Attribution

Causal attributions explain why people get sick (Weiss & Somma, 2007) or suffer from other health-related problems like mental disorders (Kleinman, 1980; McCabe & Priebe, 2004; Palmer & Gyllensten, 2008; Duddu et al., 2006). Generally, the most prevalent theory is attribution theory, which provides individuals with perspectives to frame the stereotypes of mental illness by placing them into particular and categorized knowledge structures (Hodson & Esses, 2005; Judd & Park, 1993; Krueger, 1996; Mullen et al., 1996). This theory has been proved both "social" and "efficient" since it relies on socially common opinions and perspectives regarding groups of people that are different from others; thus, individuals can realize expectations and judgments from those who belong to a particular group with stereotypes (Ar et al., 1994; Nosofsky et al., 1994). Typically, there are several causal attributions according to

Foster (1976) and Yong (1976a): personalized, naturalistic, internalized, and externalized. Each attribution is significantly different from others. In studies related to mental illness, an extensively adopted and validity-proved measurement, called the Mental Health Locus of Origin Scale (Hill & Bale, 1980, 1981), measures the causal attribution of mental illness from interactional (psychosocial) to endogenous (biological/genetic) perspectives. In later studies, scholars developed other forms of attribution beliefs, including spiritual, supernatural (Gregg & Curry, 1994), abuse and neglect during childhood (Read, 1997), and cultural (Murguía et al., 2000).

To sum up, most of the existing attribution has two levels. The first level involves impersonal or situational causes that attribute mental illness to factors outside an individual, including ethics and living environment. The second entails personalistic or individual causes that presume causal factors within a person, including biological factors, genes, characteristics, and personality. Different causal attributions can variably influence individuals' stigmatized attitudes significantly. For instance, a study in New Zealand involving 469 adults determined that psychosocial attribution results in more positive attitudes than genetic attribution (Chou & Mak, 1998). However, contradictory findings still exist regarding different attributions' effects. Some studies found that biological attributions yield less negative attitudes towards people with mental illness (Boyson & Vogel, 2008; Deacon & Baird, 2009), while others concluded that attributing individuals with mental illness to biological causes increases negative attitudes, considering it as a lack of control (Kvaale et al., 2013; Read, 2001).

Research Questions and Hypothesis

RQ4: How frequently do causal attribution messages appear in the Xiaohongshu community? (b) Which types of causal attribution are common in the Xiaohongshu community?

RQ5: How frequently do social support provision and request messages appear in the Xiaohongshu community?

RQ6: (a)Which types of social support provision is the most common one in the Xiaohongshu community? (b) Which types of social support request is the most common in the Xiaohongshu community?

RQ7: How frequently do (a) mental illness, (b) stereotype, (c) stigma (d) treatment (e) recovery (f) seeking help experience (g) professional source messages appear in the Xiaohongshu community?

Method

Study Site: Xiaohongshu

Xiaohongshu, one of the Chinese mainland's social platforms, was founded in June 2013 and announced in January 2019 that it had 200 million users, among which more than 85 million users are monthly active users, and the site reached 3 billion exposure per day. Xiaohongshu is like Instagram; you must add some text to illustrate the pictures or videos. Additionally, as an online lurker, I searched the mental illness-related content for a long time on different social media platforms before I conducted the study in Weibo, Douban, Douyin, and so on. Xiaohongshu has unique advantages as the study site for content analysis and survey. It is the place that you could access all the contents without permission from the account owner, so crawling messages on this platform is possible. Additionally, some professional content on Weibo required money and access. In this study, I only focused on its social media function instead of its e-commerce function. In the Xiaohongshu community, both ordinary people and celebrities could generate all kinds of content in the form of notes, using video, pictures, and

text. Similarly, like Instagram, contents on xiaohongshu have to be posted with text. Therefore, this study took the text as the unit for content analysis due to its less ambiguity.

Additionally, the content on Xiaohongshu is public, so there are no boundaries for anyone who wants to search or surf information online without the need for registration. I choose Xiaohongshu as the study site because of its large number of users and the characteristics that users also used xiaohongshu to search for experience or information about a specific topic such as weight loss mental illness (Liu et al., 2019). That is to say, apart from being an e-commercial platform, xiaohongshu is increasingly served as a platform that people could seek or provide information. Moreover, xiaohongshu has unique algorithms that enable users to be equally exposed to content designed to improve mental health. During the covid-19 period, xiaohongshu collaborated with the Chinese science academy to together advocate mental illness-related knowledge campaigns and distributed the contents towards all the users ("小红书上线抗疫心理援助平台 逾千名咨询师提供免费心理咨询," 2018).

Data Collection and Sample

In February 2021, I crawled a total of 19,557 messages posted in the Xiaohongshu containing mental illness-related keywords (e.g., depression OR anxiety OR mental illness) from 11 May 2016 to 24 December 2020 using Python Web Crawler. There was also an interesting phenomenon that it was until 2019, posts about mental illness-related content started to increase to a large number. To be more specific, in 2016 and 2017, the number of total posts that meet the requirements is 189, while the remaining 19,368 posts collected were generated in 2019 and 2020. To reduce the potential harm to the social media users, we ensured confidentiality by the following means. First, all the usernames were removed from the data. Furthermore, the sample messages reported in the manuscript were paraphrased according to the original meanings to

make sure and protect the identity of users from being recognized by reference to original messages. I randomly selected 10,000 (51.13%) messages from the entire dataset for the manual content analysis.

Coding Schemes

Mental Illness. Among the messages collected that contained depression or anxiety, we found that they also included commercial themes such as selling medicine or meditation classes. Additionally, some of the users posted emotional expression using the term of "feeling blue" or "anxious" about the situation in Chinese such as "I am feeling blue recently because of the rainy days.1"and "I am so anxious because the exam is approaching.2", which are not consistent as the definition of the original conceptualization of depression and anxiety. To be more specific, Chinese tend to use the word "症" (syndrome) to officially and specifically demonstrate the clinically mental illness problems; but due to some of the language habits, they might ignore that word and express the narration as "I have been diagnosed as depression for two years.3"and "Depression is just being dramatic from others' perspectives and nobody really cares.4", so the two coders specifically and precisely coded the topic of the message and categorized them as mental illness related or not as the first of all basis (1= presence of clinically described mental illness; 0=other). However, due to some of the language habits, they might ignore that word and express the narration as "I have been diagnosed as depression for two years.[3]"and "Depression is just being dramatic from others' perspectives and nobody really cares.[4]", so the two coders specifically and precisely coded the topic of the message and categorized them as mental illness related or not as the first of all basis (1= presence of clinically described mental illness; 0=other).

Stereotypes. To start with, each initial message was coded based on whether it involved the following stereotypes categories listed in the above literature: People with mental illness are

(a) scary, (b) out of control, (c) weak, (d) not typical in real life, (e) dangerous, (f) suicidal, (g)abnormal. For instance, if a person with mental illness hurts his/her surroundings, it will be coded as the "dangerous" stereotype. If he/she was found to do extreme behaviors such as hurt themselves, we coded the "out of control" stereotype. If a person was found to cry a lot without specific reasons or being too sensitive, we coded the "weak" stereotype. If he or she committed suicide, we coded the "suicidal" stereotype. However, in Chinese social media, not many of the data collected expressed in the conceptualized above way and could not be categorized following that detail. Therefore, I just coded their presence and listed some of the examples as references. In the end, each stereotyped message was analyzed and categorized (0 = absent,1= present), but an original message could involve more than one stereotype simultaneously, so we coded only them depend on the main stereotype. Due to a basic understanding of the content presented on the platform and the description that existed in previous studies, the stereotypes of individuals who suffer from anxiety or depression are always perceived as being hypocritical, fake, and pretending. Additionally, we also found that some of the stereotypes come from a lack of knowledge. Therefore, we coded any content that contained this kind of description as the stereotype for people with anxiety and depression.

Causal Attributions. Four causal attributions of mental illness were coded. Biological/genetic causal attribution was coded if the message contained the statement that the person had mental illness due to the genes or inherited. Environmental causal attribution was coded if the message contained the statement such as pressure, workload management, family harmony, and new changes in daily life. Parental causal attribution was coded if the message contained the statement that individuals got mental illness because of parental mistakes or abuse. Personal causal attribution was coded if the message contained the statement that someone had a

mental illness because of personal reasons such as weak characteristics or sensitive personalities. The frequency of every causal attribution was coded (0 = absent,1= present), but based on the fact that a message could contain single causal attribution, we also coded the post with a mutually overlap standard.

Treatment and Recovery. Treatment was coded if the message involved professional treatment such as psychotherapy, medicine, or other specific psychological or biological treatment (0 = absent,1= present). Recovery was coded if the original message indicated the recovery as an outcome (0 = absent,1= present). Because the coding was mutually exclusive and only one choice could be selected for each message.

Stigmatization. Stigmatization was coded as the declaration of judging someone who experiences an abnormal process regarding mental illness. Stigmatization in this study was coded as a present because a message represents the desire to distance people who have mental disorders, and messages conducted biased and negative evaluations about them or showed negative attitudes against them (Corrigan et al., 2005). For instance, in a message about a daughter who suffered from depression and left school, her father said, "You should be ashamed of being so abnormal to quit school at this young age." This message was coded as stigmatization because the individuals with mental illness were considered abnormal and criticized by her family members instead of a normal patient who needs empathy and discreet care. (0 = absent,1= present).

Social Support. Messages that include social acceptance and encouragement, normalized people with mental disorders, or transferred wishes and cheering up emotions were categorized as support (Corrigan et al., 2005). Take a message as an example, a message that writes, "Cheer up, mental illness is not incurable cancer, and if you treat it positively, you could get better

eventually!" was coded as expressing support provision (0 = absent,1= present). While another kind of post writing, "I have finally recovered from the nightmare and always here to offer help, should you have any questions about the recovery and concerns, you could also PM me," represents volunteered provision was coded as support request (0 = absent,1= present). Adopted from former studies that coded social support in Chinese social platforms (Shi & Chen, 2014; Chu et al., 2020), we code them into the three types of support: informational, emotional, and supplemental and categorized them into support provision and support request based on the contextual meaning of the message.

Other attributes such as the sources (official vs. non-official) and experience of seeking help were also coded. All the examples are listed in table 6.

Coding Procedure

The analysis unit is a single message collected by a Xiaohongshu user. All of the texts were written in Chinese. Although there are different forms of the content presented on Xiaohongshu, we decided to code only the text messages for the following reasons: First, visualized contents need to be analyzed together with the context, which is hard to require at the stage; secondly, most of the data we collected was in the form of the large paragraph of texts combining several pictures as the assistance, which means the text interpretation would be enough for understanding the users' post. Lastly, analyzing videos and pictures requires more energy and discussion due to the multiple elements such as background music, time length, and so on, but eh two coders were lack of sufficient time for the process. Two mainland coders (one woman and one man), both postgraduate students studying communication studies and knowing how to use the platform, coded the messages. The two coders independently coded 10% of the messages (n = 1,000). If a single message consisted of more than one theme (e.g., different sorts

of causal attribution or social support), the message was coded based on its major theme (Shi & Chen, 2014). The values of Cohen's Kappa for intercoder reliability were 0.85 (mental illness), 0.63 (stereotype), 0.91 (genetic attribution), 0.54 (environmental attribution), 0.66 (parental attribution), 0.81 (personal attribution), 0.73 (treatment), 0.56 (recovery), 0.75 (stigma), 0.62 (emotional support provision), 0.64 (informational support provision), 0.82 (instrumental support provision), 0.74 (source), 0.62 (seeking experience), 0.83 (emotional support request), 0.62 (informational support request), 0.77 (instrumental support request).Further discussions and adjustments solved the disagreements to avoid fuzziness based on category definitions and personalized text understanding. In the end, two coders individually coded the remaining 9,000 messages, which were separated into two parts.

Table 6

Coding Scheme for the Content Analysis.

Category	Definition	Sample Message
Mental Illness	Clinically described mental illness and certain description which includes the functioning disorder and inability to cope with daily life.	Since last year, I have been diagnosed as depression and my whole life collapsed immediately from the moment when I got my prescription.
Stereotype	Biased conceptions or opinion towards certain idea or group in the society	Those who have mental problems might all come from a tragic family where they cannot find love.
Treatment	Clinically and professionally valid treatment such as medicine, meditation, integrative or holistic therapy, cognitive behavioral therapy and so on.	Doctor suggested me to stay in the hospital for two months in order to take systematic test and treatment.
Recovery	Clinically and professionally valid judgement made from doctors that described the patient is recovering.	Today doctor said I could try to stop the medicine for a week as a first try, I cried for this progress.
Stigma	Messages that present the desire of distance of people who have mentally disorders and messages made biased evaluation about them.	I just cannot stand those people with depression compiling or wailing about their tragic life, because those things are just so trifle and easy to bare.
Experience	Experience about individuals' mental help seeking including asking doctors for details, go to counseling and find specialist for mental illness curation.	When I finally realized that my mood is out of control too frequently, I went to the largest mental hospital immediately.
Source	If the information about mental illness come from psychologist, doctors, news feed or certificated official accounts, then they are coded as professional sources.	As the director of *** hospital, today I would like to share some updates on the distinguishment and relationship between depression and anxiety…
Causal Attribution		
Genetic Cause	Biological/genetic causal attribution was coded if the message showed that the people with mental illness due to genes or are of inherited.	Mental illness could be inherited and that is the only reason I am so afraid of getting pregnant with a baby who might suffer what I have experienced.

Environmental Cause	Environmental causal attribution was coded if the message involved pressure, workload management, and changes in life as the reasons of mental illness.	After the work shift, I found that my boss has so much expectation on me and pushed me to do tons of work, in the end, I was diagnosed with anxiety.
Parental Cause	The message contained the statement that people have mental disorders due to parental mistakes or abuse.	I am a sensitive person and anxiety tortured me since I was a little girl, my alcoholic father beat me and said mean things to me all the time.
Personal Cause	Message indicated that the person was suffering from mental illness due to personal reasons such as character flaws or weak personalities.	It is all due to my cousin's desire for perfection ends up with her depression. She is too stubborn to admit her imperfect and cried all day long.
Social Support		
Emotional support provisions	Expressing empathy, reassurance, encouragement.	Life will finally get better and please never lose hope!
Informational support provisions	Offering information for solutions or guidance, including explanations, sharing of personal experiences, and suggestions.	According to my experience, *** is only for depression and if you are with bi-polar, maybe you need to change that to the more suitable medicine.
Instrumental support provisions	Providing physical assistance, such as directly tangible resources offer, help, service, or expressing willingness to provide them.	Anyone who have more concerns, feel free to contact me online or offline, I could provide free test and brief counselling based on my knowledge.
Emotional support requests	Expressing negative emotional states or seeking empathy, reassurance, encouragement, or support.	Depression has put me through pain, why god treats me so unfair! Why nobody understands me!
Informational support requests	Inquiring for information about domestic violence.	Anyone has any tips on how to make an appointment with the specialists at ****?
Instrumental support requests	Seeking tangible resources or service.	Can anyone talk to me and give me a hug? I am dying here struggling with all the syndromes.

Results

Mental Illness Massages

In the total 9,000 messages, only one-fourth of the messages (n = 2509, 27.9%) is strictly about mental illness such as professional introduction, personal experience, treatment, etc. We made the judgment based not only on the content but also on the name of the account that posted them. For example, some accounts have been officially certificated by Xiaohongshu as the professionals such as "Beijing Anding Hospital" (北京安定医院), which is a well-known hospital for mental health disorders. Among other unrelated messages, including mental illness, topics range from commercial promotion, expression of depressed and anxious emotions, and introduction of book chapters or other movies as commercial publicity. Therefore, the two coders mainly coded the 2509 messages and calculated the messages covering mental illness (See Table 7).

Table 7

Frequencies of Schemes in Messages that are Strictly Related to Mental Illness (n = 2509).

	n (include)	*Ratio*
Stereotype	371	14.8%
Causal Attribution	600	23.9%
Treatment	800	31.9%
Recovery	188	7.5%
Stigma	89	3.5%
Social Support Provision	1670	66.6%
Social Support Request	173	6.9%
Source	368	14.7%
Experience	769	30.6%

Note. Items coded were not mutually exclusive, so the sum of all ratio value is larger than 100%.

Stereotype Messages

Among the 2509 messages that strictly described mental illness issues, 371 (15%) of them are about the stereotype towards mental illness. To be more specific, typical stereotypes are not all negative. For example, one of the posts wrote, "Never think that you are immune to depression and do remember to do regular self-check for mental problems is highly important." (抑郁症，请不要觉得自己不可能患有……要记得做抑郁评估测试). Another typical stereotype is that depression could be cured without professional treatment; for example, another post wrote that "After 8 to 9 months exploring myself and spent time with family members and all my best friends, I finally recovered without any medicine. It is such a relief that I could be reborn as a positive and energetic person again!" (第八个月到第九个月，我的情绪越来越好……因为我的妈妈和朋友帮助了我很多……就这样通过我自己的努力，我痊愈了。）

Causal Attribution Messages

To answer RQ4, about 24% (n = 600) of the messages strictly about mental illness mainly described causal attribution. The result from the chi-square test indicated that the four types of causal attributions are different from each other, χ^2 (3) = 710.96, $p < .001$. Most attributions are environmental attribution (n = 427, 71.17% of all the causal attribution messages), such as the stressful workload, the pressure from peers, and the competition they are experiencing. The second-largest amount of causal attribution is personal attributions (n = 111, 18.50% of all the causal attribution messages) that attribute the mental illness to individuals' weak characteristics, high-standard self-requirement, as well as "being too sensitive about what others' perceptions." Followed by parental (n = 37, 6.17% of all the causal attribution messages) and genetic/biological (n = 25, 4.16% of all the causal attribution messages) attributions. Results from pairwise comparisons also indicated that environmental causal attribution are significantly

more common than personal causal attribution (χ^2 (1) = 336.16, p < .001), genetic causal attribution (χ^2 (1) = 64.39, p < .001), and parental causal attribution (χ^2 (1) = 97.33, p < .001). Meanwhile, personal causal attribution is found to be significantly the second common type compared with genetic causal attribution (χ^2 (1) = 5.92, p < .05), and parental causal attribution (χ^2 (1) = 8.95, p < .01).

Social Support Messages

RQ5 wanted to figure out how frequently do messages containing social support in post messages are. The results revealed that almost three-quarters of messages strictly related to mental illness contained a social support construct (n = 1,843, 73.46%). Among all social support messages, only 9.39% of them have sought help or obtained support from others (n = 173), and the remaining social support messages were the ones that provided support (n = 1,670, 90.61%).

To answer RQ6(a) about the most prevalent gene of social support provided in the mental illness messages post online. The results lead to informational support provisions, which accounted for 73.29% (n = 1,224) of all social support provisions. At the same time, 23.89% of all the provisions were coded as emotional support (n = 399), and instrumental social support provisions only occupied 2.81% (n = 47) of all the messages. The chi-square test indicated that the three types of support provisions are significantly different from each other, χ^2 (2) = 1311.29, p < .001. In addition, informational support provisions accounted significantly more than emotional support provisions, χ^2 (1) = 1438.77, p < .001 and instrumental provisions, χ^2 (1) = 132.72, p < .001. Emotional support provisions were significantly more prevalent than instrumental support provisions, χ^2 (1) = 15.18, p < .001. Therefore, informational support provisions were the most common type of social support provided in the Xiaohongshu.

To answer RQ6(b) about the most prevalent social support request among the mental illness messages post online. The results showed that informational support requests were the most common type (n = 141, 81.50%), followed by emotional support requests (n = 24, 13.87%), and only 4.62% (n = 8) were instrumental. According to the chi-square test, the three types of social support requests were significantly different from each other, χ^2 (2, n = 173) = 182.86, p < .001. The pairwise comparisons revealed that informational support requests were found to be significantly more prevalent emotional support requests, χ^2 (1) = 122.78, p < .001 and instrumental support, χ^2 (1) = 36.96, p < .001. Whereas there is no significant difference between emotional and instrumental support χ^2 (1) = 1.35, p = .245. Therefore, the most common requests were the informational support requests among all the social support requests.

Other Types of Messages

What is more, to answer RQ7, among all the messages strictly related to mental illness, I found that 32% (n = 800) of them are about treatment but only 7.5% (n = 188) are about recovery. To my surprise, the messages containing obvious and direct stigma only accounts for 3.5% (n = 89). There are 368 posts come from professional sources (14.7%) and almost one third of total 2509 messages mentioned their experience in seeking help no matter they are online or offline (n = 769). Details of the social support and causal attribution messages were listed in table 8.

Table 8

Frequencies of Social Support Provision, Request and Causal Attribution Messages

	n	*Ratio*
Social Support Provision		
Emotional	399	23.9%
Informational	1224	73.3%
Instrumental	47	2.8%
Total	1,670	100.0%
Social Support Request		
Emotional	24	13.9%
Informational	141	81.5%
Instrumental	8	4.6%
Total	173	100.0%
Causal Attribution		
Genetic	25	4.2%
Environmental	427	71.2%
Parental	37	6.2%
Personal	111	18.5%
Total	600	100.0%

Discussion

Stigma is not that prevalent as what previous studies had determined. Meanwhile, stereotypes are much more prevalent than stigma. These findings indicate that people's biased and hostile perceptions towards people with mental illnesses or other related issues have decreased compared to several years ago. However, due to lack of knowledge, various stereotypes still exist simultaneously, which may adversely influence individuals' mental health. Although people may not perceive others with mental illness or are dangerous or ashamed, they may instill an optimistic bias that they are not as quick to obtain those kinds of mental illnesses. In a study by Kim and Hancock (2015), people with higher optimistic bias are affected more efficiently due to lack of attention, thus missing the optimal stage for curation and treatment. Studies further indicated that the duration of untreated psychosis is significantly crucial as a

critical predictor of both short- and long-term outcomes of psychosis (Chang et al., 2013; Tang et al., 2014).

This thesis found that the most prevalent causal attribution is environmental causal attribution; it arises from society's stress, including workplace and workload pressure and all other kinds of pressures and factors that affect individuals' perceptions and behaviors. Studies have found that environmental causal attributions (Chou & Mak, 1998) decrease individuals' negative perceptions towards people with mental illness; therefore, this finding can explain why stigma-related themes are much less in former studies. However, this thesis also found that personal attributions are the second-largest causal attribution, with individuals making statements like "I am too sensitive, or it is all my personality that pursues perfection too much; therefore, I got this kind of illness." Studies have indicated that people who desire perfection are more easily dissatisfied with their achievements, and increased depression can harm their self-esteem as another adverse outcome (Accordino et al., 2000). Among all biological and parental causal attributions, this thesis found that most second-largest attributions pertained to the concerns from pregnant mothers or those who were about to get married or become pregnant, as they expressed their worries on whether the syndrome might influence their children's mental health instead of establishing others as born with the illness. Regarding parental causal attributions, nearly all posts involved individuals' memories of their parents' abuse, dislikes, and distance.

Several posts provided social support instead of requested support; one reason might be due to the platform's characteristics. In the aspect of affordance of social media platforms (Bucher & Helmond, 2018; Ellison & Vitak, 2015), such platforms like Xiaohongshu function with high-level affordance, encouraging individuals to share and engage in various kinds of

discussions. As discussed, individuals used Xiaohongshu to express their experiences and understanding, and all the tips they concluded based on their perceptions. While such an anonymous feature helped individuals in hiding their true identities, they were more willing to express the experiences and emotions. However, Xiaohongshu was initially a platform to recommend a good thing or share user experiences. As such, norms on platforms include general detailed posts about individuals' personal experiences. Hence, users may not utilize it to raise specific questions or seek empathy regarding their situation.

Among all social support provisions, informational ones were the most common. One reason for this phenomenon is that people with mental illness tend to express their feelings and experiences in a much more anonymous atmosphere instead of realistically; therefore, the platform serves as a shelter for individuals who are concerned or ashamed of their situations to express their experiences and seek help. Moreover, when people get cured or perceive some positive effects from their treatments, their suffering and doubting past builds bridges with those still wondering about the situation. Thus, a similar situation and past may encourage cured people to share their experiences. Meanwhile, instrumental social support is the least among the three types of social support provision. According to a report, one problem is that most of Xiaohongshu users are females aged 25–35. These users may not have relatively substantial economic resources or the capacity to provide practical help based on safety concerns. Another reason is that some who have mental illness still suffer from stigmatization; when offering instrumental support, they may put themselves at the risk of letting others know their identities. In this case, relatively few people tend to offer instrumental social support instead of emotional and informational social support.

According to the observations, although 32% (n = 800) were about treatment, not many of them mentioned curation or recovery. To some extent, it may be because some users did not follow up on their original posts and continued updating. Another potential explanation can be that mental illness is a relatively lengthy process that cannot complete within a year or two; however, the dataset included messages posted only within the past two years. In this case, governments and health campaigns can enhance the coverage of professional sources that are both valid and publicly trustworthy.

Strengthen and Limitations

The content analysis provides an up-to-date picture of social media coverage of mental illness and related issues. New findings different from existing studies such as that stigma is significantly less than before, and there is a magnificent difference between social support provision and request could provide scholars and government insights and inspirations to understand better social media's role in influencing individuals' mental help-seeking. However, two limitations could be paid more attention to in future studies. The first one is that the choice of the platform, although at the beginning, demographic quota sampling was adopted to make sure the sample was not gendered biased. In the data filtering procedure, most of the male participants were filtered out because they are not frequent users of Xiaohongshu. So next time, a more gender-balanced social media platform could be considered. The second point is that only 2509 messages are strictly about mental illness, so later research on a dataset with a more significant number of messages could provide a more representative analysis.

Conclusion

The content analysis results showed that social media such as Xiaohongshu play a significant role in providing social support for people regarding mental illness-related issues.

Individuals could obtain informational, emotional, and instrumental resources on this platform. In detail, individuals could refer to others' experience on confirmation of illness, making appointments with hospitals, and how to deal with personal life. Additionally, the platform also serves as a shelter where individuals could express their sadness and acquire empathy. The general landscape of this platform is not as stigmatized as former studies have concluded, but there are still large numbers of stereotypes that exist simultaneously, which provides new research directions for future scholars.

CHAPTER 5: SOCIAL MEDIA EXPOSURE AND COGNITIVE FACTORS

Literature Review

Social Media Effect on Cognitive Factors

Large amounts of studies have tested the effects of media on individuals' perception of mental illness-related issues. With the increasing user and prevalence of social media, scholars' interest in exploring its effect in advocating mental health glowed up as well. Most of the studies paid attention to user-generated content and explained how the interaction online enhanced users' self-esteem and their choice of sources. For example, scholars found that social media functions as a valuable tool to promote mental health issues and reduce stigma (Naslund et al., 2014; Bargh & McKenna, 2004; Whitley & Denise Campbell, 2014). In the context of mass media, some scholars pointed out the potential and salient framing effects of stigmatization on mental illness and help-seeking behaviors (see Corrigan et al., 2005; Pirkis et al., 2006). Moreover, it is more practical to find communication channels' effect directly on individuals' behavior change based on the media's effects on individuals' cognitive perception. Social media, including social network sites (such as Facebook, Twitter, and Instagram) and mobile applications (such as WeChat, Weibo, and Snapchat), have received billions of users worldwide and occupy a large amount of their daily usage (McColl et al., 2014; China Internet Network Information Center, August 2019). Social media has been approved to be a powerful "tool" for understanding the psychological states, health, and well-being of individuals and populations (Culotta, 2014)

In addition, studies have explored how the frequency of use and the quality of content on social media influence audiences' perception of mental health (Davila et al., 2012) and found that both the quality of content and the exposure frequency influence individuals' mental health

decision. With the emergency of social media, different types of conversation and communication about mental illness could happen on the Internet. Apart from a large amount of social media users, multifarious contents about mental illness such as social support (Choudhury & De, 2014; Berryman & Kavka, 2018), professional treatment or clinical approaches information (Stuart, 2006) as well as cases report about suicide or self-injuries of celebrities and ordinary citizens are also represented on social media (Niederkrotenthaler et al., 2010, 2012).

Large amounts of analyses have reported that the media coverage of mental illness could be stigmatizing, and some descriptions about those who are mentally ill are misconceptions despite social media or mass media (Corrigan et al., 2005; Pirkis et al., 2006; Robinson et al., 2019). For instance, Pan, Liu, and Kreps (2018) systematically categorized the stigma related media content and attribute them into four categories, namely biological/genetic (i.e., born with), environmental (i.e., life changes, incidents, work), parental (i.e., abuse or parental issue) and personal (i.e., character deficit). Although other studies also indicated that the reports about depression are becoming less stigmatizing and more favorable (Aragonès et al., 2014; (Goulden et al., 2011, pp. 1992–2008). Frankham (2019) pointed out that implicit and innocuous stigmatization is three times as explicit forms, which still influence public attitudes and behaviors towards mental illness. For example, one of the up-to-date studies indicated that news coverage still picturing depression as a violent and suicidal concept no matter whether depression was the main topic of the news stories or not, as a result, the stereotype of mental illness such as depression still keeps increasing (Xiaohui Wang et al., 2020). Moreover, according to Cornelia, von Heydendorff, Harald, and Josef (2019), “Even single film presentations of familiar events that contain potentially stigmatizing content have an impact on stereotype agreement and negative affect.”

Social Media Exposure Influence Individuals' Self-stigma

Nowadays, media plays a critical role in influencing individuals' evaluation of mental illness and related treatment. Numbers of existing studies reported the significant relationship between social media exposure to stigma towards mental illness (Ma, 2017; Goepfert et al., 2019). For example, Maier and her colleagues found that films and TV portraits about individuals seeking help and those with mental illness significantly increased audiences' self-stigma (2014). Chan and Yanos's (2018) study indicated that biased media priming directly causes individuals' perception that mental illness is associated with violence. Another newly published study investigated the effects of a variety of media, including both online media and offline media, found that the portrayal of people with mental illness leads to a higher public stigma that seeing people with mental illness as dangerous and lack of responsibility (Odgers & Jensen, 2020). In Ma's (2017) study, the author stated that media is still describing mental illness negatively and led to ongoing stigmatization towards mental illness issues.

With the growing user population and interactive characteristics, social media's role in influencing audiences' stigma has also been studied. However, findings contradicted from the traditional media's effects suggested that social media could probably be an effective tool to promote mental health issues and reduce stigma (Bargh & McKenna, 2004; Whitley & Denise Campbell, 2014). For instance, scholars emphasized the importance of user-generated content, which might help adjust individuals' stigma (Betton et al., 2015). Additionally, Naslund, Aschbrenner, Marsch, and Bartels (2016) found that by providing hope and personal empowerment, approaching interventions for mental wellbeing delivered through social media, and exchanging experience and knowledge about mental illness, social media can reduce stigma and overcome social distance and isolation for both individuals with and without mental

disorders. Unlike personal stigma and public stigma (Brown et al., 2010; Vogel et al., 2009), self-stigma has been found to fully mediate the influence of public stigma on mental help-seeking (Vogel & Wester, 2003). Combined with the results from the meta-analysis that self-stigma has a more substantial effect on influencing the final intention, I will mainly take self-stigma as the research subject instead of including all types of stigma.

Social Media Exposure and Cognitive Factors

Exposure to media not only influences individuals' stigma but also impacts other cognitive components. McCombs, Shaw, and Weaver (1997) had widely explored the media's cognitive effects by raising the agenda-setting theory. Jeffres (1997) also indicated that media has stimulating effects on individuals' cognition. Gerbner, Gross, Signorielli, Morgan, and Jackson-Beeck (1979, p. 10) pointed out the cumulative effects of messages on media. To put it more precisely, Riles' study (2020) indicated that social media consumption significantly influences individuals' communication with people diagnosed as mentally maladjusted via the mediation role of attitudes instead of stigma. Diefenbach and West (2007) found that watching TV about violent scenes about mental illness is significantly related to the negative attitudes towards mental illness.

Additionally, Demyan and Anderson (2012) systematically analyzed the mass media's influence on individuals' attitudes, expectations, and intentions on mental illness help-seeking. Results indicated that with the intervention of mass media, participants' attitudes and MIHS intention increased significantly. Livingston (2014) focused on social media and found out that public service announcements (PSA) about mental illness presented on social media significantly augmented young people's negative attitudes towards mental illness issues. Johnson and Riles

(2018) found that media use significantly predicted individuals' perceived prevalence of mental illness.

In the meta-analysis, I analyzed the estimated effect size of perceived self-efficacy instead of perceived behavioral control. I continue to measure self-efficacy in the following survey. I chose self-efficacy as follows. Perceived behavioral control refers to the perceived ease or difficulties over a behavior (both the control of the behavior itself and the control of the outcome). While self-efficacy from Bandura's theory refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given levels of attainments." As Ajzen stated in his article in 2002., in this condition, self-efficacy also represents the control over behavior (the behavior itself). So, self-efficacy could be considered as part of the perceived behavioral control. Their measurements are also alike. For perceived behavioral control, the measurement is "capability to perform a behavior or indirectly based on beliefs about ability to deal with specific inhibiting or facilitating factors." While self-efficacy also measures the individuals' capability to conduct a behavior. Ajzen clarified the difference between self-efficacy and controllability in another article in 2006, stated that controllability is emphasized on "the extent to which performance is up to the actor."

Moreover, he also analyzed the difference between self-efficacy and controllability. He further confirmed the findings from a meta-analysis by Cheung and Chen (2000). This analysis showed that self-efficacy measures accounted for additional variance in intentions and behaviors, but controllability predicted intentions only when combined with self-efficacy. So, I chose self-efficacy instead of perceived behavioral control as a more suitable predictor for its stronger effect.

Research Questions and Hypothesis

As discussed above, I proposed the following hypothesis and research questions:

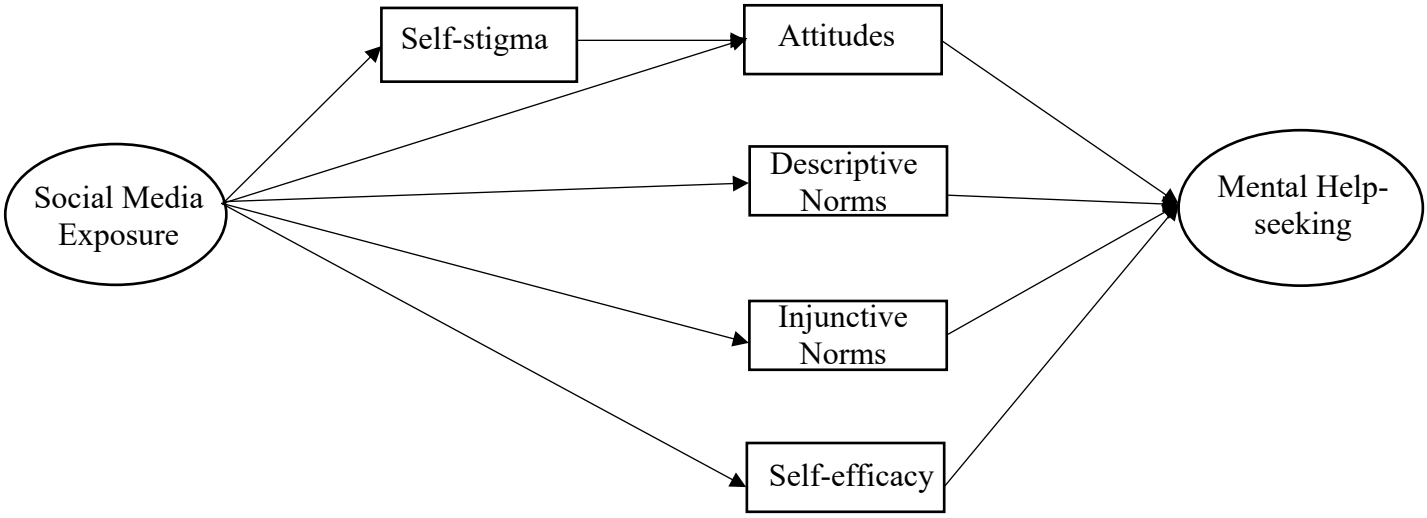
H1: Social media exposure significantly increase individuals' self-stigma towards mental illness.

H2: Self-stigma significantly decrease individuals' attitudes towards mental help seeking.

H3: Self-stigma significantly mediates the relationship between social media exposure to attitudes towards mental help seeking.

RQ8: What is the relationship between social media exposure and attitudes, descriptive norms, injunctive norms and self-efficacy towards mental help seeking?

RQ9: What is the relationship between attitudes, descriptive norms, injunctive norms and self-efficacy towards mental help seeking and intention to seeking mental help?



Proposed Research Model

Method

Participants and Procedures

First of all, I randomly recruited the online survey participants using the Tencent

Questionnaires (腾讯问卷) online panel. A power analysis using GPower (Faul et al., 2007) with power (1 – β) of 0.95 and α = .05, two-tailed, indicated a sample size of 184 participants was necessary to reach a statistical significance level of $p = .05$ in the repeated measures ANOVAs reported in the results section. The initial number of participants was 644, then I filtered out participants who are not Xiaohongshu users and currently or have been in mental health situations for at least six months to make sure them won't get potentially influenced. The sample included 413 participants who are all adults (372 female, $M_{age} = 22.28$, $SD_{age} = 4.31$) who completed the survey in the end. The IRB approved the questionnaire and procedure.

Measurements

The dependent variable will be mental help-seeking intention, and the independent variables include demographic factors (age, gender, educational status, income, mental health conditions and former help-seeking experience), behavior factors (attitudes, descriptive norms, injunctive norms, self-efficacy, intention, self-stigma,), and media exposure frequency. The measures of study variables will be adapted from previous research on mental help seeking (Corrigan et al., 2006; Fishbein & Ajzen, 2010; Henry & Crawford, 2005; Lovibond & Lovibond, 1995). Details are provided as below.

Social Media Exposure. In order to measure social media exposure frequency ($M = 5.02$, $SD = 2.57$), I asked the participants how frequently they use Xiaohongshu using the Likert scale from 1 = never to 7 = extremely frequent in the last one months. In addition, I also asked how often individuals are exposed to social media content that are related to mental illness (specific examples will be provided for participants' better understanding of the related content) with Likert scale from 1 = never to 7 = extremely frequent in the last month ($M = 2.15$, $SD = 1.39$).

DASS. The Depression, Anxiety, Stress Scales (DASS-21) short form were used to measure depression, anxiety, and stress (Henry & Crawford, 2005). The measure contained 21 items, and each seven items for each are categorized as one mental health constructs (depression, anxiety and stress). Scores for each subscale vary from zero to 21. According to the results of categorical analysis, scores were gathered and collected depend on scorings from Lovibond and Lovibond (1995), with depression, anxiety, and stress divided into five categories each, with cut points set at < 10 (normal), < 15 (mild), < 21 (moderate), < 27 (severe), and 28 (extremely severe) for depression. Then a median split was used to divide the participants into two groups: better mental health group (n = 232) and worse mental health group (n = 181) based on their mental health status score.

Theory of Planned Behavior. The variables from theory of planned behavior are used to measure participants' attitudes, descriptive norms, injunctive norms and self-efficacy towards mental help seeking (Ajzen, 1995; Fishbein & Ajzen, 2010). The measure consists of five set of variables. Items from descriptive norms, injunctive norms, self-efficacy and intention are measured with Likert scale from 1 to 7, with 7 being the most intense. While attitudes are measured with semantic differential scale.

In details, I measured attitudes towards MHS (α = .91, M = 5.63, SD = 1.28) using three 7-point semantic-differential items: (a) worthless to valuable, (b) undesirable to desirable, and (c) extremely unimportant to extremely important. To measure the descriptive norms (α = .88, M = 3.33, SD = 1.37), I asked the participants to indicate their perceived level of prevalence (1 = never, 7 = all the time) for seeking mental help when experiencing mental health issues among (a)average people, (b) their friends, and (c) their classmates/colleagues. To measure injunctive norms (α = .90, M = 4.83, SD = 1.59), the participants were asked to indicate their perceived

level of approval (1 = strongly disapprove, 7 = strongly approve) for seeking mental help from their (a) family members, (b) close friends and (c) classmates/colleagues. As for self-efficacy (α = .93, *M* = 4.62, *SD* = 1.67), the participants indicated their perception on three statements about their confidence in their capability to seek mental help on a 7-point scale (1 = strongly disagree, 7 = strongly agree), e.g., "I am confident of seeking mental help when I experience mental health issues even if I need to figure out the process". To measure intention (*M* = 3.29, *SD* = 1.65), I asked the participants how likely (1 = very unlikely, 7 = very likely) they would seek mental help the next time they experienced mental health issues.

Self-stigma towards Mental Help Seeking. To measure self-stigma (α = .65, *M* = 3.67, *SD* = 0.87), participants were asked to rate the following statements such as "I would feel inadequate if I went to a therapist for psychological help.", "My self-confidence would NOT be threatened if I sought professional help.", "It would make me feel inferior to ask a therapist for help." and so on.

Results

Differences in Psychosocial Factors

According to the independent sample T-tests, the better group reported significantly more favorable attitudes, as well as higher levels of descriptive norms, and self-efficacy compare to the worse mental health group. However, people in the worse mental health situation showed higher social media exposure frequency (See Table 9).

Table 9

Means and Standard Deviations of the Variables by Mental Health Conditions (n = 413)

	Better Mental Health Group (n = 232)	Worse Mental Health Group (n = 181)	t
Attitudes	5.83 (1.29)	5.37 (1.23)	3.64***
Descriptive norms	3.28 (1.44)	3.41 (1.28)	-0.93
Injunctive norms	5.03 (1.72)	4.57 (1.36)	2.95**
Self-efficacy	4.87 (1.70)	4.31 (1.58)	3.43***
Self-stigma	3.61 (0.92)	3.74 (0.79)	-1.55
Exposure	4.86 (1.62)	5.22 (1.49)	-2.31*
Behavioral intention	3.22 (1.70)	3.38 (1.57)	-0.96

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

Predictors of Mental Help-seeking

To assess the measurement model, confirmatory factor analysis (CFA) was conducted with the maximum likelihood mean adjusted (MLM) estimator. The CFA results showed an acceptable level of model fit (n = 413): χ^2 (150) = 219.180, χ^2/df = 1.46, CFI = 0.98, TLI = 0.98, RMSEA = 0.033, SRMR = 0.039. All the factor loadings were ranged from 0.65 to 0.96. The correlations among all study variables are presented in Table 10.

Structural Equation Modeling (SEM) with the maximum likelihood mean adjusted (MLM) estimator was conducted (n = 413), controlling age, gender, income, education, experience and mental health conditions. The model fit was acceptable: χ^2(160) = 192.319, χ^2/df = 1.20, CFI = 0.99, TLI = 0.99, RMSEA = 0.022, 90% CI of RMSEA = 0.005 - 0.033, SRMR = 0.036 (see Figure1). In detail, attitudes (β = .131, p < .01), injunctive norms (β = .148, p < .05) and self-efficacy (β = .168, p < .01) significantly influenced the intention to mental help-seeking.

Meanwhile, social media exposure has significant influence on attitudes (β = .124, $p < .01$), descriptive norms (β = .231, $p < .001$), injunctive norms (β = .132, $p < .05$) and self-stigma (β = .138, $p < .01$). Self-stigma was found to negatively influence individuals' attitudes (β = -.105, $p < .05$) (See Figure 1). Additionally, total effect from social media exposure to attitudes is positive (β = .109, $p < .05$) which represents that social media exposure significantly increase individuals' attitudes towards mental help seeking in general even self-stigma partially mediates the effect (See Figure 1).

Table 10

Correlations among All Study Variables (n = 413).

	Mean	BI	AT	DN	IN	SE	Ssti	Age	Exp	Fre
BI	3.29 (1.65)	-								
AT	5.63 (1.28)	.355***	-							
DN	3.33 (1.37)	.368***	.311***	-						
IN	4.83 (1.59)	.388***	.575***	.386***	-					
SE	4.62 (1.67)	.415***	.590***	.411***	.656**	-				
Ssti	3.67 (0.87)	.212***	.363***	.344***	.414***	.423***	-			
Age	22.3 (4.31)	-.020	-.035	-.038	-.018	-.037	.045	-		
Exp	1.94 (1.25)	.432***	.008	.310***	.021	.061	.124*	-.010	-	
Fre	5.01 (1.57)	.134**	.106*	.181***	.132**	.077	.125*	-.239***	.099*	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. AT = attitudes, IN = injunctive norms, DN = descriptive norms, SE = self-efficacy, BI = behavioral intention, Ssti = self-stigma, Edu = education, Exp = help-seeking experience, Fre = social media exposure frequency

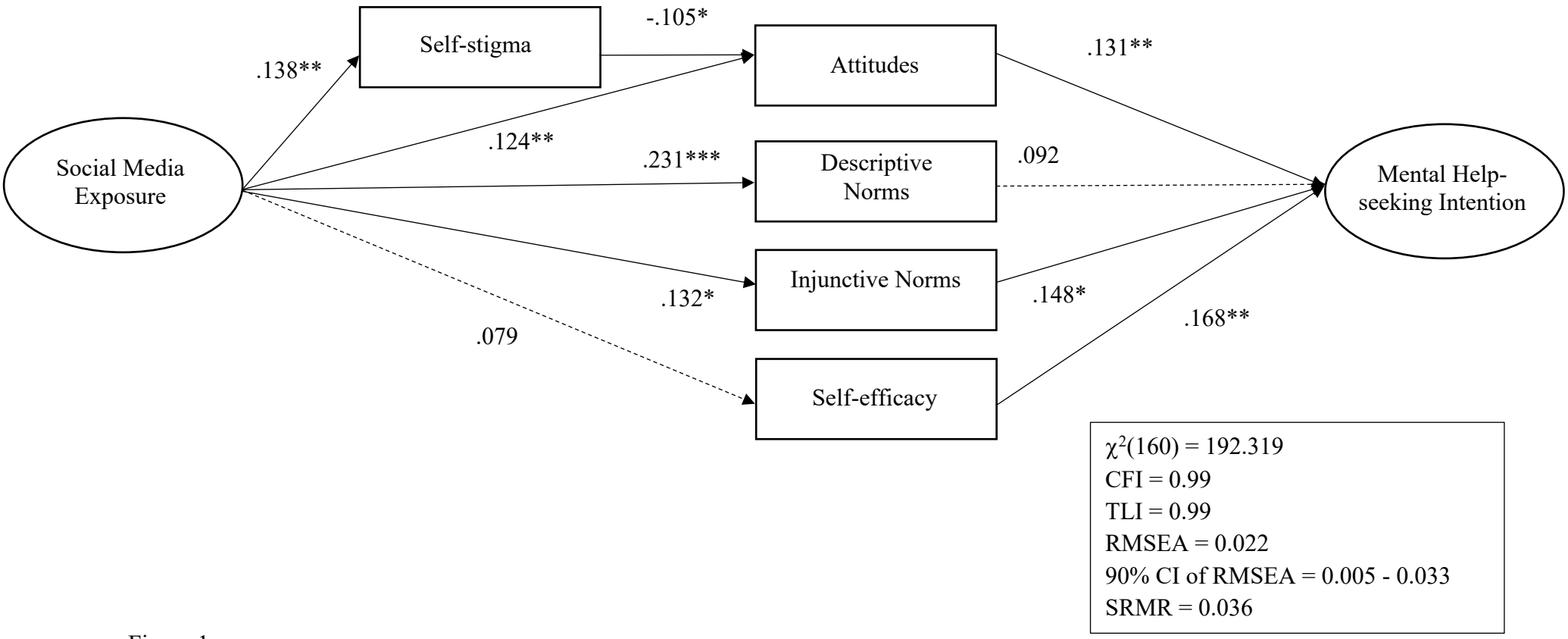


Figure 1

SEM results for the survey sample ($n = 413$). *$p < .05$, **$p < .01$, ***$p < .001$. Age, gender, education, income, experience and mental health conditions were controlled.

Discussion

Scholars have contradicted findings on social media exposure's influence on mental health and related behaviors. Some of them believe that social comparison-online might increase users' anxiety and harm their mental situations. Others tend to focus on the interactive parts stating that by learning from others' experiences, individuals could gain different types of social support and messages as reference. Findings from this study further explain the contradiction. First, social media exposure in general increased people's attitudes towards mental help-seeking, which could enhance users' mental help-seeking intention and solve their problems positively. However, as a significant and non-negligible factor, self-stigma played another role in how this process might differ. To make it more specific, self-stigma has been regarded as the mediator between social media exposure and attitudes towards mental help-seeking, which is to say, if an individual has higher self-stigma such as devaluing themselves, seeing things from a more negative aspect, and so on. Therefore, even in the face of the same content, people with higher self-stigma might take the content from a self-objectification angle and compare themselves to the case instead of taking positive cues and seeking help. Another explication of this finding is that individuals with worse mental health conditions tend to be more likely to be influenced by social media exposure in a negatively way; therefore, when design health campaigns and messages, scholars need to be aware of the boomerang effect (Lienemann & Siegel, 2016).

As for social media exposure's effect on other TPB variables, results indicated that social media exposure significantly increases individuals' descriptive norms and injunctive norms. On the one hand, Xiaohongshu is the platform to share and exchange experiences. Therefore, most users come to this kind of platform to figure out the "norms" regarding specific topics. Taking mental help-seeking as an example, most of the messages provided informational social support

and treatment information based on users' personal experience. Therefore, a relatively straightforward trend and status of what other people are doing were well presented on the platform. When it comes to injunctive norms, content analysis has found that most help-seeking experiences come from the encouragement or concerns from their family members, which made individuals decide to seek help eventually. It is more of the orientation of others instead of themselves. However, social media exposure did not affect individuals' self-efficacy, which is not hard to understand. Seeking mental help is instead a personal and private behavior that depends on one's evolution on the ability and possibility to take action, which is less likely to be interfered with by external influence.

TPB's constructs' effect in explaining individuals' mental help-seeking reached 39% of the variance. Attitudes, injunctive norms, and self-efficacy were significant predictors of individuals' mental help-seeking, which is similar to existing studies. However, different from former studies, descriptive norms failed to predict mental help-seeking. One possible explanation could be drawn from optimistic bias; according to a study conducted by Spendelow and Jose (2010), a total sample of 263 undergraduate students were found to evaluate themselves less likely to get depressive symptoms compared with their peers, as well as to have a lower possibility to need help. Another study conducted taking Facebook as the platform found similar results that Facebook users tend to perceive them as less likely to experience adverse outcomes and potential risks than other uses (B. J. Kim et al., 2015).

Limitations and Strength

First of all, the survey has several strengths. From the empirical investigation of how social media exposure interfered with individuals' self-stigma and TPB constructs, findings of the mediation effect explained some of the contradicted conclusions on social media exposure's

effect. The more nonsignificant effect from descriptive norms to intention also provides a new perspective for scholars when taking TPB as the theoretical framework. Nevertheless, there are several limitations. Although I used quota sampling at the first stage, after filtering out the participants who do not use Xiaohongshu, the ratio of gender is not as balanced as expected because there were more female users than male users. Another limitation is that Xiaohongshu might not be the perfect platform as the survey object because most of the messages on this platform focus on sharing instead of helping out. Although it has the advantage of public data, other online help forums could serve a more suitable place in future studies.

Conclusion

To conclude, participants' mental help-seeking intentions were significantly predicted by individuals' attitudes, injunctive norms, and self-efficacy, consistent with the former study—the descriptive norms' nonsignificant effect on intention worth more attention regarding the optimistic bias. Self-stigma also significantly negatively affected individuals' attitudes and, meanwhile, influenced social media's effect on individuals' attitudes. Last but not least, the findings highlighted the effect and nature of social media and that self-stigma and descriptive norms are potential indices for a sally port for mental health intervention strategies.

CHAPTER 6: CONCLUSIONS, IMPLICATIONS, AND FUTURE DIRECTIONS

This thesis provided a thorough comprehension of how scholars had addressed various topics and factors to predict and interfere with individuals' mental help-seeking. By conducting a meta-analysis based on 69 articles published in standard journals over the past 20 years, its results indicated that attitude was the strongest predictor of mental help-seeking, while TPB constructs were likewise valid predictors as consistent with former studies. Self-stigma was another significant predictor compared to the other factors. Based on statistical data, other factors from TPB, IMBP, and HBM were also significant predictors. Meanwhile, demographic factors like gender and education further significantly influenced mental help-seeking. Nowadays, social media is a significant component of everyone's daily life. Statistics from published help-seeking reports determined that individuals usually spend more than six hours on social media daily.

Moreover, scholars found that exposure to social media content could yield social help-seeking and addictive syndromes, worsening individuals' sleep status and mental wellbeing. Despite the excessive use of social media and its potentially adverse outcomes, people worldwide also utilize social media to seek social support and help. Studies have proved that social media platforms serve as places for people suffering from domestic violence, HIV, and various cancers to seek help and social support. Related user-generated social media content include help-seeking empathy, authority (based on experience), and first-hand information regarding health topics. Among the samples in the meta-analysis, only one study involved people older than 65 years old, which might entail complex social media content. Other samples involved young adults, college students, or adults who took the survey via their electronic devices. Therefore, it is reasonable to assume social media exposure as a vital antecedent of mental help-seeking and an unignorable context when analyzing mental help-seeking.

However, this thesis determined that none of the 69 articles analyzed social media engagement or exposure's influence. Although existing studies have paid various endeavors in exploring social media's role in influencing people's mental health situations, it was rare for them to test social media's effect on resolutions like seeking help. The underlying reason could be drawn from two aspects. The first aspect was that how mental help-seeking was presented online remained vague; the second was that social media comprised various types of messages, and the underlying "atmosphere" is still being contended by existing studies. Based on the results of meta-analysis, this thesis aimed to test social media's presentation of contents further.

Nowadays, various studies have indicated that people can seek mental illness-related content, including social support, stigmatized expressions, and others' mental help-seeking experiences. However, existing studies were only focused on singular perspectives, with contradictory findings getting in the way against scholars further exploring social media's effects. For instance, whether social media has more supportive valence or repellent valence towards mental illness remains debatable. Meta-analysis indicated that varying proportions of positive attitudes and stigma affect individuals' mental help-seeking intentions. In this case, an underlying significance exists to explore social media presentation. Thus, this study conducted a content analysis following the meta-analysis to determine the domain valence of the different factors on a social media platform like Xiaohongshu. This platform was the chosen study site for its extensive userbase and open access characteristics, enabling people to read the contents on the platform without having the need to register. In addition, users can post and search information, and conduct all forms of communication operations on the platform. Although Xiaohongshu was a social e-commerce platform when it initially entered the market, it currently has all the same attributes as other mainstream social platforms, even ranking among the eight most used social

media software (27%) in China and becoming the mainstream social platform for young people. Moreover, there is little research on Xiaohongshu as a social platform, thus exhibiting much potential value.

Through content analysis, this thesis selected 2,509 messages that strictly covered mental illness topics from a total sample of 9,000 messages using the keywords "mental illness." Among those 2,509 messages, only 368 came from official accounts. Hence, although the government has advocated promoting citizens' mental health awareness, the coverage of professional information still necessitates improvement. Moreover, among the 2,509 messages, the coders coded only 89 that directly expressed stigma. More messages merely presented stereotypes that might come from insufficient knowledge instead of adverse evaluations of mental illness-related issues. One huge difference between stereotype and stigma lies in bias of valence; a stereotype is not always negative, perhaps due to lack of knowledge instead of discrimination towards mental illness. Consistently, this thesis determined that there were much more existing stereotypes compared to stigma. Stereotypes like mental illness can undergo treatment without medicine, and some users believe that they are not likely influenced by mental disorders, all of which may be potential hindrances against individuals seeking help. Results from content analysis further proved that social media could work as a shelter where individuals could garner plenty of social support, whether emotional, informational, or instrumental. To sum up, social media platforms like Xiaohongshu consist of relatively less damaging content regarding mental illness. Based on former scholars' findings, they are anticipated to elevate individuals' perceptions towards mental help-seeking.

Based on the content analysis results, most people could seek emotional or instrumental support by searching and surfing relevant apps. However, stereotypes and other types of

attributions might still hinder individuals' mental help-seeking. Following a clear understanding of content presentation, a test for exposure to social media contents could help explain and predict mental help-seeking intentions. Presently, scholars have investigated how social media exposure influences individuals' cognitive factors (A→B) or how these factors influence final mental help-seeking intention (B→C). However, none of the existing studies analyzed the effects of social media exposure on individuals' mental help-seeking intention (A→C). Together with the meta-analysis results that confirmed the effects of cognitive factors like attitudes, perceived norms, and self-efficacy on mental help seek help-seeking, and the findings from content analysis, social media included factors that could potentially impact cognitive factors. Reasonably speaking, social media contents could influence individuals' mental help-seeking intentions through changes in cognitive factors. By conducting the survey and taking social media exposure, cognitive factors, and mental help-seeking intention into the model, this thesis could not only fill in the research gaps and answering how social media influence individuals' mental help-seeking, but also could provide feasible explanations concerning the underlying process (A→B→C). Among the stigmatized contents summarized, most of them were public stigma, or shared discrimination towards mental illness. Studies have found that both stereotype and public stigma can lead to increased self-stigma (Baumeister & Finkel, 2010; Gawronski & Bodenhausen, 2006; Nosek & Greenwald, 2009; Wittenbrink & Phil, 2007). Therefore, this study also included self-stigma as one of the results of social media content exposure.

The survey results served as further explanation and supplement to existing studies focusing on mental help-seeking. The survey aimed to include both social media exposure and self-stigma based on meta-analysis and content analysis. It testified to the hypothesis, with the results indicating that social media exposure significantly increased individuals' attitudes

towards mental help-seeking and enhanced their intention towards it. Moreover, self-stigma was also increased by social media exposure and was found to influence individuals' attitudes adversely. One potential explanation could be that people with worse mental health conditions are relatively sensitive, and some messages may negatively impact their perception of specific issues. For instance, according to Lienemann and Siegel (2016), people with higher depression levels may perceive public service announcements as aggressive, hence reacting with greater resistance.

Another point that provides scholars with new insight is that descriptive norms fail to predict individuals' intentions. A feasible justification involves individuals' optimistic bias, which hold that they are much less likely to acquire mental illness; thus, irrespective of what others have been warning, they tend not to act regarding their syndromes. An example from the coded stereotypes from the content analysis can further support this; several stereotypes expressed surprise on how such an outgoing or ordinary people could be depressed, never expecting that this kind of "trouble" would affect them.

Based on the above conclusions and implications, there are several feasible future directions . Firstly, scholars can pay more attention to individuals' stereotypes towards mental illness instead of stigma, and then explore the effects of stereotypes on mental help-seeking. Sometimes, it is not the negative evaluation of an outcome, but the fear or ignorance that inhibits a person's action. Secondly, advocation on the generalization of some diseases can be realized to interfere with optimistic bias better. Lastly, according to Lapinski and Rimal (2005), private settings may not be as predictable as behaviors that occur in public settings. Ajzen further emphasized that intention does not necessarily lead to the occurrence of behavior at the first stage. Although several people advocate mental help-seeking, whether individuals will seek help

remain under their control, and no one can witness the process apart from the necessary persons involved (e.g., doctors or therapists). Thus, for referential purposes, a longitudinal study designed to detect actual behaviors can help make future research focus on the association between cognitive and behavioral changes more accurately.

APPENDIX CHINESE VERSION OF QUESTIONNAIRES

社交媒体使用和个体心理求助的研究

您获邀参与一项基于计划行为理论，关于社交媒体曝光会如何影响个人寻求心理帮助的调查。本次研究将不会对您的生理，心理，情绪，职业或者财产造成任何损失。您需要在网上完成一份问卷，大约需要 5 到 10 分钟完成。为确保隐私，调查不会涉及到任何可以辨识您身份的信息。您的姓名以及其他辨识性信息将在问卷结束后以序号的形式替代。只有您填写的内容会被记录。所有资料会在电子密码设备中储存至少三年。数据仅供授权人员进行分析和发布，且仅供研究使用。您的参与是完全自愿的，您可以拒绝参加而不受处罚。如果您决定参加，您同样可以在任何时候退出研究，而不会受到任何惩罚，也不会失去您在其他方面享有的权益。如果您在问卷收集结束之前退出，您之前的回答记录将被清空销毁。本人已阅读及明白上述内容，我同意参与这项研究。

1.你的年龄

小于 18

大于 18

2.你今年几岁?

3.你的性别是

男

女

4.目前你是否正在寻求心理咨询，接受药物或冥想治疗?

是的

不是

5.过去的六个月以内，你是否接受过心理咨询，接受过药物或冥想治疗?

是的

不是

6.你平时会使用小红书吗？包括浏览，搜索，发帖，种草等

会

不会

7.请问在过去一个月里，你使用小红书频率是

1 分为非常几乎没有,7 分为非常几乎每时每刻, 您的评分是 ___分

8.请问在过去一个月里，你在小红书上接触到关于心理健康内容的频率是

心理健康问题内容包括：症状描述，个人经历分享，诊断治疗，他人评价，康复过程，相关药物等

1 分为非常几乎没有,7 分为非常几乎每时每刻, 您的评分是 ___分

请根据你的日常感受，对以下每项描述的程度进行评分

9.我感到口干

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

10.我感到呼吸困难

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

11.我感到颤抖（例如手抖）

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

12.我担心一些令自己恐慌或者出丑的场合

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

13.我感到自己快要恐慌了

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

14.我察觉自己在没有明显体力劳动的时候，也感到心率不正常

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

15.我无缘无故的感到害怕

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

16.我好像不再能有任何愉快舒畅的感觉

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

17.我感到很难主动去开始工作

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

18.我感到自己对未来没有什么盼望可言

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

19.我感到沮丧忧愁

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

20.我对任何事情也提不起兴趣

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

21.我觉得自己不怎么配做人

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

22.我感到生活毫无意义

1 分为非常正常程度,4 分为非常非常严重的程度, 您的评分是 ___分

23.我觉得很难让自己安静下来

1 分为非常正常程度,4 分为非常非常严重程度, 您的评分是 ___分

24.我对事情往往过度敏感

1 分为非常正常程度,4 分为非常非常严重程度, 您的评分是 ___分

25.我觉得自己消耗了很多精力

1 分为非常正常程度,4 分为非常非常严重程度, 您的评分是 ___分

26.我感到忐忑不安

1 分为非常正常程度,4 分为非常非常严重程度, 您的评分是 ___分

27.我感到很难放松自己

1 分为非常正常程度,4 分为非常非常严重程度, 您的评分是 ___分

28.我无法容忍任何阻碍我工作的事情

1 分为非常正常程度,4 分为非常非常严重程度, 您的评分是 ___分

29.我发觉自己很容易被激怒

1 分为非常正常程度,4 分为非常非常严重程度, 您的评分是 ___分

30.在过去的一年里，当你感觉出现心理健康问题时，你有多经常寻求心理帮助?

心理帮助——在本问卷中指的是专业的心理帮助例如心理咨询，诊所治疗，医院看诊和咨询等

1 分为非常从来没有,7 分为非常每次都会, 您的评分是 ___分

31.当你下一次感觉出现心理健康问题的时候，你有多大可能寻求心理帮助?

1 分为非常非常不可能,7 分为非常十分有可能, 您的评分是 ___分

请按照直观感受填写以下量表

当我感觉出现心理健康问题的时候，寻求心理帮助是

32.向心理健康专业从事人员袒露自我是舒适自在的

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

33.心理帮助可以使我在专业的指导下更好的理解我自己

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

34.心理帮助可以提升我的心理健康

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

35.会让朋友们对我有负面的看法

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

36.会占据我太多的时间

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

37.会打乱我的日常计划

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

38.请选择以下数字表示你的感受：当出现心理健康问题的时候，你觉得寻求心理帮助

-3 分为非常非常不重要,3 分为非常非常重要, 您的评分是 ___分

39.请选择以下数字表示你的感受：当出现心理健康问题的时候，你觉得寻求心理帮助

-3 分为非常不值得,3 分为非常很值得, 您的评分是 ___分

40.请选择以下数字表示你的感受：当出现心理健康问题的时候，你觉得寻求心理帮助

-3 分为非常不吸引人,3 分为非常很吸引人, 您的评分是 ___分

41.你认为一个**普通人**有多经常在感觉出现心理健康问题时寻求心理帮助?

1 分为非常从来没有,7 分为非常每次都会, 您的评分是 ___分

42.你认为你的**好朋友**有多经常在感觉出现心理健康问题时寻求心理帮助?

1 分为非常从来没有,7 分为非常每次都会, 您的评分是 ___分

43.你认为你的**同学/同事**有多经常在感觉出现心理健康问题时寻求心理帮助?

1 分为非常从来没有,7 分为非常每次都会, 您的评分是 ___分

44.当你感到出现心理健康问题并寻求心理辅导，你觉得你的**家人**的感受如何?

1 分为非常非常不支持,7 分为非常非常支持, 您的评分是 ___分

45.当你感到出现心理健康问题并寻求心理辅导，你觉得你的**好朋友**的感受如何?

1 分为非常非常不支持,7 分为非常非常支持, 您的评分是 ___分

46.当你感到出现心理健康问题并寻求心理辅导，你觉得你的**同学/同事**的感受如何?

1 分为非常非常不支持,7 分为非常非常支持, 您的评分是 ___分

47.我有信心在感到出现心理健康问题时主动寻求心理帮助，即使我需要自己弄清楚这个流程

例如如何联络辅导中心等

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

48.我有信心在感到出现心理健康问题时主动寻求心理帮助，即使这可能花费我很多时间

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

49.我有信心在感到出现心理健康问题时主动寻求心理帮助，不管这个问题严不严重

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

50.如果我寻求心理帮助，我会觉得自己不够好

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

51.如果我寻求心理帮助，我的自信心不会被影响

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

52.寻求心理健康帮助让我觉得自己不够聪明

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

53.如果我找一个治疗师聊一聊，会提升我的自我认同感

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

54.关于我自己的看法不会因为我是否决定寻求帮助而改变

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

55.寻求心理帮助会让我觉得低人一等

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

56.如果我决定去寻求心理帮助，我觉得没什么

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

57.如果我决定去寻求心理帮助，我会对自己感到不满意

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

58.如果我是因为自己解决不了的问题寻求心理帮助，我的自信心不会受到影响

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

59.如果我不能自己解决问题，我会感到更糟

1 分为非常不认同,7 分为非常认同, 您的评分是 ___分

60.你每个月的个人收入是多少

0-1500 元

1501-3000 元

3001-4500 元

4501-6000 元

6001-7500 元

大于 7500 元

61.你的文化程度是

未受教育/学前教育

小学

初中

高中

大学专科

大学本科

研究生或以上

62.你的婚姻状况是

未婚

已婚（有配偶）

同居

离婚

丧偶

REFERENCES

Abe-Kim, J., Takeuchi, D. T., Hong, S., Zane, N., Sue, S., Spencer, M. S., Appel, H., Nicdao, E., & Alegría, M. (2007). Use of Mental Health–Related Services Among Immigrant and US-Born Asian Americans: Results From the National Latino and Asian American Study. *American Journal of Public Health*, *97*(1), 91–98. https://doi.org/10.2105/AJPH.2006.098541

Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist, The*, *58*(1), 5–14. https://doi.org/10.1037/0003-066X.58.1.5

Ajzen, I. (2002). *Constructing a TPB Questionnaire: Conceptual and Methodological Considerations*. 14.

Ajzen, I. (1985). From Intentions to Actions: A Theory of Planned Behavior. In J. Kuhl & J. Beckmann (Eds.), *Action Control: From Cognition to Behavior* (pp. 11–39). Springer. https://doi.org/10.1007/978-3-642-69746-3_2

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I. (2002). Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior1. *Journal of Applied Social Psychology*, *32*(4), 665–683. https://doi.org/10.1111/j.1559-1816.2002.tb00236.x

Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, *2*(4), 314–324. https://doi.org/10.1002/hbe2.195

Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological Bulletin*, *82*(2), 261–277. https://doi.org/10.1037/h0076477

Ajzen, I., Fishbein, M., Lohmann, S., & Albarracin, D. (2018). *The influence of attitudes on behavior. The Influence of Attitudes on Behavior*.

Alegría, M., Mulvaney-Day, N., Torres, M., Polo, A., Cao, Z., & Canino, G. (2007). Prevalence of Psychiatric Disorders Across Latino Subgroups in the United States. *American Journal of Public Health*, *97*(1), 68–75. https://doi.org/10.2105/AJPH.2006.087205

Andoh–Arthur, J., Oppong Asante, K., & Osafo, J. (2015). Determinants of Psychological Help-Seeking Intentions of University Students in Ghana. *International Journal for the Advancement of Counselling*, *37*(4), 330–345. https://doi.org/10.1007/s10447-015-9247-2

Angermeyer, M. C., & Matschinger, H. (1997). Social distance towards the mentally ill: Results of representative surveys in the Federal Republic of Germany. *Psychological Medicine*, *27*(1), 131–141. https://doi.org/10.1017/s0033291796004205

Ar, M., Sj, S., & Dl, H. (1994). Illusory correlation in the perception of groups: An extension of the distinctiveness-based account. *Journal of Personality and Social Psychology*, *67*(3), 414–429. https://doi.org/10.1037//0022-3514.67.3.414

Aragonès, E., López-Muntaner, J., Ceruelo, S., & Basora, J. (2014). Reinforcing Stigmatization: Coverage of Mental Illness in Spanish Newspapers. *Journal of Health Communication*, *19*(11), 1248–1258. https://doi.org/10.1080/10810730.2013.872726

Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A meta-analytic review. *British Journal of Social Psychology*, *40*(4), 471–499. https://doi.org/10.1348/014466601164939

Arnaez, J. M., Krendl, A. C., McCormick, B. P., Chen, Z., & Chomistek, A. K. (2020). The association of depression stigma with barriers to seeking mental health care: A cross-

sectional analysis. *Journal of Mental Health*, *29*(2), 182–190. https://doi.org/10.1080/09638237.2019.1644494

Aromaa, E., Tolvanen, A., Tuulari, J., & Wahlbeck, K. (2011). Personal stigma and use of mental health services among people with depression in a general population in Finland. *BMC Psychiatry*, *11*(1), 52. https://doi.org/10.1186/1471-244X-11-52

Baams, L., De Luca, S. M., & Brownson, C. (2018). Use of Mental Health Services Among College Students by Sexual Orientation. *LGBT Health*, *5*(7), 421–430. https://doi.org/10.1089/lgbt.2017.0225

Bandura, A. (1986). Fearful Expectations and Avoidant Actions as Coeffects of Perceived Self-Inefficacy. *American Psychologist*, 3.

Bandura, A. (1993). Perceived Self-Efficacy in Cognitive Development and Functioning. *Educational Psychologist*, *28*(2), 117–148. https://doi.org/10.1207/s15326985ep2802_3

Baptista, M. N., Zanon, C., Baptista, M. N., & Zanon, C. (2017). Why not Seek Therapy? The Role of Stigma and Psychological Symptoms in College Students. *Paidéia (Ribeirão Preto)*, *27*(67), 76–83. https://doi.org/10.1590/1982-43272767201709

Barbara Downe-Wamboldt RN, P. (1992). Content analysis: Method, applications, and issues. *Health Care for Women International*, *13*(3), 313–321. https://doi.org/10.1080/07399339209516006

Bargh, J. A., & McKenna, K. Y. A. (2004). The Internet and Social Life. *Annual Review of Psychology*, *55*(1), 573–590. https://doi.org/10.1146/annurev.psych.55.090902.141922

Barney, L. J., Griffiths, K. M., Jorm, A. F., & Christensen, H. (2006). Stigma about Depression and its Impact on Help-Seeking Intentions. *Australian & New Zealand Journal of Psychiatry*, *40*(1), 51–54. https://doi.org/10.1080/j.1440-1614.2006.01741.x

Barry, M. M., Clarke, A. M., Jenkins, R., & Patel, V. (2013). A systematic review of the effectiveness of mental health promotion interventions for young people in low and middle income countries. *BMC Public Health*, *13*(1), 835. https://doi.org/10.1186/1471-2458-13-835

Bathje, G., & Pryor, J. (2011). The Relationships of Public and Self-Stigma to Seeking Mental Health Services. *Journal of Mental Health Counseling*, *33*(2), 161–176. https://doi.org/10.17744/mehc.33.2.g632039274160411

Baumeister, R. F., & Finkel, E. J. (2010). *Advanced Social Psychology: The State of the Science*. Oxford University Press.

Bayer, J. K., & Peay, M. Y. (1997). Predicting intentions to seek help from professional mental health services. *Australian and New Zealand Journal of Psychiatry*, *31*(4), 504–513. https://doi.org/10.3109/00048679709065072

Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The Scale for Suicide Ideation. *Journal of Consulting and Clinical Psychology*, *47*(2), 343–352. https://doi.org/10.1037/0022-006X.47.2.343

Becker, M. H. (1974). The Health Belief Model and Sick Role Behavior. *Health Education Monographs*, *2*(4), 409–419.

Benyamini, Y., Johnston, M., & Karademas, E. C. (2015). *Assessment in Health Psychology*. Hogrefe Publishing.

Berkman, L. F., & Kawachi, I. (2000). *Social Epidemiology*. Oxford University Press.

Berryman, C., Ferguson, C. J., & Negy, C. (2018). Social media use and mental health among young adults. *Psychiatric Quarterly*, *89*(2), 307–314. https://doi.org/10.1007/s11126-017-9535-6

Berryman, R., & Kavka, M. (2018). Crying on YouTube: Vlogs, self-exposure and the productivity of negative affect. *Convergence*, *24*(1), 85–98. https://doi.org/10.1177/1354856517736981

Betton, V., Borschmann, R., Docherty, M., Coleman, S., Brown, M., & Henderson, C. (2015). The role of social media in reducing stigma and discrimination. *The British Journal of Psychiatry*, *206*(6), 443–444. https://doi.org/10.1192/bjp.bp.114.152835

Blais, R. K., & Renshaw, K. D. (2013). Stigma and demographic correlates of help-seeking intentions in returning service members. *Journal of Traumatic Stress*, *26*(1), 77–85. https://doi.org/10.1002/jts.21772

Bohon, L. M., Cotter, K. A., Kravitz, R. L., Jr, P. C. C., & Garcia, E. F. y. (2016). The Theory of Planned Behavior as it predicts potential intention to seek mental health services for depression among college students. *Journal of American College Health*, *64*(8), 593–603. https://doi.org/10.1080/07448481.2016.1207646

Bowers, H., Manion, I., Papadopoulos, D., & Gauvreau, E. (2013). Stigma in school-based mental health: Perceptions of young people and service providers. *Child and Adolescent Mental Health*, *18*(3), 165–170. https://doi.org/10.1111/j.1475-3588.2012.00673.x

Brinded, P. M. J., Simpson, A. I. F., Laidlaw, T. M., Fairley, N., & Malcolm, F. (2001). Prevalence of Psychiatric Disorders in New Zealand Prisons: A National Study. *Australian & New Zealand Journal of Psychiatry*, *35*(2), 166–173. https://doi.org/10.1046/j.1440-1614.2001.00885.x

Brown, C., Conner, K. O., Copeland, V. C., Grote, N., Beach, S., Battista, D., & Reynolds, C. F. (2010). Depression stigma, race, and treatment seeking behavior and attitudes. *Journal of Community Psychology*, *38*(3), 350–368. https://doi.org/10.1002/jcop.20368

Bucher, T., & Helmond, A. (2018). The Affordances of Social Media Platforms. In J. Burgess, A. Marwick, & T. Poell, *The SAGE Handbook of Social Media* (pp. 233–253). SAGE Publications Ltd. https://doi.org/10.4135/9781473984066.n14

Castonguay, J., Filer, C. R., & Pitts, M. J. (2016). Seeking help for depression: Applying the health belief model to illness narratives. *Southern Communication Journal*, *81*(5), 289–303.

Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, *39*(5), 752–766. https://doi.org/10.1037/0022-3514.39.5.752

Chan, G., & Yanos, P. T. (2018). Media depictions and the priming of mental illness stigma. *Stigma and Health*, *3*(3), 253–264. https://doi.org/10.1037/sah0000095

Chang, C.-C., Lin, C.-Y., Gronholm, P. C., & Wu, T.-H. (2018). Cross-Validation of Two Commonly Used Self-Stigma Measures, Taiwan Versions of the Internalized Stigma Mental Illness Scale and Self-Stigma Scale-Short, for People With Mental Illness. *Palliative Medicine*, *v.25*(n.6), 777–792. https://doi.org/10.1177/1073191116658547

Chang, D. F., Tong, H., Shi, Q., & Zeng, Q. (2005). Letting a Hundred Flowers Bloom: Counseling and Psychotherapy in the People's Republic of China. *Journal of Mental Health Counseling*, *27*(2), 104–116. https://doi.org/10.17744/mehc.27.2.hxfupdhht26b30a6

Chang, W. C., Hui, C. L. M., Tang, J. Y. M., Wong, G. H. Y., Chan, S. K. W., Lee, E. H. M., & Chen, E. Y. H. (2013). Impacts of duration of untreated psychosis on cognition and negative symptoms in first-episode schizophrenia: A 3-year prospective follow-up study. *Psychological Medicine*, *43*(9), 1883–1893. https://doi.org/10.1017/S0033291712002838

Chen, J. (2012). Seeking Help for Psychological Distress in Urban China. *Journal of Community Psychology*, *40*(3), 319–341. https://doi.org/10.1002/jcop.20513

Chen, M.-F., Wang, R.-H., Schneider, J. K., Tsai, C.-T., Jiang, D. D.-S., Hung, M.-N., & Lin, L.-J. (2011). Using the Health Belief Model to Understand Caregiver Factors Influencing Childhood Influenza Vaccinations. *Journal of Community Health Nursing*, *28*(1), 29–40. https://doi.org/10.1080/07370016.2011.539087

Chen, S. X., & Mak, W. W. S. (2008). Seeking professional help: Etiology beliefs about mental illness across cultures. *Journal of Counseling Psychology*, *55*(4), 442–450. https://doi.org/10.1037/a0012898

Cheng, J. W., Mitomo, H., Otsuka, T., & Jeon, S. Y. (2015). The effects of ICT and mass media in post-disaster recovery – A two model case study of the Great East Japan Earthquake. *Telecommunications Policy*, *39*(6), 515–532. https://doi.org/10.1016/j.telpol.2015.03.006

Chong, S., Abdin, E., Vaingankar, J., Kwok, K., & Subramaniam, M. (2012). Where do People with Mental Disorders in Singapore go to for Help? *Annals of the Academy of Medicine, Singapore*, *41*, 154–160.

Chou, K.-L., & Mak, K. (1998). Attitudes To Mental Patients Among Hong Kong Chinese: A Trend Study Over Two Years. *International Journal of Social Psychiatry*, *44*(3), 215–224. https://doi.org/10.1177/002076409804400307

Chu, T. H., Su, Y., Kong, H., Shi, J., & Wang, X. (2021). Online Social Support for Intimate Partner Violence Victims in China: Quantitative and Automatic Content Analysis. *Violence Against Women*, *27*(3–4), 339–358. https://doi.org/10.1177/1077801220911452

Chubon, R. (1982). An analysis of research dealing with the attitudes of professionals toward disability. - Abstract—Europe PMC. *Journal of Rehabilitation*, *48*(1), 25–30.

Chung, H., & Epstein, N. B. (2014). Perceived racial discrimination, acculturative stress, and psychological distress among Asian immigrants: The moderating effects of support and interpersonal strain from a partner. *International Journal of Intercultural Relations*, *42*, 129–139. https://doi.org/10.1016/j.ijintrel.2014.04.003

Chung, K. F., Chen, E. Y. H., Lam, L. C. W., Chen, R. Y. L., & Chan, C. K. Y. (1997). How are psychotic symptoms perceived? A comparison between patients, relatives and the general public. *Australian and New Zealand Journal of Psychiatry*, *31*(5), 756–761. https://doi.org/10.3109/00048679709062691

Cialdini, R., Reno, R., & Kallgren, C. (1990). A Focus Theory of Normative Conduct: Recycling the Concept of Norms to Reduce Littering in Public Places. *Journal of Personality and Social Psychology*, *58*(6), 1015–1026. https://doi.org/10.1037/0022-3514.58.6.1015

Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., Morgan, C., Rüsch, N., Brown, J. S. L., & Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological Medicine*, *45*(1), 11–27. https://doi.org/10.1017/S0033291714000129

Cohen, S. and S. (1985). *Social Support and Health*. https://repository.library.georgetown.edu/handle/10822/806409

Coker, A. L., Smith, P. H., Thompson, M. P., McKeown, R. E., Bethea, L., & Davis, K. E. (2002). Social Support Protects against the Negative Effects of Partner Violence on Mental Health. *Journal of Women's Health & Gender-Based Medicine*, *11*(5), 465–476. https://doi.org/10.1089/15246090260137644

Cole, B. P., & Ingram, P. B. (2020). Where do I turn for help? Gender role conflict, self-stigma, and college men's help-seeking for depression. *Psychology of Men & Masculinities*, *21*(3), 441–452. https://doi.org/10.1037/men0000245

Constantine, M. G., & Arorash, T. J. (2001). Universal-diverse orientation and general expectations about counseling: Their relation to college students' multicultural counseling expectations. *Journal of College Student Development*, *42*(6), 535–544.

Constantine, M. G., & Gainor, K. A. (2004). Depressive Symptoms and Attitudes Toward Counseling as Predictors of Biracial College Women's Psychological Help-Seeking Behavior. *Women & Therapy*, *27*(1–2), 147–158. https://doi.org/10.1300/J015v27n01_10

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, *59*(7), 614–625. https://doi.org/10.1037/0003-066X.59.7.614

CORRIGAN, P., & MATTHEWS, A. (2003). Stigma and disclosure: Implications for coming out of the closet. *Journal of Mental Health*, *12*(3), 235–248. https://doi.org/10.1080/0963823031000118221

Corrigan, P. W. (1998). The impact of stigma on severe mental illness. *Cognitive and Behavioral Practice*, *5*(2), 201–222. https://doi.org/10.1016/S1077-7229(98)80006-0

Corrigan, P. W. (2016). Lessons learned from unintended consequences about erasing the stigma of mental illness. *World Psychiatry*, *15*(1), 67–73. https://doi.org/10.1002/wps.20295

CORRIGAN, P. W., & WATSON, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry*, *1*(1), 16–20.

Corrigan, P. W., Watson, A. C., & Barr, L. (2006). The Self–Stigma of Mental Illness: Implications for Self–Esteem and Self–Efficacy. *Journal of Social and Clinical Psychology*, *25*(8), 875–884. https://doi.org/10.1521/jscp.2006.25.8.875

Corrigan, P. W., Watson, A. C., Gracia, G., Slopen, N., Rasinski, K., & Hall, L. L. (2005). Newspaper Stories as Measures of Structural Stigma. *Psychiatric Services*, *56*(5), 551–556. https://doi.org/10.1176/appi.ps.56.5.551

Costas-Muñiz, R., Hunter-Hernández, M., Garduño-Ortega, O., Morales-Cruz, J., & Gany, F. (2017). Ethnic differences in psychosocial service use among non-Latina white and Latina breast cancer survivors. *Journal of Psychosocial Oncology*, *35*(4), 424–437. https://doi.org/10.1080/07347332.2017.1310167

Crabtree, J. W., Haslam, S. A., Postmes, T., & Haslam, C. (2010). Mental Health Support Groups, Stigma, and Self-Esteem: Positive and Negative Implications of Group Identification. *Journal of Social Issues*, *66*(3), 553–569. https://doi.org/10.1111/j.1540-4560.2010.01662.x

Culotta, A. (2014). Estimating county health statistics with twitter. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 1335–1344. https://doi.org/10.1145/2556288.2557139

Currier, J. M., McDermott, R. C., & McCormick, W. H. (2017). Mental health treatment-related stigma and professional help seeking among student veterans. *Psychological Services*, *14*(4), 531–542. https://doi.org/10.1037/ser0000129

Cutrona, C. E., & Troutman, B. R. (1986). Social support, infant temperament, and parenting self-efficacy: A mediational model of postpartum depression. *Child Development*, *57*(6), 1507–1518.

Davidson, A. L. (1999). Negotiating Social Differences: Youths' Assessments of Educators' Strategies. *Urban Education*, *34*(3), 338–369. https://doi.org/10.1177/0042085999343004

Davila, J., Hershenberg, R., Feinstein, B., Gorman, K., Bhatia, V., & Starr, L. (2012). Frequency and Quality of Social Networking Among Young Adults: Associations With Depressive Symptoms, Rumination, and Corumination. *Psychology of Popular Media Culture*, *1*(2), 72–86. https://doi.org/10.1037/a0027512

Deacon, B. J., & Baird, G. L. (2009). The Chemical Imbalance Explanation of Depression: Reducing Blame at What Cost? *Journal of Social and Clinical Psychology*, *28*(4), 415–435. https://doi.org/10.1521/jscp.2009.28.4.415

Demyan, A., & Anderson, T. (2012). Effects of a Brief Media Intervention on Expectations, Attitudes, and Intentions of Mental Health Help Seeking. *Journal of Counseling Psychology*, *59*(2), 222–229. https://doi.org/10.1037/a0026541

DiClemente, R. J., Wingood, G. M., Harrington, K. F., Lang, D. L., Davies, S. L., Hook III, E. W., Oh, M. K., Crosby, R. A., Hertzberg, V. S., Gordon, A. B., Hardin, J. W., Parker, S., & Robillard, A. (2004). Efficacy of an HIV Prevention Intervention for African American Adolescent GirlsA Randomized Controlled Trial. *JAMA*, *292*(2), 171–179. https://doi.org/10.1001/jama.292.2.171

Diefenbach, D. L., & West, M. D. (2007). Television and attitudes toward mental health issues: Cultivation analysis and the third-person effect. *Journal of Community Psychology*, *35*(2), 181–195. https://doi.org/10.1002/jcop.20142

Dobson, K. S. (1985). The relationship between anxiety and depression. *Clinical Psychology Review*, *5*(4), 307–324. https://doi.org/10.1016/0272-7358(85)90010-8

Donchi, L., & Moore, S. (2004). It's a Boy Thing: The Role of the Internet in Young People's Psychological Wellbeing. *Behaviour Change*, *21*(2), 76–89. https://doi.org/10.1375/bech.21.2.76.55426

Drapeau, A., Boyer, R., & Lesage, A. (2009). The Influence of Social Anchorage on the Gender Difference in the Use of Mental Health Services. *The Journal of Behavioral Health Services & Research*, *36*(3), 372–384. https://doi.org/10.1007/s11414-009-9168-0

Duddu, D. V., Isaac, M. K., & Chaturvedi, S. K. (2006). Somatization, somatosensory amplification, attribution styles and illness behaviour: A review. *International Review of Psychiatry*, *18*(1), 25–33. https://doi.org/10.1080/09540260500466790

Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and Help Seeking for Mental Health Among College Students. *Medical Care Research and Review*, *66*(5), 522–541. https://doi.org/10.1177/1077558709335173

Eisenberg, D., Golberstein, E., & Gollust, S. E. (2007). Help-Seeking and Access to Mental Health Care in a University Student Population. *Medical Care*, *45*(7), 594–601.

Eisenberg, D., Gollust, S., Golberstein, E., & Hefner, J. (2007). Prevalence and Correlates of Depression, Anxiety, and Suicidality Among University Students. *The American Journal of Orthopsychiatry*, *77*, 534–542. https://doi.org/10.1037/0002-9432.77.4.534

Elhai, J., & Simons, J. (2007). Trauma Exposure and Posttraumatic Stress Disorder Predictors of Mental Health Treatment Use in College Students. *Psychological Services*, *4*(1), 38–45. https://doi.org/10.1037/1541-1559.4.1.38

Ellerby, D. J., & Gerry, S. P. (2011). Sympatric Divergence and Performance Trade-Offs of Bluegill Ecomorphs. *Evolutionary Biology*, *38*(4), 422–433. https://doi.org/10.1007/s11692-011-9130-y

Ellis, L. A., Collin, P., Hurley, P. J., Davenport, T. A., Burns, J. M., & Hickie, I. B. (2013). Young men's attitudes and behaviour in relation to mental health and technology:

Implications for the development of online mental health services. *BMC Psychiatry*, *13*(1), 119. https://doi.org/10.1186/1471-244X-13-119

Ellison, N. B., & Vitak, J. (2015). Social Network Site Affordances and Their Relationship to Social Capital Processes. In *The Handbook of the Psychology of Communication Technology* (pp. 203–227). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118426456.ch9

Fang, Q., Zhang, T.-M., Wong, Y. L. I., Yau, Y. Y., Li, X.-H., Li, J., Chui, C. H. K., Tse, S., Chan, C. L.-W., Chen, E. Y. H., & Ran, M.-S. (2020). The mediating role of knowledge on the contact and stigma of mental illness in Hong Kong. *International Journal of Social Psychiatry*, 0020764020975792. https://doi.org/10.1177/0020764020975792

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. https://doi.org/10.3758/BF03193146

Fava, M., Rankin, M. A., Wright, E. C., Alpert, J. E., Nierenberg, A. A., Pava, J., & Rosenbaum, J. F. (2000). Anxiety disorders in major depression. *Comprehensive Psychiatry*, *41*(2), 97–102. https://doi.org/10.1016/S0010-440X(00)90140-8

Fishbein, M., Jaccard, J., Davidson, A. R., Ajzen, I., & Loken, B. (1980). Predicting and understanding family planning behaviors. *Understanding Attitudes and Predicting Social Behavior*. https://nyuscholars.nyu.edu/en/publications/predicting-and-understanding-family-planning-behaviors

Fishbein, Martin, & Ajzen, I. (2011). *Predicting and Changing Behavior: The Reasoned Action Approach*. Taylor & Francis.

Fishbein, Martin, & Yzer, M. C. (2003). Using Theory to Design Effective Health Behavior Interventions. *Communication Theory*, *13*(2), 164–183. https://doi.org/10.1111/j.1468-2885.2003.tb00287.x

Fonseca, A., Moura-Ramos, M., & Canavarro, M. C. (2018). Attachment and Mental Help-Seeking in the Perinatal Period: The Role of Stigma. *Community Mental Health Journal*, *54*(1), 92–101. https://doi.org/10.1007/s10597-017-0138-3

Francis, J., Johnston, M., Eccles, M., Walker, A., Grimshaw, J. M., Foy, R., Kaner, E. F. S., Smith, L., & Bonetti, D. (2004). Constructing questionnaires based on the theory of planned behaviour: A manual for Health Services Researchers. *Quality of Life and Management of Living Resources; Centre for Health Services Research*. https://abdn.pure.elsevier.com/en/publications/constructing-questionnaires-based-on-the-theory-of-planned-behavi

Frankham, E. (2019). A Modified Framework for Identifying Stigma: News Coverage of Persons With Mental Illness Killed by Police. *Stigma and Health*, *4*(1), 62–71. https://doi.org/10.1037/sah0000121

Franklin, C. G. S., Kim, J. S., Ryan, T. N., Kelly, M. S., & Montgomery, K. L. (2012). Teacher involvement in school mental health interventions: A systematic review. *Children and Youth Services Review*, *34*(5), 973–982. https://doi.org/10.1016/j.childyouth.2012.01.027

Fripp, J. A., & Carlson, R. G. (2017). Exploring the Influence of Attitude and Stigma on Participation of African American and Latino Populations in Mental Health Services. *Journal of Multicultural Counseling and Development*, *45*(2), 80–94. https://doi.org/10.1002/jmcd.12066

Furnham, A., & Chan, E. (2004). Lay theories of schizophrenia. *Social Psychiatry and Psychiatric Epidemiology*, *39*(7), 543–552. https://doi.org/10.1007/s00127-004-0787-8

Gaddis, S. M., Ramirez, D., & Hernandez, E. L. (2018). Contextualizing public stigma: Endorsed mental health treatment stigma on college and university campuses. *Social Science & Medicine*, *197*, 183–191. https://doi.org/10.1016/j.socscimed.2017.11.029

Garriott, P. O., Raque-Bogdan, T. L., Yalango, K., Ziemer, K. S., & Utley, J. (2017). Intentions to seek counseling in first-generation and continuing-generation college students. *Journal of Counseling Psychology*, *64*(4), 432–442. https://doi.org/10.1037/cou0000210

Gawronski, B., & Bodenhausen, G. V. (2006). Associative and propositional processes in evaluation: An integrative review of implicit and explicit attitude change. *Psychological Bulletin*, *132*(5), 692–731. https://doi.org/10.1037/0033-2909.132.5.692

Gerbner, G., Gross, L., Signorielli, N., Morgan, M., & Jackson-Beeck, M. (1979). The Demonstration of Power: Violence Profile No. 10. *Journal of Communication*, *29*(3), 177–196. https://doi.org/10.1111/j.1460-2466.1979.tb01731.x

Gesinde, A. M., & Sanu, O. J. (2015). Psycho-demographic correlates of behaviour towards seeking counselling intervention among workers in Lagos, Nigeria. *British Journal of Guidance & Counselling*, *43*(5), 570–583. https://doi.org/10.1080/03069885.2014.999025

Gifford, R., & Nilsson, A. (2014). Personal and social factors that influence pro-environmental concern and behaviour: A review. *International Journal of Psychology*, *49*(3), 141–157. https://doi.org/10.1002/ijop.12034

Gist, M. E., & Mitchell, T. R. (1992). Self-Efficacy: A Theoretical Analysis of Its Determinants and Malleability. *Academy of Management Review*, *17*(2), 183–211. https://doi.org/10.5465/amr.1992.4279530

Goepfert, N. C., Conrad von Heydendorff, S., Dreßing, H., & Bailer, J. (2019). Effects of stigmatizing media coverage on stigma measures, self-esteem, and affectivity in persons with depression – an experimental controlled trial. *BMC Psychiatry*, *19*(1), 138. https://doi.org/10.1186/s12888-019-2123-6

Goldman, L. S., Nielsen, N. H., & Champion, H. C. (1999). Awareness, Diagnosis, and Treatment of Depression. *Journal of General Internal Medicine*, *14*(9), 569–580. https://doi.org/10.1046/j.1525-1497.1999.03478.x

González, H. M., Vega, W. A., Williams, D. R., Tarraf, W., West, B. T., & Neighbors, H. W. (2010). Depression Care in the United States: Too Little for Too Few. *Archives of General Psychiatry*, *67*(1), 37. https://doi.org/10.1001/archgenpsychiatry.2009.168

Gordon, E., Minnes, P., & Holden, R. (1990). The Structure of Attitudes Toward Persons with a Disability, When Specific Disability and Context Are Considered. *Rehabilitation Psychology*, *35*(2), 79–90. https://doi.org/10.1037/h0079054

Goulden, R., Corker, E., Evans-Lacko, S., Rose, D., Thornicroft, G., & Henderson, C. (2011). Newspaper coverage of mental illness in the UK, 1992-2008. *BMC Public Health*, *11*(1), 796. https://doi.org/10.1186/1471-2458-11-796

Gourash, N. (1978). Help-seeking: A review of the literature. *American Journal of Community Psychology*, *6*(5), 413–423. https://doi.org/10.1007/BF00941418

Gracia, E., & Herrero, J. (2004). Determinants of social integration in the community: An exploratory analysis of personal, interpersonal and situational variables. *Journal of Community & Applied Social Psychology*, *14*(1), 1–15. https://doi.org/10.1002/casp.746

Gregg, J., & Curry, R. H. (1994). Explanatory models for cancer among African-American women at two Atlanta neighborhood health centers: The implications for a cancer screening program. *Social Science & Medicine*, *39*(4), 519–526. https://doi.org/10.1016/0277-9536(94)90094-9

Gruber, R., Xi, T., Frenette, S., Robert, M., Vannasinh, P., & Carrier, J. (2009). Sleep Disturbances in Prepubertal Children with Attention Deficit Hyperactivity Disorder: A Home Polysomnography Study. *Sleep*, *32*(3), 343–350. https://doi.org/10.5665/sleep/32.3.343

Gum, A. M., Iser, L., King-Kallimanis, B. L., Petkus, A., DeMuth, A., & Schonfeld, L. (2011). Six-Month Longitudinal Patterns of Mental Health Treatment Utilization by Older Adults With Depressive Symptoms. *Psychiatric Services*, *62*(11), 1353–1360. https://doi.org/10.1176/ps.62.11.pss6211_1353

Guo, S., Nguyen, H., Weiss, B., Ngo, V. K., & Lau, A. S. (2015). Linkages between mental health need and help-seeking behavior among adolescents: Moderating role of ethnicity and cultural values. *Journal of Counseling Psychology*, *62*(4), 682–693. https://doi.org/10.1037/cou0000094

Han, B., Cook, P., & Baldwin, T. (2012). Geolocation Prediction in Social Media Data by Finding Location Indicative Words. *Proceedings of COLING 2012*, 1045–1062. https://www.aclweb.org/anthology/C12-1064

Han, R., & Xu, J. (2020). A Comparative Study of the Role of Interpersonal Communication, Traditional Media and Social Media in Pro-Environmental Behavior: A China-Based Study. *International Journal of Environmental Research and Public Health*, *17*(6), 1883. https://doi.org/10.3390/ijerph17061883

Heath, P. J., Brenner, R. E., Vogel, D. L., Lannin, D. G., & Strass, H. A. (2017). Masculinity and barriers to seeking counseling: The buffering role of self-compassion. *Journal of Counseling Psychology*, *64*(1), 94–103. https://doi.org/10.1037/cou0000185

Hechanova, Ma. R. M., Tuliao, A. P., Teh, L. A., Alianan, A. S., & Acosta, A. (2013). Problem Severity, Technology Adoption, and Intent to Seek Online Counseling Among Overseas Filipino Workers. *Cyberpsychology, Behavior, and Social Networking*, *16*(8), 613–617. https://doi.org/10.1089/cyber.2012.0648

Hedges, L. V., & Pigott, T. D. (2004). The Power of Statistical Tests for Moderators in Meta-Analysis. *Psychological Methods*, *9*(4), 426–445.

Helgeson, V. S. (2003). Social support and quality of life. *Quality of Life Research*, *12*(1), 25–31. https://doi.org/10.1023/A:1023509117524

Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, *44*(2), 227–239. https://doi.org/10.1348/014466505X29657

Hill, D. J., & Bale, R. M. (1981). Measuring Beliefs About Where Psychological Distress Originates and Who is Responsible for its Alleviation. In H. M. Lefcourt (Ed.), *Research with the Locus of Control Construct* (p. 2). Academic Press.

Hill, David J., & Bale, R. M. (1980). Development of the Mental Health Locus of Control and Mental Health Locus of Origin Scales. *Journal of Personality Assessment*, *44*(2), 148–156. https://doi.org/10.1207/s15327752jpa4402_5

Ho, K. P., Hunt, C., & Li, S. (2008). Patterns of help-seeking behavior for anxiety disorders among the Chinese speaking Australian community. *Social Psychiatry and Psychiatric Epidemiology*, *43*(11), 872–877. https://doi.org/10.1007/s00127-008-0387-0

Hoagwood, K. E., Serene Olin, S., Kerker, B. D., Kratochwill, T. R., Crowe, M., & Saka, N. (2007). Empirically Based School Interventions Targeted at Academic and Mental Health Functioning. *Journal of Emotional and Behavioral Disorders*, *15*(2), 66–92. https://doi.org/10.1177/10634266070150020301

Hochbaum, G. M. (1958). *Public Participation in Medical Screening Programs: A Socio-psychological Study*. U.S. Department of Health, Education, and Welfare, Public Health Service, Bureau of State Services, Division of Special Health Services, Tuberculosis Program.

Hodson, G., & Esses, V. M. (2005). Lay perceptions of ethnic prejudice: Causes, solutions, and individual differences. *European Journal of Social Psychology*, *35*(3), 329–344. https://doi.org/10.1002/ejsp.251

Holmes, E. P., & River, L. P. (1998). Individual strategies for coping with the stigma of severe mental illness. *Cognitive and Behavioral Practice*, *5*(2), 231–239. https://doi.org/10.1016/S1077-7229(98)80008-4

Howell, J., & Maguire, R. (2019). Seeking help when transgender: Exploring the difference in mental and physical health seeking behaviors between transgender and cisgender

individuals in Ireland. *International Journal of Transgenderism*, *20*(4), 421–433. https://doi.org/10.1080/15532739.2019.1658145

Hubbard, K., Reohr, P., Tolcher, L., & Downs, A. (2018). Stress, Mental Health Symptoms, and Help-Seeking in College Students. *Psi Chi Journal of Psychological Research*, *23*(4), 293–305. https://doi.org/10.24839/2325-7342.JN23.4.293

Huedo-Medina, T. B., Sánchez-Meca, J., Marín-Martínez, F., & Botella, J. (2006). Assessing heterogeneity in meta-analysis: Q statistic or I^2 index? *Psychological Methods*, *11*(2), 193–206. https://doi.org/10.1037/1082-989X.11.2.193

Hunkin, H., King, D. L., & Zajac, I. T. (2020). Perceived acceptability of wearable devices for the treatment of mental health problems. *Journal of Clinical Psychology*, *76*(6), 987–1003. https://doi.org/10.1002/jclp.22934

Hunt, J., & Eisenberg, D. (2010). Mental Health Problems and Help-Seeking Behavior Among College Students. *Journal of Adolescent Health*, *46*(1), 3–10. https://doi.org/10.1016/j.jadohealth.2009.08.008

Hyler, S. E., Gabbard, G. O., & Schneider, I. (1991). Homicidal Maniacs and Narcissisfic Parasites: Stigmatization of Mentally Ill Persons in the Movies. *Psychiatric Services*, *42*(10), 1044–1048. https://doi.org/10.1176/ps.42.10.1044

Jamalamadaka, T., Griffith, E., Steer, H., & Salkovskis, P. (2020). Fear of illness recurrence and mental health anxiety in people recovering from psychosis and common mental health problems. *British Journal of Clinical Psychology*, *59*(3), 403–423. https://doi.org/10.1111/bjc.12253

Janz, N. K., & Becker, M. H. (1984). The Health Belief Model: A Decade Later. *Health Education Quarterly*, *11*(1), 1–47. https://doi.org/10.1177/109019818401100101

John Read, N. H. (2001). The role of biological and genetic causal beliefs in the stigmatisation of "mental patients." *Journal of Mental Health*, *10*(2), 223–235. https://doi.org/10.1080/09638230123129

Johnson, J. Q., & Riles, J. (2018). "He Acted Like a Crazy Person": Exploring the Influence of College Students' Recall of Stereotypic Media Representations of Mental Illness. *Psychology of Popular Media Culture*, *7*(2), 146–163. https://doi.org/10.1037/ppm0000121

Johnston, K. L., & White, K. M. (2003). Binge-Drinking: A Test of the Role of Group Norms in the Theory of Planned Behaviour. *Psychology & Health*, *18*(1), 63–77. https://doi.org/10.1080/0887044021000037835

Jorm, A. F., Morgan, A. J., & Wright, A. (2008). Interventions that are helpful for depression and anxiety in young people: A comparison of clinicians' beliefs with those of youth and their parents. *Journal of Affective Disorders*, *111*(2), 227–234. https://doi.org/10.1016/j.jad.2008.02.021

Judd, C., & Park, B. (1993). Definition and Assessment of Accuracy in Social Stereotypes. *Psychological Review*, *100*(1), 109–128.

Jung, H., Sternberg, K. von, & Davis, K. (2017). The impact of mental health literacy, stigma, and social support on attitudes toward mental health help-seeking. *International Journal of Mental Health Promotion*, *19*(5), 252–267. https://doi.org/10.1080/14623730.2017.1345687

Kapusta, N. D., Posch, M., Niederkrotenthaler, T., Fischer-Kern, M., Etzersdorfer, E., & Sonneck, G. (2010). Availability of Mental Health Service Providers and Suicide Rates in

Austria: A Nationwide Study. *Psychiatric Services*, *61*(12), 1198–1203. https://doi.org/10.1176/ps.2010.61.12.1198

Keeler, A. R., Siegel, J. T., & Alvaro, E. M. (2014). Depression and Help Seeking Among Mexican–Americans: The Mediating Role of Familism. *Journal of Immigrant and Minority Health*, *16*(6), 1225–1231. https://doi.org/10.1007/s10903-013-9824-6

Keeling, M., Barr, N., Atuel, H., & Castro, C. A. (2020). Symptom Severity, Self-efficacy and Treatment-Seeking for Mental Health Among US Iraq/Afghanistan Military Veterans. *Community Mental Health Journal*, *56*(7), 1239–1247. https://doi.org/10.1007/s10597-020-00578-8

Kessler, R. C., McLeod, J. D., & Wethington, E. (1985). The Costs of Caring: A Perspective on the Relationship Between Sex and Psychological Distress. In I. G. Sarason & B. R. Sarason (Eds.), *Social Support: Theory, Research and Applications* (pp. 491–506). Springer Netherlands. https://doi.org/10.1007/978-94-009-5115-0_25

Kim, B. J., Hancock, B. M., Bermudez, A., Cid, N. D., Reyes, E., Sorge, N. M. van, Lauth, X., Smurthwaite, C. A., Hilton, B. J., Stotland, A., Banerjee, A., Buchanan, J., Wolkowicz, R., Traver, D., & Doran, K. S. (2015). Bacterial induction of Snail1 contributes to blood-brain barrier disruption. *The Journal of Clinical Investigation*, *125*(6), 2473–2483. https://doi.org/10.1172/JCI74159

Kim, H. K., & Niederdeppe, J. (2013). The Role of Emotional Response during an H1N1 Influenza Pandemic on a College Campus. *Journal of Public Relations Research*, *25*(1), 30–50. https://doi.org/10.1080/1062726X.2013.739100

Kim, P. Y., Kendall, D. L., & Cheon, H.-S. (2017). Racial microaggressions, cultural mistrust, and mental health outcomes among asian american college students. *American Journal of Orthopsychiatry*, *87*(6), 663–670. https://doi.org/10.1037/ort0000203

Kim, S. J., & Hancock, J. T. (2015). Optimistic Bias and Facebook Use: Self–Other Discrepancies About Potential Risks and Benefits of Facebook Use. *Cyberpsychology, Behavior, and Social Networking*, *18*(4), 214–220. https://doi.org/10.1089/cyber.2014.0656

Kleinman, A. (1980). *Patients and Healers in the Context of Culture: An Exploration of the Borderland Between Anthropology, Medicine, and Psychiatry*. University of California Press.

Knorr, A. C., Tull, M. T., Anestis, M. D., Dixon-Gordon, K. L., Bennett, M. F., & Gratz, K. L. (2016). The Interactive Effect of Major Depression and Nonsuicidal Self-Injury on Current Suicide Risk and Lifetime Suicide Attempts. *Archives of Suicide Research*, *20*(4), 539–552. https://doi.org/10.1080/13811118.2016.1158679

Komiti, A., Judd, F., & Jackson, H. (2006). The influence of stigma and attitudes on seeking help from a GP for mental health problems: A rural context. *Social Psychiatry and Psychiatric Epidemiology*, *41*(9), 738–745. https://doi.org/10.1007/s00127-006-0089-4

KRAEMER, H., HC, K., & G, A. (1982). A NONPARAMETRIC TECHNIQUE FOR META-ANALYSIS EFFECT SIZE CALCULATION. *A NONPARAMETRIC TECHNIQUE FOR META-ANALYSIS EFFECT SIZE CALCULATION*.

Krippendorff, K. (2019). The Changing Landscape of Content Analysis: Reflections on Social Construction of Reality and Beyond. *Communication & Society*, *47*, 1–27.

KRUEGER, J. (1996). Personal beliefs and cultural stereotypes about racial characteristics. *Personal Beliefs and Cultural Stereotypes about Racial Characteristics*, *71*(3), 536–548.

Kung, W. W. (2004). Cultural and practical barriers to seeking mental health treatment for Chinese Americans. *Journal of Community Psychology*, *32*(1), 27–43. https://doi.org/10.1002/jcop.10077

Kuther, T. L., & Higgins-D'Alessandro, A. (2003). Attitudinal and Normative Predictors of Alcohol Use by Older Adolescents and Young Adults. *Journal of Drug Education*, *33*(1), 71–90. https://doi.org/10.2190/G0PR-XVHT-JL92-HE8T

Kvaale, E. P., Haslam, N., & Gottdiener, W. H. (2013). The 'side effects' of medicalization: A meta-analytic review of how biogenetic explanations affect stigma. *Clinical Psychology Review*, *33*(6), 782–794. https://doi.org/10.1016/j.cpr.2013.06.002

Lakey, B., & Scoboria, A. (2005). The Relative Contribution of Trait and Social Influences to the Links Among Perceived Social Support, Affect, and Self-Esteem. *Journal of Personality*, *73*(2), 361–388. https://doi.org/10.1111/j.1467-6494.2005.00312.x

Lally, J., Conghaile, A. ó, Quigley, S., Bainbridge, E., & McDonald, C. (2013). Stigma of mental illness and help-seeking intention in university students. *The Psychiatrist*, *37*(8), 253–260. https://doi.org/10.1192/pb.bp.112.041483

Lan, C.-M. (2016). Predictors of willingness to use cyber counseling for college students with disabilities. *Disability and Health Journal*, *9*(2), 346–352. https://doi.org/10.1016/j.dhjo.2015.11.004

Langley, E. L., Wootton, B. M., & Grieve, R. (2018). The Utility of the Health Belief Model Variables in Predicting Help-Seeking Intention for Anxiety Disorders: Predicting help-

seeking intention for anxiety. *Australian Psychologist*, *53*(4), 291–301. https://doi.org/10.1111/ap.12334

Lapinski, M. K., & Rimal, R. N. (2005). An Explication of Social Norms. *Communication Theory*, *15*(2), 127–147. https://doi.org/10.1111/j.1468-2885.2005.tb00329.x

Lauber, C., & Rössler, W. (2007). Stigma towards people with mental illness in developing countries in Asia. *International Review of Psychiatry*, *19*(2), 157–178. https://doi.org/10.1080/09540260701278903

Lazard, A. J., Bamgbade, B. A., Sontag, J. M., & Brown, C. (2016). Using Visual Metaphors in Health Messages: A Strategy to Increase Effectiveness for Mental Illness Communication. *Journal of Health Communication*, *21*(12), 1260–1268. https://doi.org/10.1080/10810730.2016.1245374

Lee, E.-H., Kim, J.-S., & Song, M. S. (2002). Translation and Validation of Champion's Health Belief Model Scale With Korean Women. *Cancer Nursing*, *25*(5), 391–395.

Lee, E.-J., Ditchman, N., Fong, M. W. M., Piper, L., & Feigon, M. (2014). MENTAL HEALTH SERVICE SEEKING AMONG KOREAN INTERNATIONAL STUDENTS IN THE UNITED STATES: A PATH ANALYSIS: Mental Health Service-Seeking Behavior. *Journal of Community Psychology*, *42*(6), 639–655. https://doi.org/10.1002/jcop.21643

Levin, M. E., Krafft, J., & Levin, C. (2018). Does self-help increase rates of help seeking for student mental health problems by minimizing stigma as a barrier? *Journal of American College Health*, *66*(4), 302–309. https://doi.org/10.1080/07448481.2018.1440580

Li, L., Wang, H., Ye, X., Jiang, M., Lou, Q., & Hesketh, T. (2007). The mental health status of Chinese rural–urban migrant workers. *Social Psychiatry and Psychiatric Epidemiology*, *42*(9), 716–722. https://doi.org/10.1007/s00127-007-0221-0

Li, P., Wong, Y. J., & Toth, P. (2013). Asian International Students' Willingness to Seek Counseling: A Mixed-Methods Study. *International Journal for the Advancement of Counselling*, *35*(1), 1–15. https://doi.org/10.1007/s10447-012-9163-7

Liberman, A., & Chaiken, S. (1996). The Direct Effect of Personal Relevance on Attitudes. *Personality and Social Psychology Bulletin*, *22*(3), 269–279. https://doi.org/10.1177/0146167296223005

Lienemann, B. A., & Siegel, J. T. (2016). State Psychological Reactance to Depression Public Service Announcements Among People With Varying Levels of Depressive Symptomatology. *Health Communication*, *31*(1), 102–116. https://doi.org/10.1080/10410236.2014.940668

Link, B G, Phelan, J. C., Bresnahan, M., Stueve, A., & Pescosolido, B. A. (1999). Public conceptions of mental illness: Labels, causes, dangerousness, and social distance. *American Journal of Public Health*, *89*(9), 1328–1333. https://doi.org/10.2105/AJPH.89.9.1328

Link, Bruce G. (1987). Understanding Labeling Effects in the Area of Mental Disorders: An Assessment of the Effects of Expectations of Rejection. *American Sociological Association*, *52*(1), 96–112. https://doi.org/10.2307/2095395

Link, Bruce G., Cullen, F. T., Struening, E., Shrout, P. E., & Dohrenwend, B. P. (1989). A Modified Labeling Theory Approach to Mental Disorders: An Empirical Assessment. *American Sociological Review*, *54*(3), 400–423. https://doi.org/10.2307/2095613

Link, Bruce G., & Phelan, J. C. (2001). Conceptualizing Stigma. *Annual Review of Sociology*, *27*(1), 363–385. https://doi.org/10.1146/annurev.soc.27.1.363

Liu, F., Zhou, N., Cao, H., Fang, X., Deng, L., Chen, W., Lin, X., Liu, L., & Zhao, H. (2017). Chinese college freshmen's mental health problems and their subsequent help-seeking behaviors: A cohort design (2005-2011). *PLOS ONE*, *12*(10), e0185531. https://doi.org/10.1371/journal.pone.0185531

Liu, C., Zhao, K., Luo, M., Yang, T., & Cui, Y. (2019) Weight loss information on social media RED and third-person effect (Outstanding Academic Papers by Students (OAPS), City University of Hong Kong).

Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: A systematic review and meta-analysis. *Social Science & Medicine*, *71*(12), 2150–2161. https://doi.org/10.1016/j.socscimed.2010.09.030

Livingston, J. D., Cianfrone, M., Korf-Uzan, K., & Coniglio, C. (2014). Another time point, a different story: One year effects of a social media intervention on the attitudes of young people towards mental health issues. *Social Psychiatry and Psychiatric Epidemiology*, *49*(6), 985–990. https://doi.org/10.1007/s00127-013-0815-7

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, *33*(3), 335–343. https://doi.org/10.1016/0005-7967(94)00075-U

Lueck, J. A. (2018). Examining determinants of seeking help for depression: Implications for effective health promotion messages. *Journal of Communication in Healthcare*, *11*(1), 19–29. https://doi.org/10.1080/17538068.2017.1417957

Lungu, A., & Sun, M. (2016). Time for a Change: College Students' Preference for Technology-Mediated Versus Face-to-Face Help for Emotional Distress. *Telemedicine and E-Health*, *22*(12), 991–1000. https://doi.org/10.1089/tmj.2015.0214

Ma, Z. (2017). How the media cover mental illnesses: A review. *Health Education*, *117*(1), 90–109. https://doi.org/10.1108/HE-01-2016-0004

Mackenzie, C. S., Gekoski, W. L., & Knox, V. J. (2006). Age, gender, and the underutilization of mental health services: The influence of help-seeking attitudes. *Aging & Mental Health*, *10*(6), 574–582. https://doi.org/10.1080/13607860600641200

Maier, J. A., Gentile, D. A., Vogel, D. L., & Kaplan, S. A. (2014). Media influences on self-stigma of seeking psychological services: The importance of media portrayals and person perception. *Psychology of Popular Media Culture*, *3*(4), 239–256. https://doi.org/10.1037/a0034504

Major, B., & O'Brien, L. T. (2005). The Social Psychology of Stigma. *Annual Review of Psychology*, *56*(1), 393–421. https://doi.org/10.1146/annurev.psych.56.091103.070137

Mak, H. W., & Davis, J. M. (2014). The application of the theory of planned behavior to help-seeking intention in a Chinese society—ProQuest. *Social Psychiatry and Psychiatric Epidemiology*, *49*(9), 1501–1515. http://dx.doi.org/10.1007/s00127-013-0792-x

Mak, W. W., Tong, A. C., Yip, S. Y., Lui, W. W., Chio, F. H., Chan, A. T., & Wong, C. C. (2018). Efficacy and Moderation of Mobile App–Based Programs for Mindfulness-Based Training, Self-Compassion Training, and Cognitive Behavioral Psychoeducation on Mental Health: Randomized Controlled Noninferiority Trial. *JMIR Mental Health*, *5*(4), e60. https://doi.org/10.2196/mental.8597

Malecki, C., & Demaray, M. (2003). What Type of Support Do They Need? Investigating Student Adjustment as Related to Emotional, Informational, Appraisal, and Instrumental Support. *School Psychology Quarterly*, *18*, 231–252. https://doi.org/10.1521/scpq.18.3.231.22576

Mansfield, A., Addis, M., & Courtenay, W. (2005). Measurement of Men's Help Seeking: Development and Evaluation of the Barriers to Help Seeking Scale. *Psychology of Men & Masculinity*, *6*(2), 95–108.

Marsh, C. N., & Wilcoxon, S. A. (2015). Underutilization of Mental Health Services Among College Students: An Examination of System-Related Barriers. *Journal of College Student Psychotherapy*, *29*(3), 227–243. https://doi.org/10.1080/87568225.2015.1045783

Martin, J. K., Pescosolido, B. A., & Tuch, S. A. (2000). Of Fear and Loathing: The Role of "Disturbing Behavior," Labels, and Causal Attributions in Shaping Public Attitudes toward People with Mental Illness. *Journal of Health and Social Behavior*, *41*(2), 208–223. https://doi.org/10.2307/2676306

Martin, T. L., Doka, K. J., & Martin, T. R. (2000). *Men Don't Cry-- Women Do: Transcending Gender Stereotypes of Grief*. Psychology Press.

McCabe, R., & Priebe, S. (2004). The Therapeutic Relationship in the Treatment of Severe Mental Illness: A Review of Methods and Findings. *International Journal of Social Psychiatry*, *50*(2), 115–128. https://doi.org/10.1177/0020764004040959

McColl, L., Rideout, P., Parmar, T., & Abba-Aji, A. (2014). Peer Support Intervention Through Mobile Application: An Integrative Literature Review and Future Directions. *Canadian Psychology*, *55*(4), 250–257. https://doi.org/10.1037/a0038095

McCombs, M. E., Shaw, D. L., & Weaver, D. H. (1997). *Communication and Democracy: Exploring the Intellectual Frontiers in Agenda-setting Theory*. Psychology Press.

McEachan, R. R. C., Conner, M., Taylor, N. J., & Lawton, R. J. (2011). Prospective prediction of health-related behaviours with the Theory of Planned Behaviour: A meta-analysis. *Health Psychology Review*, *5*(2), 97–144. https://doi.org/10.1080/17437199.2010.521684

Mesidor, J. K., & Sly, K. F. (2014). Mental Health Help-Seeking Intentions Among International and African American College Students: An Application of the Theory of Planned Behavior. *Journal of International Students*, *4*(2), 137–149.

Mickelson, K. D. (2001). Perceived Stigma, Social Support, and Depression. *Personality and Social Psychology Bulletin*, *27*(8), 1046–1056. https://doi.org/10.1177/0146167201278011

Mikhail, B. I., & Petro-Nustas, W. I. (2001). Transcultural Adaptation of Champion's Health Belief Model Scales. *Journal of Nursing Scholarship*, *33*(2), 159–165. https://doi.org/10.1111/j.1547-5069.2001.00159.x

Milne-Ives, M., Lam, C., Cock, C. D., Velthoven, M. H. V., & Meinert, E. (2020). Mobile Apps for Health Behavior Change in Physical Activity, Diet, Drug and Alcohol Use, and Mental Health: Systematic Review. *JMIR MHealth and UHealth*, *8*(3), e17046. https://doi.org/10.2196/17046

Mo, P. K. H., & Lau, J. T. F. (2015). Influenza vaccination uptake and associated factors among elderly population in Hong Kong: The application of the Health Belief Model. *Health Education Research*, *30*(5), 706–718. https://doi.org/10.1093/her/cyv038

Mo, Phoenix K. H., & Coulson, N. S. (2010). Empowering processes in online support groups among people living with HIV/AIDS: A comparative analysis of 'lurkers' and 'posters.'

Computers in Human Behavior, *26*(5), 1183–1193. https://doi.org/10.1016/j.chb.2010.03.028

Mo, Phoenix K. H., & Mak, W. W. S. (2009). Help-seeking for mental health problems among Chinese. *Social Psychiatry and Psychiatric Epidemiology*, *44*(8), 675–684. https://doi.org/10.1007/s00127-008-0484-0

Mojtabai, R., Evans-Lacko, S., Schomerus, G., & Thornicroft, G. (2016). Attitudes Toward Mental Health Help Seeking as Predictors of Future Help-Seeking Behavior and Use of Mental Health Treatments. *Psychiatric Services*, *67*(6), 650–657. https://doi.org/10.1176/appi.ps.201500164

Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication. *Journal of Medical Internet Research*, *15*(4), e1933. https://doi.org/10.2196/jmir.1933

Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1996). The long-term impact of the physical, emotional, and sexual abuse of children: A community study. *Child Abuse & Neglect*, *20*(1), 7–21. https://doi.org/10.1016/0145-2134(95)00112-3

Murguía, A., Zea, M., Reisen, C., & Peterson, R. (2000). The Development of the Cultural Health Attributions Questionnaire (CHAQ). *Cultural Diversity and Ethnic Minority Psychology*, *6*(3), 268–283.

Muscari, E. C., & Fleming, C. E. (2019). Help-seeking for mental health concerns: The role of partner influence. *Couple and Family Psychology: Research and Practice*, *8*(4), 181–196. https://doi.org/10.1037/cfp0000125

Naslund, J. A., Aschbrenner, K. A., Marsch, L. A., & Bartels, S. J. (2016). The future of mental health care: Peer-to-peer support and social media. *Epidemiology and Psychiatric Sciences*, *25*(2), 113–122. https://doi.org/10.1017/S2045796015001067

Naslund, John A., Grande, S. W., Aschbrenner, K. A., & Elwyn, G. (2014). Naturally Occurring Peer Support through Social Media: The Experiences of Individuals with Severe Mental Illness Using YouTube. *PLOS ONE*, *9*(10), e110171. https://doi.org/10.1371/journal.pone.0110171

Ng, P., & Chan, K.-F. (2000). Sex Differences in Opinion Towards Mental Illness of Secondary School Students in Hong Kong. *International Journal of Social Psychiatry*, *46*(2), 79–88. https://doi.org/10.1177/002076400004600201

Ng, T. P., Fones, C. S. L., & Kua, E. H. (2003). Preference, need and utilization of mental health services, Singapore National Mental Health Survey. *Australian and New Zealand Journal of Psychiatry*, *37*(5), 613–619. https://doi.org/10.1046/j.1440-1614.2003.01233.x

Nguyen, P. V. (2018). *Do Asian American Young Adults Differ in their Help Seeking Compared to Older Adults? Help Seeking Patterns and Predictors*. *5*(2), 16.

Niederdeppe, J., Shapiro, M. A., Kim, H. K., Bartolo, D., & Porticella, N. (2014). Narrative Persuasion, Causality, Complex Integration, and Support for Obesity Policy. *Health Communication*, *29*(5), 431–444. https://doi.org/10.1080/10410236.2012.761805

Niederkrotenthaler, T., Fu, K., Yip, P. S. F., Fong, D. Y. T., Stack, S., Cheng, Q., & Pirkis, J. (2012). Changes in suicide rates following media reports on celebrity suicide: A meta-analysis. *J Epidemiol Community Health*, *66*(11), 1037–1042. https://doi.org/10.1136/jech-2011-200707

Niederkrotenthaler, T., Rasmussen, F., & Mittendorfer-Rutz, E. (2012). Perinatal conditions and parental age at birth as risk markers for subsequent suicide attempt and suicide: A population based case–control study. *European Journal of Epidemiology*, *27*(9), 729–738. https://doi.org/10.1007/s10654-012-9724-4

Niederkrotenthaler, T., Voracek, M., Herberth, A., Till, B., Strauss, M., Etzersdorfer, E., Eisenwort, B., & Sonneck, G. (2010). Role of media reports in completed and prevented suicide: Werther v. Papageno effects. *The British Journal of Psychiatry*, *197*(3), 234–243. https://doi.org/10.1192/bjp.bp.109.074633

Nosek, B. A., & Greenwald, A. G. (2009). (Part of) the Case for a Pragmatic Approach to Validity: Comment on De Houwer, Teige-Mocigemba, Spruyt, and Moors (2009). *Psychological Bulletin*, *135*(3), 373–376. https://doi.org/10.1037/a0015047

Nosofsky, R. M., Palmeri, T. J., & McKinley, S. C. (1994). Rule-plus-exception model of classification learning. *Psychological Review*, *101*(1), 53–79. https://doi.org/10.1037/0033-295x.101.1.53

O'Connor, P. J., Martin, B., Weeks, C. S., & Ong, L. (2014). Factors that influence young people's mental health help-seeking behaviour: A study based on the Health Belief Model. *Journal of Advanced Nursing*, *70*(11), 2577–2587.

Odgers, C. L., & Jensen, M. R. (2020). Annual Research Review: Adolescent mental health in the digital age: facts, fears, and future directions. *Journal of Child Psychology and Psychiatry*, *61*(3), 336–348. https://doi.org/10.1111/jcpp.13190

Oliver, R. L., & Berger, P. K. (1979). A Path Analysis of Preventive Health Care Decision Models. *Journal of Consumer Research*, *6*(2), 113–122. https://doi.org/10.1086/208755

O'Sullivan, P. B., & Carr, C. T. (2018). Masspersonal communication: A model bridging the mass-interpersonal divide. *New Media & Society*, *20*(3), 1161–1180. https://doi.org/10.1177/1461444816686104

Ow, R., & Katz, D. (1999). Family Secrets and the Disclosure of Distressful Information in Chinese Families. *Families in Society*, *80*(6), 620–628. https://doi.org/10.1606/1044-3894.1783

Pa, T. (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior*, *Spec No*, 53–79.

Palmer, S., & Gyllensten, K. (2008). How Cognitive Behavioural, Rational Emotive Behavioural or Multimodal Coaching could Prevent Mental Health Problems, Enhance Performance and Reduce Work Related Stress. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *26*(1), 38–52. https://doi.org/10.1007/s10942-007-0069-y

Pan, J., Liu, B., & Kreps, G. L. (2018). A content analysis of depression-related discourses on Sina Weibo: Attribution, efficacy, and information sources. *BMC Public Health*, *18*(1), 772. https://doi.org/10.1186/s12889-018-5701-5

Papadimitriou, G. N., & Linkowski, P. (2005). Sleep disturbance in anxiety disorders. *International Review of Psychiatry*, *17*(4), 229–236. https://doi.org/10.1080/09540260500104524

Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: A global public-health challenge. *The Lancet*, *369*(9569), 1302–1313. https://doi.org/10.1016/S0140-6736(07)60368-7

Pederson, E., & Vogel, D. (2007). Male Gender Role Conflict and Willingness to Seek Counseling: Testing a Mediation Model on College-Aged Men. *Journal of Counseling Psychology*, *54*(4), 373–384. https://doi.org/10.1037/0022-0167.54.4.373

Penn, D. L., & Corrigan, P. W. (2002). The effects of stereotype suppression on psychiatric stigma. *Schizophrenia Research*, *55*(3), 269–276. https://doi.org/10.1016/S0920-9964(01)00207-9

PENN, P. W. C. & D. (1997). Disease and discrimination: Two paradigms that describe severe mental illness. *Journal of Mental Health*, *6*(4), 355–366. https://doi.org/10.1080/09638239718680

Pescosolido, B. A., & Boyer, C. A. (1999). How do people come to use mental health services? Current knowledge and changing perspectives. In *A handbook for the study of mental health: Social contexts, theories, and systems* (pp. 392–411). Cambridge University Press.

Phelan, J., Link, B. G., Moore, R. E., & Stueve, A. (1997). The Stigma of Homelessness: The Impact of the Label "Homeless" on Attitudes Toward Poor Persons. *Social Psychology Quarterly*, *60*(4), 323–337. https://doi.org/10.2307/2787093

Phillips, M. R., Zhang, J., Shi, Q., Song, Z., Ding, Z., Pang, S., Li, X., Zhang, Y., & Wang, Z. (2009). Prevalence, treatment, and associated disability of mental disorders in four provinces in China during 2001–05: An epidemiological survey. *The Lancet*, *373*(9680), 2041–2053. https://doi.org/10.1016/S0140-6736(09)60660-7

Pirkis, J., Blood, R. W., Francis, C., & McCallum, K. (2006). On-Screen Portrayals of Mental Illness: Extent, Nature, and Impacts. *Journal of Health Communication*, *11*(5), 523–541. https://doi.org/10.1080/10810730600755889

Pirkis, J. E., Burgess, P. M., Francis, C., Blood, R. W., & Jolley, D. J. (2006). The relationship between media reporting of suicide and actual suicide in Australia. *Social Science & Medicine*, *62*(11), 2874–2886. https://doi.org/10.1016/j.socscimed.2005.11.033

Pratkanis, A. R., Breckler, S. J., & Greenwald, A. G. (2014). *Attitude Structure and Function*. Psychology Press.

Procter, N. G., Kenny, M. A., Eaton, H., & Grech, C. (2018). Lethal hopelessness: Understanding and responding to asylum seeker distress and mental deterioration. *International Journal of Mental Health Nursing*, *27*(1), 448–454. https://doi.org/10.1111/inm.12325

Proper, K. I., & van Oostrom, S. H. (2019). The effectiveness of workplace health promotion interventions on physical and mental health outcomes – a systematic review of reviews. *Scandinavian Journal of Work, Environment & Health*, *45*(6), 546–559. https://doi.org/10.5271/sjweh.3833

Rafal, G., Gatto, A., & DeBate, R. (2018). Mental Health Literacy, Stigma, and Help-Seeking Behaviors among Male College Students. *Journal of American College Health*, *66*(4), 284–291. https://doi.org/10.1080/07448481.2018.1434780

Ray, E. C., Arpan, L., Oehme, K., Perko, A., & Clark, J. (2019). Helping students cope with adversity: The influence of a web-based intervention on students' self-efficacy and intentions to use wellness-related resources. *Journal of American College Health*, 1–8. https://doi.org/10.1080/07448481.2019.1679818

Reynders, A., Kerkhof, A. J. F. M., Molenberghs, G., & Van Audenhove, C. (2014). Attitudes and stigma in relation to help-seeking intentions for psychological problems in low and

high suicide rate regions. *Social Psychiatry and Psychiatric Epidemiology*, *49*(2), 231–239. https://doi.org/10.1007/s00127-013-0745-4

Riles, J. M. (2020). The social effect of exposure to mental illness media portrayals: Influencing interpersonal interaction intentions. *Psychology of Popular Media*, *9*(2), 145–154. https://doi.org/10.1037/ppm0000217

Rimal, R. N., Lapinski, M. K., Cook, R. J., & Real, K. (2005). Moving Toward a Theory of Normative Influences: How Perceived Benefits and Similarity Moderate the Impact of Descriptive Norms on Behaviors. *Journal of Health Communication*, *10*(5), 433–450. https://doi.org/10.1080/10810730591009880

Robbins, R., & Niederdeppe, J. (2015). Using the integrative model of behavioral prediction to identify promising message strategies to promote healthy sleep behavior among college students. *Health Communication*, *30*(1), 26–38. https://doi.org/10.1080/10410236.2013.835215

Robinson, P., Turk, D., Jilka, S., & Cella, M. (2019). Measuring attitudes towards mental health using social media: Investigating stigma and trivialisation. *Social Psychiatry and Psychiatric Epidemiology; Heidelberg*, *54*(1), 51–58. http://dx.doi.org/10.1007/s00127-018-1571-5

Rosenstock, I. M. (1960). What Research in Motivation Suggests for Public Health. *American Journal of Public Health and the Nations Health*, *50*(3_Pt_1), 295–302. https://doi.org/10.2105/AJPH.50.3_Pt_1.295

Rosenstock, I. M. (1974). Historical Origins of the Health Belief Model. *Health Education Monographs*, *2*(4), 328–335. https://doi.org/10.1177/109019817400200403

Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin*, *86*(3), 638–641. https://doi.org/10.1037/0033-2909.86.3.638

Ross, C. A., & Goldner, E. M. (2009). Stigma, negative attitudes and discrimination towards mental illness within the nursing profession: A review of the literature. *Journal of Psychiatric and Mental Health Nursing*, *16*(6), 558–567. https://doi.org/10.1111/j.1365-2850.2009.01399.x

Rudowicz, E., & Au, E. (2011). Help-Seeking Experiences of Hong Kong Social Work Students: Implications for Professional Training. *International Social Work*, *44*, 75.

Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry*, *20*(8), 529–539. https://doi.org/10.1016/j.eurpsy.2005.04.004

Schlaegel, C. (2015). Understanding individuals' initial and continued use of online auction marketplaces: A meta-analysis. *Management Research Review*, *38*(8), 855–907.

Schmidt, F. L., & Hunter, J. (2004). General mental ability in the world of work: Occupational attainment and job performance. *Journal of Personality and Social Psychology*, *86*(1), 162–173. https://doi.org/10.1037/0022-3514.86.1.162

Schofield, M., & Khan, A. (2008). Australian Women Seeking Counseling Have Higher Use Of Health Services. *Women's Health Issues*, *18*(5), 399–405. https://doi.org/10.1016/j.whi.2008.07.005

Schomerus, G., Matschinger, H., & Angermeyer, M. C. (2009). Attitudes that determine willingness to seek psychiatric help for depression: A representative population survey applying the Theory of Planned Behaviour. *Psychological Medicine*, *39*(11), 1855–1865. https://doi.org/10.1017/S0033291709005832

Schomerus, Georg, Auer, C., Rhode, D., Luppa, M., Freyberger, H. J., & Schmidt, S. (2012). Personal stigma, problem appraisal and perceived need for professional help in currently untreated depressed persons. *Journal of Affective Disorders*, *139*(1), 94–97. https://doi.org/10.1016/j.jad.2012.02.022

Seehuus, M., Moeller, R. W., & Peisch, V. (2019). Gender effects on mental health symptoms and treatment in college students. *Journal of American College Health*, 1–8. https://doi.org/10.1080/07448481.2019.1656217

Segal, D. L., Coolidge, F. L., Mincic, M. S., & O'Riley, A. (2005). Beliefs about mental illness and willingness to seek help: A cross-sectional study. *Aging & Mental Health*, *9*(4), 363–367. https://doi.org/10.1080/13607860500131047

Seidman, A. J., Wade, N. G., Lannin, D. G., Heath, P. J., Brenner, R. E., & Vogel, D. L. (2018). Self-affirming values to increase student veterans' intentions to seek counseling. *Journal of Counseling Psychology*, *65*(5), 653–660. https://doi.org/10.1037/cou0000289

Setoyama, Y., Yamazaki, Y., & Namayama, K. (2011). Benefits of Peer Support in Online Japanese Breast Cancer Communities: Differences Between Lurkers and Posters. *Journal of Medical Internet Research*, *13*(4), e1696. https://doi.org/10.2196/jmir.1696

Seyfi, F., Poudel, K. C., Yasuoka, J., Otsuka, K., & Jimba, M. (2013). Intention to seek professional psychological help among college students in Turkey: Influence of help-seeking attitudes. *BMC Research Notes*, *6*(1), 519. https://doi.org/10.1186/1756-0500-6-519

Shears, L. M., & Jensema, C. J. (1969). Social Acceptability of Anomalous Persons. *Exceptional Children*, *36*(2), 91–96. https://doi.org/10.1177/001440296903600204

Shechtman, Z., Alim, E., Brenner, R. E., & Vogel, D. L. (2018). Public stigma, self-stigma, and group therapy help-seeking intentions among clinical and non-clinical Arab adults in Israel. *International Journal of Culture and Mental Health*, *11*(4), 595–604. https://doi.org/10.1080/17542863.2018.1461913

Shi, J., & Chen, L. (2014). Social support on Weibo for people living with HIV/AIDS in China: A quantitative content analysis. *Chinese Journal of Communication*, *7*(3), 285–298. https://doi.org/10.1080/17544750.2014.926954

Shi, J., & Kim, H. K. (2020). Integrating Risk Perception Attitude Framework and the Theory of Planned Behavior to Predict Mental Health Promotion Behaviors among Young Adults. *Health Communication*, *35*(5), 597–606. https://doi.org/10.1080/10410236.2019.1573298

Shi, J., Kim, H. K., Su, Y., & Kong, H. (2020). Mental Health Conditions in Young Asian Adults and Motivation to Seek Counseling: A Cross-Country Study. *Asia Pacific Journal of Public Health*, *32*(6–7), 328–333. https://doi.org/10.1177/1010539520937091

Simon, P., & Ward, N. L. (2014). An evaluation of training for lay providers in the use of motivational interviewing to promote academic achievement among urban youth. *Advances in School Mental Health Promotion*, *7*(4), 255–270. https://doi.org/10.1080/1754730X.2014.949062

Skogstad, P., Deane, F. P., & Spicer, J. (2006). Social-cognitive determinants of help-seeking for mental health problems among prison inmates. *Criminal Behaviour and Mental Health*, *16*(1), 43–59. https://doi.org/10.1002/cbm.54

Skoric, M. M., Zhu, Q., Goh, D., & Pang, N. (2016). Social media and citizen engagement: A meta-analytic review. *New Media & Society*, *18*(9), 1817–1839. https://doi.org/10.1177/1461444815616221

Socall, D. W., & Holtgraves, T. (1992). Attitudes Toward the Mentally Ill: *The Sociological Quarterly*, *33*(3), 435–445. https://doi.org/10.1111/j.1533-8525.1992.tb00383.x

Solomon, P. (2004). Peer support/peer provided services underlying processes, benefits, and critical ingredients. *Psychiatric Rehabilitation Journal*, *27*(4), 392–401. https://doi.org/10.2975/27.2004.392.401

Song, X., Anderson, T., Himawan, L., McClintock, A., Jiang, Y., & McCarrick, S. (2019). An Investigation of a Cultural Help-Seeking Model for Professional Psychological Services With U.S. and Chinese Samples. *Journal of Cross-Cultural Psychology*, *50*(9), 1027–1049. https://doi.org/10.1177/0022022119878506

Spendelow, J. S., & Jose, P. E. (2010). Does the Optimism Bias Affect Help-Seeking Intentions for Depressive Symptoms in Young People? *The Journal of General Psychology*, *137*(2), 190–209. https://doi.org/10.1080/00221301003645277

Spengler, E. S., & Ægisdóttir, S. (2015). Psychological help-seeking attitudes and intentions of lesbian, gay, and bisexual individuals: The role of sexual minority identity and perceived counselor sexual prejudice. *Psychology of Sexual Orientation and Gender Diversity*, *2*(4), 482–491. https://doi.org/10.1037/sgd0000141

Stavrakaki, C., & Vargo, B. (1986). The Relationship of Anxiety and Depression: A Review of the Literature. *The British Journal of Psychiatry*, *149*(1), 7–16. https://doi.org/10.1192/bjp.149.1.7

Steel, P. D., & Kammeyer-Mueller, J. D. (2002). Comparing meta-analytic moderator estimation techniques under realistic conditions. *Journal of Applied Psychology*, *87*(1), 96–111. https://doi.org/10.1037/0021-9010.87.1.96

Stewart, G., Kamata, A., Miles, R., Grandoit, E., Mandelbaum, F., Quinn, C., & Rabin, L. (2019). Predicting mental health help seeking orientations among diverse Undergraduates: An ordinal logistic regression analysis☆. *Journal of Affective Disorders*, *257*, 271–280. https://doi.org/10.1016/j.jad.2019.07.058

Stuart, H. (2006). Media Portrayal of Mental Illness and its Treatments. *CNS Drugs*, *20*(2), 99–106. https://doi.org/10.2165/00023210-200620020-00002

Suka, M., Yamauchi, T., & Sugimori, H. (2016). Help-seeking intentions for early signs of mental illness and their associated factors: Comparison across four kinds of health problems. *BMC Public Health*, *16*(1), 301. https://doi.org/10.1186/s12889-016-2998-9

Sutton, J. A., & Walsh-Buhi, E. R. (2017). Factors influencing college women's contraceptive behavior: An application of the integrative model of behavioral prediction. *Journal of American College Health: J of ACH*, *65*(5), 339–347. https://doi.org/10.1080/07448481.2017.1312414

Sze, C. Y. (2017). *Coping and help-seeking for mental health issues among undergraduates in Hong Kong | Institutional Repository*. http://ra.lib.hksyu.edu.hk/jspui/handle/20.500.11861/5277

Tang, J. Y.-M., Chang, W.-C., Hui, C. L.-M., Wong, G. H.-Y., Chan, S. K.-W., Lee, E. H.-M., Yeung, W.-S., Wong, C.-K., Tang, W.-N., Chan, W.-F., Pang, E. P.-F., Tso, S., Ng, R. M.-K., Hung, S.-F., Dunn, E. L.-W., Sham, P.-C., & Chen, E. Y.-H. (2014). Prospective relationship between duration of untreated psychosis and 13-year clinical outcome: A first-episode psychosis study. *Schizophrenia Research*, *153*(1), 1–8. https://doi.org/10.1016/j.schres.2014.01.022

Tardy, C. H. (1985). Social support measurement. *American Journal of Community Psychology*, *13*(2), 187–202. https://doi.org/10.1007/BF00905728

Taylor, J., & Gibson, L. K. (2017). Digitisation, digital interaction and social media: Embedded barriers to democratic heritage. *International Journal of Heritage Studies*, *23*(5), 408–420. https://doi.org/10.1080/13527258.2016.1171245

Thoits, P. (1986). Social Support as Coping Assistance. *Journal of Consulting and Clinical Psychology*, *54*(4), 416–423.

Thomas, N., Ribaux, D., & Phillips, L. J. (2014). Rumination, Depressive Symptoms and Awareness of Illness in Schizophrenia. *Behavioural and Cognitive Psychotherapy*, *42*(2), 143–155. https://doi.org/10.1017/S1352465812000884

Tomczyk, S., Muehlan, H., Freitag, S., Stolzenburg, S., Schomerus, G., & Schmidt, S. (2018). Is knowledge "half the battle"? The role of depression literacy in help-seeking among a non-clinical sample of adults with currently untreated mental health problems. *Journal of Affective Disorders*, *238*, 289–296. https://doi.org/10.1016/j.jad.2018.05.059

Tomczyk, S., Schomerus, G., Stolzenburg, S., Muehlan, H., & Schmidt, S. (2020). Ready, Willing and Able? An Investigation of the Theory of Planned Behaviour in Help-Seeking for a Community Sample with Current Untreated Depressive Symptoms. *Prevention Science*, *21*(6), 749–760. https://doi.org/10.1007/s11121-020-01099-2

Tong, S. T., Heinemann-LaFave, D., Jeon, J., Kolodziej-Smith, R., & Warshay, N. (2013). The Use of Pro-Ana Blogs for Online Social Support. *Eating Disorders*, *21*(5), 408–422. https://doi.org/10.1080/10640266.2013.827538

Tran, M. M., Curland, R. A., & Leykin, Y. (2020). Association Between Treatment Seeking and Personal Knowledge of Others With Emotional or Mental Problems. *Psychiatric Services*, *71*(4), 393–396. https://doi.org/10.1176/appi.ps.201900190

Trojanowski, P. J., & Fischer, S. (2018). The role of depression, eating disorder symptoms, and exercise in young adults' quality of life. *Eating Behaviors*, *31*, 68–73. https://doi.org/10.1016/j.eatbeh.2018.08.005

Tuliao, A. P., & Holyoak, D. (2020). Psychometric properties of the perceived stigma towards substance users scale: Factor structure, internal consistency, and associations with help-seeking variables. *The American Journal of Drug and Alcohol Abuse*, *46*(2), 158–166. https://doi.org/10.1080/00952990.2019.1658198

Turner, E., Jensen-Doss, A., & Heffer, R. (2015). Ethnicity as a Moderator of How Parents' Attitudes and Perceived Stigma Influence Intentions to Seek Child Mental Health Services. *Cultural Diversity and Ethnic Minority Psychology*, *21*(4), 613–618. https://doi.org/10.1037/cdp0000047

Turner, R. J., & Brown, R. L. (2010). Social support and mental health. In *A handbook for the study of mental health: Social contexts, theories, and systems, 2nd ed* (pp. 200–212). Cambridge University Press.

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*(3), 1–48. https://doi.org/10.18637/jss.v036.i03

Vogel, D. L., Bitman, R. L., Hammer, J. H., & Wade, N. G. (2013). Is Stigma Internalized? The Longitudinal Impact of Public Stigma on Self-Stigma. *Journal of Counseling Psychology*, *60*(2), 311–316. https://doi.org/10.1037/a0031889

Vogel, D. L., Heimerdinger-Edwards, S. R., Hammer, J. H., & Hubbard, A. (2011). "Boys don't cry": Examination of the links between endorsement of masculine norms, self-stigma, and help-seeking attitudes for men from diverse backgrounds. *Journal of Counseling Psychology*, *58*(3), 368–382. https://doi.org/10.1037/a0023688

Vogel, D. L., Shechtman, Z., & Wade, N. G. (2010). The Role of Public and Self-Stigma in Predicting Attitudes Toward Group Counseling. *The Counseling Psychologist*, *38*(7), 904–922. https://doi.org/10.1177/0011000010368297

Vogel, D. L., Wade, N. G., & Ascheman, P. L. (2009). Measuring perceptions of stigmatization by others for seeking psychological help: Reliability and validity of a new stigma scale with college students. *Journal of Counseling Psychology*, *56*(2), 301–308. https://doi.org/10.1037/a0014903

Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology*, *53*(3), 325–337. https://doi.org/10.1037/0022-0167.53.3.325

Vogel, D. L., Wade, N. G., & Hackler, A. H. (2007). Perceived Public Stigma and the Willingness to Seek Counseling: The Mediating Roles of Self-Stigma and Attitudes toward Counseling. *Journal of Counseling Psychology*, *54*(1), 40–50.

Vogel, D. L., & Wester, S. R. (2003). To seek help or not to seek help: The risks of self-disclosure. *Journal of Counseling Psychology*, *50*(3), 351–361. https://doi.org/10.1037/0022-0167.50.3.351

Vogel, D. L., Wester, S. R., Wei, M., & Boysen, G. A. (2005). The Role of Outcome Expectations and Attitudes on Decisions to Seek Professional Help. *Journal of Counseling Psychology*, *52*(4), 459–470. https://doi.org/10.1037/0022-0167.52.4.459

Wahl, O. F. (1995). *Media Madness: Public Images of Mental Illness*. Rutgers University Press.

WANG, P. S., ANGERMEYER, M., BORGES, G., BRUFFAERTS, R., TAT CHIU, W., DE GIROLAMO, G., FAYYAD, J., GUREJE, O., HARO, J. M., HUANG, Y., KESSLER, R. C., KOVESS, V., LEVINSON, D., NAKANE, Y., OAKLEY BROWN, M. A., ORMEL, J. H., POSADA-VILLA, J., AGUILAR-GAXIOLA, S., ALONSO, J., … ÜSTÜN, T. B. (2007). Delay and failure in treatment seeking after first onset of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry*, *6*(3), 177–185.

Wang, Xiao. (2013). Applying the integrative model of behavioral prediction and attitude functions in the context of social media use while viewing mediated sports. *Computers in Human Behavior*, *29*(4), 1538–1545. https://doi.org/10.1016/j.chb.2013.01.031

Wang, Xiaohui, & Goh, D. H.-L. (2017). Video Game Acceptance: A Meta-Analysis of the Extended Technology Acceptance Model. *Cyberpsychology, Behavior and Social Networking*, *20*(11), 662–671. https://doi.org/10.1089/cyber.2017.0086

Wang, Xiaohui, Shi, J., & Kong, H. (2020). Online Health Information Seeking: A Review and Meta-Analysis. *Health Communication*, *0*(0), 1–13. https://doi.org/10.1080/10410236.2020.1748829

Wang, Z., Walther, J. B., & Hancock, J. T. (2009). Social Identification and Interpersonal Communication in Computer-Mediated Communication: What You Do Versus Who You Are in Virtual Groups. *Human Communication Research*, *35*(1), 59–85. https://doi.org/10.1111/j.1468-2958.2008.01338.x

Ward, E. C., & Besson, D. D. (2013). African American Men's Beliefs About Mental Illness, Perceptions of Stigma, and Help-Seeking Barriers. *The Counseling Psychologist*, *41*(3), 359–391. https://doi.org/10.1177/0011000012447824

Watson, H. J., Joyce, T., French, E., Willan, V., Kane, R. T., Tanner-Smith, E. E., McCormack, J., Dawkins, H., Hoiles, K. J., & Egan, S. J. (2016). Prevention of eating disorders: A systematic review of randomized, controlled trials. *International Journal of Eating Disorders*, *49*(9), 833–862. https://doi.org/10.1002/eat.22577

Whiteford, H. A., Ferrari, A. J., Degenhardt, L., Feigin, V., & Vos, T. (2015). The Global Burden of Mental, Neurological and Substance Use Disorders: An Analysis from the Global Burden of Disease Study 2010. *PLOS ONE*, *10*(2), e0116820. https://doi.org/10.1371/journal.pone.0116820

Whitley, R., & Denise Campbell, R. (2014). Stigma, agency and recovery amongst people with severe mental illness. *Social Science & Medicine*, *107*, 1–8. https://doi.org/10.1016/j.socscimed.2014.02.010

Wigand, M. E., Oexle, N., Waldmann, T., Staiger, T., Becker, T., & Rüsch, N. (2019). Predictors of help-seeking in unemployed people with mental health problems. *International Journal of Social Psychiatry*, *65*(7–8), 543–547. https://doi.org/10.1177/0020764019868262

Wight, D., Abraham, C., & Scott, S. (1998). Towards a psycho-social theoretical framework for sexual health promotion. *Health Education Research*, *13*(3), 317–330. https://doi.org/10.1093/her/13.3.317-a

Williston, S. K., Bramande, E. A., Vogt, D. S., Iverson, K. M., & Fox, A. B. (2020). An Examination of the Roles of Mental Health Literacy, Treatment-Seeking Stigma, and

Perceived Need for Care in Female Veterans' Service Use. *Psychiatric Services*, *71*(2), 144–150. https://doi.org/10.1176/appi.ps.201800405

Wilson, C. J. (2010). General psychological distress symptoms and help-avoidance in young Australians. *Advances in Mental Health*, *9*(1), 63–72. https://doi.org/10.5172/jamh.9.1.63

Wilson, C. J., & Deane, F. P. (2010). Help-Negation and Suicidal Ideation: The Role of Depression, Anxiety and Hopelessness. *Journal of Youth and Adolescence*, *39*(3), 291–305. https://doi.org/10.1007/s10964-009-9487-8

Wittenbrink, B., & phil.), N. S. (Dr. (2007). *Implicit Measures of Attitudes*. Guilford Press.

Wong, D. F. K., & Li, J. C. M. (2014). Cultural Influence on Shanghai Chinese People's Help-Seeking for Mental Health Problems: Implications for Social Work Practice. *The British Journal of Social Work*, *44*(4), 868–885. https://doi.org/10.1093/bjsw/bcs180

Wong, D. F. K., Tsui, H. K. P., Pearson, V., Chen, E. Y. H., & Chiu, S. N. (2004). Family Burdens, Chinese Health Beliefs, and the Mental Health of Chinese Caregivers in Hong Kong. *Transcultural Psychiatry*, *41*(4), 497–513. https://doi.org/10.1177/1363461504047932

Wrigley, S., Jackson, H., Judd, F., & Komiti, A. (2005). Role of Stigma and Attitudes Toward Help-Seeking from a General Practitioner for Mental Health Problems in a Rural Town. *Australian & New Zealand Journal of Psychiatry*, *39*(6), 514–521. https://doi.org/10.1080/j.1440-1614.2005.01612.x

Wu, T.-Y., & Yu, M.-Y. (2003). Reliability and Validity of the Mammography Screening Beliefs Questionnaire Among Chinese American Women. *Cancer Nursing*, *26*(2), 131–142.

Yakunina, Elena S., & Weigold, I. K. (2011). Asian international students' intentions to seek counseling: Integrating cognitive and cultural predictors. *Asian American Journal of Psychology*, *2*(3), 219–224. https://doi.org/10.1037/a0024821

Yakunina, Elena Sergeeva. (2012). *Asian International Students' Intentions to Seek Counseling: Integrating Cognitive and Cultural Predictors* [University of Akron]. https://etd.ohiolink.edu/apexprod/rws_olink/r/1501/10?clear=10&p10_accession_num=akron1295704732

Yang, L. H. (2007). Application of mental illness stigma theory to Chinese societies: Synthesis and new directions. *Singapore Medical Journal*, *48*(11), 977–985.

Yeshanew, B., Belete, A., & Necho, M. (2020). Help-seeking intention and associated factors towards mental illness among residents of Mertule Mariam town, East Gojam Zone, Amhara Region, Ethiopia: A mixed-method study. *Annals of General Psychiatry*, *19*(1), 12. https://doi.org/10.1186/s12991-020-00261-y

Yuker, H. E., & Block, J. R. (1986). *Research with the Attitudes towards Disabled Persons Scales (ATDP) 1960-1985*. Hofstra University Bookstore, Hempstead, NY 11550 ($10.

Yzer, M. C. (2012). The integrated model of behavioral prediction as a tool for designing health messages: Theory and Practice. *Designing Messages for Health Communication Campaigns: Theory and Practice*, 21–40.

Zhao, D., Arpan, L., Raney, A., & Petts, R. (2020). Examining the self- and others-oriented effects of exposure to a mental health narrative. *Psychology of Popular Media*. https://doi.org/10.1037/ppm0000274

2014 | NAMI: National Alliance on Mental Illness. (n.d.). Retrieved April 18, 2021, from https://www.nami.org/Press-Media/Press-Releases/2014

小红书上线抗疫心理援助平台 逾千名咨询师提供免费心理咨询. (2020, Feb 2). Xinhuanet, http://www.xinhuanet.com/enterprise/2020-02/10/c_1125553919.htm

CURRICULUM VITAE

Academic qualifications of the thesis author, Ms. KONG Hanxiao:

• Received the degree of Bachelor of Arts in Journalism and Broadcasting from Tianjin Normal University, June 2017.

• Received the degree of Master of Arts in Communication from Hong Kong Baptist university, November 2018.

July 2021