

AN ABSTRACT OF THE DISSERTATION OF

Stephen Wong for the degree of Doctor of Philosophy in Counseling presented on October 29, 2018.

Title: Sources of Psychological Support for East Asians Reporting Mental Health Issues

Abstract approved:

Cass Dykeman

Mental illness is a universal phenomenon, but cultural context has a profound influence on how it is perceived, classified, and treated. Most systematic research on public attitudes toward mental illness has been completed in Western societies. The emergence of multicultural psychotherapy in the West has helped professionals recognize the extent to which their conceptions of normality and deviance are culture-bound, but research in this area has continued to lag. Using data from the East Asian Social Survey (EASS), this study employed a retrospective, cross-sectional observational analysis to examine help-seeking preferences for individuals reported with low mental health and Internet addiction. Preferences for kin versus non-kin

support, use of alternative medicine, and professional mental health assistance were examined, as were between-country differences in support preferences. The results support previous research in East Asian countries that found a strong preference for using kin support to address mental health concerns, followed by non-kin support (i.e., close friends and co-participants in religious institutions) and professional mental health services, respectively. Compared to Western culture, a higher percentage of East Asians report they are comfortable relying on alternative medicine for low mental health and Internet addiction. Between-country differences in mental health support preferences are presented and examined in context. Overall, results suggest that, despite enormous social, economic, and technological changes experienced over the past several decades, many East Asians remain deeply influenced by traditional ideas about mental illness.

©Copyright by Stephen Wong

October 29, 2018

All Rights Reserved

Sources of Psychological Support for East Asians Reporting Mental Health Issues

by

Stephen Wong

DISSERTATION

submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Doctor of Philosophy

Presented October 29, 2018

Commencement June 2019

Doctor of Philosophy dissertation of Stephen Wong presented on October 29, 2018

APPROVED:

Major Professor, representing Counseling

Dean of the College of Education

Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

Stephen Wong, Author

ACKNOWLEDGEMENTS

I would like to thank God for allowing me to have the experience of completing a dissertation. This dissertation has taught me lessons beyond its topic of study, namely endurance and perseverance. This long process would not be successfully completed without proper guidance and encouragement. Dr. Cass Dykeman has been there since the beginning of this process. Dr. Dykeman has not only been an advisor to me, but has also been a cheerleader motivating me to press on to take one small step at a time. I will forever be grateful to Dr. Dykeman. Another contributor to the completion of this dissertation is Dr. Wondimu who assisted on the statistical component. Dr. Wondimu has been so detailed guiding me through the statistics involved in this research. I would also like to acknowledge my committee members: Dr. Ng, Dr. Bullara, Dr. LaGue, and Yelda, for taking time out of their busy schedule to participate at the proposal and final defense. Furthermore, I would like to thank my wife and my three children for their understanding, encouragement, and prayerful heart. They had to endure my crankiness for days during the preparation of proposal and final defense.

At last, I would like to dedicate this portion of my educational accomplishment to my mother who was hoping to see the day of my graduation. The day has finally come and I know that she is able to see it from heaven.

CONTRIBUTION OF AUTHORS

Dr. Cass Dykeman assisted with methodology and research design, in addition to editing and refinement of this manuscript. Dr. Wondimu Ahmedt provided assistance with data cleaning and data analyses.

TABLE OF CONTENTS

Chapter 1: Introduction	1
Organizational Plan for Chapter 1	1
Study Rationale	2
Critical Areas of Research	3
Research on Mental Health in East Asia.....	3
Prevalence	3
Cultural conceptions of mental illness.....	4
Application to Internet Addiction	7
Conceptualizing mental health problems associated with Internet use	8
Prevalence of Internet addiction	11
Internet addiction as a comorbid disorder.....	12
Mental health systems and Internet addiction.....	12
A Word About Cultural Competence	13
Description of Manuscript #1	14
Manuscript rationale	15
How manuscript addresses research gap	15
Target journal for publication.....	15
Statement of research questions.....	15
Description of methodology	16
Description of Manuscript #2	17
Manuscript rationale	17

TABLE OF CONTENTS (Continued)

How manuscript addresses research gap	17
Target journal for publication	18
Statement of research questions.....	18
Description of methodology.	18
Specialized Glossary.....	19
Thematic Links Between Phases of the Research.....	20
Dissertation Organization	22
Chapter 2: A Research Manuscript.....	23
Abstract.....	25
Overview.....	26
Prevalence of mental illness in East Asian cultures	28
Current societal psychological support for persons with such disorders.....	29
Familial support and stigma for persons with such disorders.....	31
Traditional and alternative medicine practices for mental health issues.	31
Method	33
Design.....	33
Participants.....	34
Measures	35
Data Analysis.....	38
Results.....	38
Discussion.....	43
References.....	56

TABLE OF CONTENTS (Continued)

Chapter 3: A Research Manuscript.....	67
Abstract.....	69
Overview.....	70
Literature Review.....	71
Methods.....	75
Participants.....	76
Measures.....	76
Data Analysis.....	79
Results.....	80
Discussion.....	84
Chapter 4: General Conclusion.....	105
Overview.....	106
Summary of Manuscript #1.....	106
Summary of Manuscript #2.....	112
Thematic Linkage of the Two Manuscripts.....	118
Contribution to the Knowledge Base.....	121
Future Research Directions.....	122
Bibliography.....	124
Appendix A.....	148

LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 2.1. Frequency and Percentage of Support Sources from East Asian Social Survey	65
Table 2.2. Cross Tabulations and Chi-square Test Results for Alternative Medicine by Country	66
Table 3.1. Frequency and Percentage of Support Sources.....	102
Table 3.2. Frequency and Percentage of Respondents Using Alternative Medicine	103
Table 3.3. Cross Tabulations and Chi-square Test Results for Alternative Medicine by Country	104

Chapter 1: Introduction

Mental illness is a universal phenomenon, but cultural context has a profound influence on how it is perceived, classified, and treated (Ng, 1997). Most systematic research on mental illness and public attitudes toward mental illness has been completed in Western societies. The emergence of multicultural psychotherapy in the West has helped professionals recognize the extent to which their conceptions of normality and deviance are culture-bound (Atkinson, Bui, & Mori, 2001; Comas-Diaz, 2014; Whaley & King, 2007), but research in this area has continued to lag (Whaley & Davis, 2007). The operationalization of diagnostic criteria, expectations about where and from whom to seek help, and appropriateness of intervention should, ideally, combine the latest available scientific evidence with indigenous forms of cultural expression. This study will use data from the East Asian Social Survey (EASS; Iwai, Li, Kim, & Chang, 2010) to identify culturally preferred sources of assistance for mental health issues including low mental health and Internet addiction. The results could be used to formulate culture-sensitive approaches to emerging mental healthcare concerns in East Asian countries.

Organizational Plan for Chapter 1

This chapter contains five sections designed to create a background for the two research studies. In order of presentation, these sections are as follows: (1) study rationale, (2) critical areas of research, (3) research on mental health in East Asia (i.e., prevalence, cultural conceptions of mental illness), (4) application to Internet addiction (i.e., associated mental health problems, prevalence of Internet addiction, Internet addiction as a comorbid disorder, mental health systems and Internet

addiction), (5) a word about cultural competence. These sections will be followed by a section that describes the organizational plan for the rest of the dissertation.

Study Rationale

Professional counselors should be aware of how their theoretical orientation, training, and cultural biases influence the way they approach mental health problems. Western mental health systems have drawn widespread criticism for their inattention to their own cultural biases and preferences as they disseminate treatment models to other cultures (Betancourt, Green, Carrillo, & Ananeh-Firempong, 2016; Kohn-Wood & Hooper, 2014; Pedersen, Lonner, Draguns, Trimble, & Scharron-del Rio, 2016). Means of addressing mental health problems in non-Western countries, such as consultation with family, spiritual advising, or use of medicinal herbs, can be dismissed or viewed as harmful without fully understanding their meaning from within a specific cultural context (Whaley & Davis, 2007). In an increasingly diverse and globalized world, professional counselors must be especially aware of their personal and cultural assumptions in order to best serve a range of clients (Atkinson et al., 2001; Comas-Diaz, 2014; Whaley & King, 2007). This research will fill a gap in the counseling literature by offering a culturally sensitive perspective on preferences for mental health problems in East Asian countries. Findings can be used to consider new approaches to mental healthcare. One of the fastest-growing mental health concerns around the world is compulsive Internet use among adolescents and early adults, especially in East Asia. The findings of this study, while applicable to a number of mental health problems, can be used to propose a culturally competent mental health approach to Internet addiction, a problem that is emerging globally but

is of special concern to parents, professionals, and policy makers in East Asian countries (China Internet-Based Information Center, 2014; Dong, Lu, Zhou, & Zhao, 2011; Ni, Yan, Chen, & Liu, 2009; Tao et al., 2010).

Critical Areas of Research

The overall aim of this project is to provide a coherent and data-informed approach to mental healthcare in East Asia that reflects cultural preferences for care. Data from the East Asian Social Survey (EASS; Iwai et al., 2010) will be used to identify culturally preferred sources of assistance for individuals who report low mental health or Internet addiction. There are two critical areas of research associated with this project. The first is to identify current prevalence estimates of low mental health needs and preferred sources of mental healthcare assistance in East Asia. The second major area of research concerns Internet addiction, a problem that is of particular concern to many countries in East Asia.

Research on Mental Health in East Asia

Prevalence. Mental illness is recognized as a prevalent and serious issue in East Asian countries (Cabinet Office, 2008; Kessler et al., 2005; Lim, Lim, Michael, Cai, & Schock, 2010; Tsai & Cho, 2011). A 2006 survey study of East Asian mental illness prevalence found that approximately seven percent of the population was diagnosed with a disorder listed in the DSM-IV (American Psychiatric Associations, 2000; Shen et al., 2006). Of those, 13.9% of respondents reported conditions that were classified as serious. Research in individual countries in East Asia has generally supported this finding. One epidemiological study estimated that about 100 million Chinese citizens, or about eight percent of the country's population, have a

psychological disorder (Lim et al., 2010). Using World Health Organization data, Ishikawa, Kawakami, and Kessler (2016) found that Japan's estimated lifetime prevalence of having one or more psychological disorders was just under eight percent, with 15 percent of those cases considered serious. A study conducted by the Japanese government in 2008 estimated that three million Japanese citizens (about two percent of the population) experience mental health disorders (Cabinet Office, Government of Japan, 2008). While this number is far below the eight percent identified through Ishikawa and colleagues, this discrepancy was possibly due to the fact that the government of Japan counted only the most severely impacted individuals. While prevalence estimates vary, there is agreement that mental illness rates have escalated in both Taiwan and South Korea over the past two decades (Fu, Lee, Gunnell, Lee, & Cheng, 2013; Kessler et al., 2005; Tsai & Cho, 2011).

Cultural conceptions of mental illness. East Asian culture, like many non-Western cultures, emphasizes the needs of the collective, especially family, over individual needs (Au, 2017). However, East Asian societies are unique in the influence of Confucian philosophy on their cultural values. Traditions associated with Confucianism, as well as other major religious and philosophical influences in East Asia, have a profound influence on how mental illness is addressed.

In most East Asian cultures, behavioral and mental health problems are believed to bring shame to the individual with the problem, as well as her family (Mellor, Carne, Shen, McCabe, & Wang, 2012; Hanzawa et al., 2009). Mental health problems are an admission of weakness that causes the individual and her family to "lose face" and diminish in social status. Consequently, some individuals who are

suffering from mental distress might hesitate to seek professional assistance in order to maintain their family's status with their communities (Hanzawa et al., 2009; Lim et al., 2010). Traditionally, families take responsibility for members who are suffering from mental illness. In East Asia, for example, approximately 70% of individuals with schizophrenia depend almost exclusively on their families for care (Chan, 2011; Chan & Yu, 2004; Sethabouppha & Kane, 2005). These families often experience social isolation and financial difficulties which lead to frustration, anxiety, and a sense of helplessness; nonetheless, this practice continues to be perceived as preferable to requesting assistance from outside the family (Tsang, Tam, Chan, & Chang, 2003).

Traditionally, the most stigmatized conditions were those seen as chronic and irreversible (Fabrega, 1991). These might be judged as hereditary or as a form of spiritual punishment resulting from immorality. Emerging evidence suggests that East Asian families are becoming more open to assistance from outside the family for serious mental health conditions that involve hallucinations, delusions, and paranoia (Eguchi, 1991; Hanzawa et al., 2009; Lim et al., 2010). This shift is more evident in urban areas than rural ones. It could be related to the difficulties of maintaining the safety of seriously mentally ill family members in an urban environment, as well as influence from Western psychiatry that links serious mental illness with neurological disease. The stigma associated with mental illness has diminished to a smaller

degree, perhaps because anxiety, compulsions, and addictive disorders are perceived as related to lack of self-control (Fabrega, 1991).

In Western countries, mental illness is often conceptually distinct from physical illness (Ng, 1997). In most non-Western countries, suffering is viewed psychosomatically, a term that requires some explanation for Western audiences. In the West, bodily manifestations of neurosis are considered pathological, dating back to early psychoanalysts' conceptions of "conversion disorders" (Haller, Cramer, Lauche, & Dobos, 2015). Psychosomaticism, or linking physical symptoms to mental distress, is considered evidence of additional pathology. But in many non-Western cultures, physical, mental, and spiritual problems are seen as integrated rather than separate (Fabrega, 1991). As a consequence, a greater number of treatment options are considered legitimate to non-Westerners who are in distress, compared to Westerners who conceive of mental distress as the exclusive domain of psychiatry.

In East Asia, people suffering from mental health problems rely on a variety of supports in addition to working individually with professionals. These may include family support (Hanzawa et al., 2009; Lam et al., 2010), alternative medicine (Eguchi, 1991; Hanzawa et al., 2009; Thirthalli et al. 2016), and spirituality (Richards & Bergin, 2014). There is a lack of data on how many people seek traditional medicine when modern health services are available, though it is common to seek both, depending on the condition (Huang et al., 2015). Up to 80% of Chinese individuals with a variety of health conditions consult practitioners of traditional and complementary medicine at some point (Thirthalli et al., 2016). Popular Chinese alternatives to modern medicine include acupuncture, moxibustion, massage therapy,

qigong, tai chi, and folk therapy (Thirthalli et al., 2016). Similar practices are shared by individuals in Japan (Eguchi, 1991), Korea, and Taiwan (Hohenshil et al., 2015). Due to stigma about admitting to having a mental illness, accurate estimates of how many people use traditional or complementary medicine and the types of treatment they prefer for mental health disorders have been difficult to obtain; however, data from EASS (Iwai et al., 2010) is enabling more research in this area. Researching preferred sources of assistance for mental distress will provide insight into the types of treatment that might work best within a given cultural context and identify ways to implement them.

Application to Internet Addiction

Manuscript Two will apply information gathered from the EASS (Iwai et al., 2010) about culturally preferred sources of mental health assistance to the issue of Internet addiction (IA). IA is a relatively complex issue for diagnosis and treatment; however, the issue is one of growing concern in East Asia.

Internet use has proliferated rapidly over the past three decades. Advances in technology have made the Internet accessible to people in virtually every corner of the world. Increasingly, people with Internet access are using it to organize many areas of their lives. Internet availability offers new avenues for human social communication, personal entertainment, and access to knowledge (Byun et al., 2009; Hsu, Wen, & Wu, 2009). The Internet also poses a serious problem for an increasing number of people who struggle to manage its place in their daily lives (Chou, Condrón, & Belland, 2005). Internet use has grown quickly in regions of the world that have no functional mental healthcare system, where lack of self-control is

considered shameful. It has also proliferated in regions that rely on mental health care methods that are considered traditional or “alternative” means of help-seeking by Western standards. More information is needed about problems associated with Internet use and how culturally-informed help-seeking behaviors influence treatment. This research has important implications for the development of effective treatment and mental health systems to address Internet use problems.

Conceptualizing mental health problems associated with Internet use.

The presence of the World Wide Web is widespread for most people under the age of 30, particularly in countries that have experienced rapid industrialization and shifts to post-industrial service economies (Schneider, 2017). Each generation appears to be more familiar with and more reliant upon the Internet. The number of U.S. Internet users increased 257% between 2000 and 2012 (Miniwatts Marketing Group, 2014). Also, in 2012, the Pew Research Center’s Internet & American Life Survey (2012) found that 90% of adolescent and young adults in the U.S. had accessed the Internet in the past year. Almost 100% of college students use the Internet on a regular basis (U.S. Pew Research Center, Pew Internet & American Life Project, 2012).

Smartphones, with their portability and easy interface, have exponentially increased use of the Internet (Schneider, 2017). Complaints about overuse of the Internet and the replacement of virtual conversation with face-to-face conversation have become a social trope. In a world in which the smartphone is omnipresent and integrated into many people’s daily routines, what does it mean to use the Internet compulsively or have an “Internet addiction”?

Understanding problems with Internet use is complicated by the lack of common terminology, classification systems, and operationalization in research studies. Several terms have been used in the literature to describe problems related to Internet use. Some studies have used the terms Internet Addiction (IA) or Pathological Internet Use (PIU). Both terms suggest that problems with Internet use bear similarities to substance use disorder and behavioral addictions, such as compulsive gambling (Liu & Potenza, 2007; Spada, 2014; Weinstein & Lejoyeux, 2010; Young, 2004). Conceptualized as addiction, some of the more common criteria of mental health-related Internet use problems include preoccupation with Internet activities; increasing tolerance with an increased need for Internet connectivity; psychological dependency and withdrawal symptoms that thwart efforts to reduce Internet use; using the Internet to reduce stress; and replacing personal and professional relationships with recurrent Internet use (Scherer, 1997; Young, 1998). Generally, researchers from an “addiction” perspective believe that the problem lies in a person’s inability to reduce or alter her Internet usage patterns, even when she is aware that these behavioral patterns are resulting in negative consequences.

Pathological Internet Use or Problematic Internet Use are preferred terms for theorists who conceptualize Internet-related mental health problems from a cognitive and behavioral perspective (Caplan, 2002; Davis, 2001; LaRose & Easton, 2004). Internet-related problems are viewed as manifestations of difficulties with coping skills. Treatment involves psychoeducation and perhaps cognitive-behavioral therapy. Some cognitive and behavioral theorists prefer the term Compulsive Internet Use (CIU), but those who prefer this term conceptualize Internet use problems as

compulsive behaviors through which people attempt to manage overwhelming anxiety, similar to obsessive-compulsive disorder (Shapira, Goldsmith, Keck, Khosla, & McElroy, 2000). Those who prefer the term Compulsive Internet Use are more likely to recommend intensive cognitive behavioral therapy.

These differing conceptualizations of mental health-related Internet problems are likely to be debated for some time. This study will adopt the term Internet addiction (IA) to describe mental health problems associated with the inability to regulate Internet use. The use of this term does not suggest a particular theoretical orientation. Rather, the reason for this choice is that the majority of studies in Asia and the U.S., where most of the research in this area has occurred, overwhelmingly use the term. In addition, the American Psychiatric Association (APA, 2013) includes this terminology in its appendix of disorders that are being considered for future editions of the Diagnostic and Statistical Manual (Kuss & Lopez-Fernandez, 2016).

The APA (2013) has already approved Internet Gaming Disorder as a condition that requires consideration as a behavioral addiction. This approval suggests that similar terminology is likely to be used in attempts to classify Internet use problems for the foreseeable future.

Funded research on IA has been the most extensive in East Asia, possibly because spending inordinate amounts of time on the Internet violates the traditional cultural norms of East Asian countries (Block, 2008). This research has focused almost exclusively on defining Internet addiction and establishing prevalence rates of

IA. There has been little research on prevention, treatment, and or policy initiatives to address the problem.

Prevalence of Internet addiction. While conceptual models of Internet addiction are in flux, research in China and other East Asian countries leaves little doubt that some individuals are experiencing mental health problems associated with Internet use (Tao et al., 2010). One study found that 14.1% of adolescents in China meet diagnostic criteria for IA; the prevalence of the disorder was found to be the highest among people between the ages of 18 and 23 (China Youth Internet Association, 2009). In response, China implemented a national policy targeted at preventing or ameliorating IA that relies heavily on the use of cyber cafes that encourage Internet use as a social event (China Internet-Based Information Center, 2014). This recommendation followed from research showing an inverse relationship between time spent on the Internet and participation in face-to-face social events (Bonetti, Campbell, & Gilmore, 2010). Another impetus for policy initiatives came from formal requests from parents and health educators that the government find ways to assist youth who are overly engrossed in Internet use (China Internet-Based Information Center, 2014).

In the United States, estimates suggest that six percent to 11 percent of all Internet users in the U.S. could qualify under proposed diagnostic criteria for Internet addiction (Tao et al., 2010). University students are at higher risk due to their higher engagement with the Internet, universal online accessibility on college campuses, and difficulty managing free time without parental guidance (Yen, Ko, C. Yen, C.S. Chen, & Chen, 2009). While estimates vary considerably depending on the criteria

used, research on Internet addiction among U.S. students is remarkably consistent with similar research with university students in China, Greece, Britain, and Turkey (Canan, Ataoglu, Ozcetin, & Icmeli, 2012; Frangos, Frangos, & Kiohos, 2010; Ni et al., 2009; Niemz, Griffiths, & Banyard, 2005). Similarities in prevalence estimates across countries and cultures suggest that classification systems may be converging on what is considered “problematic” use of the Internet.

Internet addiction as a comorbid disorder. Research suggests associations between IA and other mental health issues such as depression, anxiety, and psychoticism (Dong et al., 2011; Li, O’Brien, Snyder, & Howard, 2015; Romano, Osborne, Truzoli, & Reed, 2013). However, the nature of this co-occurrence is not clear. IA as a co-occurring disorder can be conceived in two ways. First, co-occurring IA can be viewed as a comorbid mental health condition in the way that, for example, criteria for both Generalized Anxiety Disorder and Attention Deficit Hyperactivity Disorder can be met simultaneously in the same individual. Second, IA can be seen as a symptom of another diagnosis such as Obsessive-Compulsive Disorder. Third, IA may be seen as not only co-occurring with, but caused by another disorder in the same way that some perceive untreated Major Depression as the cause of a Substance Use Disorder. Lack of clarity and disagreements continue to fuel dissension and complicate efforts to develop treatment.

Mental health systems and Internet addiction. While most research has focused on establishing the prevalence of Internet addiction and delineating its boundaries, there has been little in the way of mental health system response. This lack of response represents both a concern and an opportunity for researchers and

clinicians with an interest in IA. It is concerning that, despite increasing evidence about the prevalence of IA in many countries, there is such a high level of ongoing disagreement about how to explain and classify the phenomenon (Li et al., 2015). The APA experienced heavy criticism of its last edition of the *Diagnostic and Statistical Manual (DSM)* for “creating disorders” designed to gain third-party reimbursement under the United States’ largely privatized healthcare system (Carroll, 2015). There has been particularly intense criticism of the inclusion of Internet Gaming Disorder in the *DSM* (Kuss, Griffiths, & Pontes, 2017). Disagreement and debate on the issue of IA could slow the development of effective treatment. A delay in treatment development for IA, while unfortunate, may also represent an opportunity for mental health researchers and practitioners.

It is not the author’s intention to solve the tensions between evidence-based practice and culturally responsive mental health treatment, to the extent that such debates exist; rather, protracted debate about IA as a new mental health phenomenon presents an opportunity to design and test treatments that are, by design, culturally responsive. Currently, there is an attempt to “retrofit” efficacious treatment such as cognitive behavioral therapy for depression to make it more culturally palatable (Atkinson et al., 2001). Nonetheless, most mental health treatment retains the basic assumption of Western medicine: that symptoms emerge from and should be treated apart from their sociocultural context (Fung & Lo, 2017; Marsella & White, 2012). Those who are interested in IA have an opportunity to bring a sociocultural perspective to the development of treatment.

A Word About Cultural Competence

Culture is “a dynamic process involving worldviews and ways of living in a physical and social environment shared by groups... passed from generation to generation and may be modified by contacts between cultures in a particular social, historical, and political context” (Whaley & King, 2007, p. 568). This definition of culture acknowledges the role of tradition and location while also acknowledging that it is not a static phenomenon. Culture undergoes constant change that reflects current needs, social context, and changes in available technology. Likewise, cultural competence is dynamic and process-oriented. Cultural competence requires an action on the part of the interventionist that involves at least three elements. The first element is recognition and understanding of the interplay of tradition and adaptation that is constantly shaping and reshaping behavior. The second element is the ability to use knowledge about a person’s membership of a cultural group or subgroup to improve assessment, diagnosis, and treatment. The third element is internalization, which is the constant application of cultural frameworks in understanding the needs of diverse groups. The fourth dimension of cultural competency that has entered the literature since Whaley and King’s (2007) formulation is cultural humility (Comas-Díaz, 2014). Rather than gathering and applying a static set of facts about cultural groups different from one’s own, the therapist “concentrates on understanding the significant processes that occur during therapeutic interactions” (Comas-Díaz, 2012, p. 474). Culture is placed at the center of healing rather than being regarded as an “add on” feature of psychotherapy (Fisher-Borne, Cain, & Martin, 2015; Foronda, Baptiste, Reinholdt, & Ousman, 2016).

Description of Manuscript #1

Manuscript rationale. Data from the East Asian Social Survey (EASS; Iwai, Li, Kim, & Chang, 2010) will be used to identify culturally preferred sources of assistance for individuals who report low mental health.

How manuscript addresses research gap. Studies show that East Asians seek various types of resources when it comes to mental health issues (Hanzawa et al., 2009; Lam et al., 2010; Eguchi, 1991; Hanzawa et al., 2009; Hohenshil et al., 2015; Kleinman, 1980; Thirthalli et al., 2016). Despite the importance of these resources in East Asian countries, there is a paucity of research on their prevalence. This research will fill a gap in the counseling literature by providing information on the treatment preferences of people seeking assistance with mental health problems in East Asian countries. Data can be used to provide a more nuanced view of mental health treatment in East Asia than is typically provided in Western literature on the topic.

Target journal for publication. The *Asia Pacific Journal of Counselling and Psychotherapy* aims to provide a forum for academic and research papers with a focus on the best practice in the field of counseling and psychotherapy. The journal strives to publish original articles of quality and welcomes authors from Hong Kong, the Asia Pacific Region and internationally.

Statement of research questions. The following research questions will be addressed regarding mild to moderate mental health problems.

1. What is the usage rate of kin as a support resource?
2. Are there statistically significant differences in the use of kin as a support resource by country?

3. What is the usage rate of non-kin as a support resource?
4. Are there statistically significant differences in the use of non-kin as a support resource by country?
5. What is the usage rate of alternative medicine as a support resource?
6. Are there statistically significant differences in the use of alternative medicine as support resource by country?
7. What is the usage rate of professional mental health services as a support resource?
8. Are there statistically significant differences in the use of professional mental health services as support resource by country?

Description of methodology. This study employed a retrospective, cross-sectional observational analysis in order to determine between-country differences in the utilization of different types of health assistance and the prevalence of East Asians' reporting a low level of mental health. Data were obtained from the East Asian Social Survey (EASS) (Iwai et al., 2010). EASS is a biennial, cross-national social survey project of the following four types of General Social Surveys in East Asia: (1) the Chinese General Social Survey (CGSS); (2) the Japanese General Social Survey (JGSS); (3) the Korean General Social Survey (KGSS); and (4) the Taiwan Social Change Survey (TSCS). The purpose of these surveys was to compare and contrast the varieties of social life in these geographic areas to produce and disseminate academic survey data sets in East Asia. The information derived from the surveys includes general human health issues, such as specific illnesses or

diseases, physical functioning, caretaking and assistance received from family members or friends when needed, and lifestyle choices.

Although EASS assessed a number of variables, the current dissertation focuses on mental health and different sources of assistance. The specific variables of the study were: (a) level of mental health (continuous), (b) use of family resources (ordinal), (c) use of non-family resources (ordinal), (d) use of alternative medicines (ordinal), (e) use of mental health professionals (ordinal), and (f) country (nominal). EASS utilized multistage sampling procedures to gather data: China, three-stage PPS; Japan, two-stage stratified random sampling (stratified by regional block and population size); Korea, multistage area probability sampling; Taiwan, three-stage stratified PPS sampling (PSU [township], village, and individual person).

Description of Manuscript #2

Manuscript rationale. This manuscript applies information gathered from the EASS (Iwai et al., 2010) about culturally preferred sources of assistance for mental health problems associated with Internet addiction (IA). IA is a relatively complex issue with regard to both diagnosis and treatment; however, the issue is one of growing concern in East Asia.

How manuscript addresses research gap. More information is needed to help counselors make valid judgments in their clinical assessments and treatment of Internet-related problems. This information must include sensitivity to the social, familial, and cultural assumptions and preferences of clients about help-seeking, self-control, and appropriate treatment.

Target journal for publication. The *Journal of Asia Pacific Counseling (JAPC)* publishes theoretical, empirical, and methodological articles on counseling interventions, career development and vocational psychology, supervision and training, prevention, assessment, and multicultural aspects of counseling. Particular attention is given to empirical studies on the applications of counseling with diverse populations in the Asia Pacific region.

Statement of research questions. The following research questions will be addressed regarding Internet Addiction:

1. What is the usage rate of kin as a support resource?
2. Are there statistically significant differences in the use of kin as a support resource by country?
3. What is the usage rate of non-kin as a support resource?
4. Are there statistically significant differences in the use of non-kin as a support resource by country?
5. What is the usage rate of alternative medicine as a support resource?
6. Are there statistically significant differences in the use of alternative medicine as support resource by country?
7. What is the usage rate of professional mental health services as a support resource?
8. Are there statistically significant differences in the use of professional mental health services as support resource by country?

Description of methodology. Prior to work on this dissertation, the researcher received approval from the Oregon State University Institutional Review Board to

proceed. Documentation of the approval is attached as Appendix A. This study employed a retrospective, cross-sectional observational analysis to determine between-country differences in the utilization of different types of health assistance and the prevalence of East Asians' reporting Internet addiction. Data were derived from the East Asian Social Survey (EASS). EASS is a biennial social survey project that serves as a cross-national network of the following four General Social Survey-type surveys in East Asia: (1) Chinese General Social Survey (CGSS); (2) Japanese General Social Survey (JGSS); (3) Korean General Social Survey (KGSS); and (4) Taiwan Social Change Survey (TSCS). The purpose of these surveys is to compare diverse aspects of social life in these regions. Survey information in this module focused on issues that affected overall health, such as specific conditions, physical functioning, aid received from family members or friends when needed, and lifestyle choices. While EASS assessed a number of variables, this current dissertation focused on Internet addiction and various sources of assistance. The variables in this study were (a) presence of an Internet addiction, (b) use of kin as support for an Internet addiction, (c) use of non-kin as support for an Internet addiction, (d) use of alternative medicines as support for an Internet addiction, (e) use of professional mental health as support for an Internet addiction, (f) and country. EASS utilized multistage sampling procedures to gather data: China, three-stage PPS; Japan, two-stage stratified random sampling (stratified by regional block and population size); South Korea, multistage area probability sampling; and Taiwan, three-stage stratified PPS sampling (PSU [township], village, and individual person).

Specialized Glossary

This study will include specialized use of terms that might be unfamiliar to the reader. These terms are defined here for the purposes of clarity:

Cultural competence. The ability to internalize and use cultural frameworks in understanding the needs of diverse groups.

Internet addiction. Mental health problems associated with the inability to regulate Internet use.

Alternative mental health treatment. Action taken to secure assistance with a mental health problem that is difficult to manage individually but lies outside the purview of psychiatric care as defined in traditional Western medicine.

Thematic Links Between Phases of the Research

The overall aim of this project is to provide a coherent and data-informed approach to mental health care in East Asia that reflects culturally specific preferences for care. This research will be conducted in two manuscripts. In the first manuscript, Chapter 2, data from the East Asian Social Survey (EASS; Iwai et al., 2010) will be used to identify culturally preferred sources of assistance for mild to moderate mental health problems. This data will be contextualized using empirical research on the prevalence of mental health problems in East Asia. In addition, descriptive cultural, historical, and demographic data will be used to provide a more nuanced view of mental health treatment in East Asia than is typically provided in Western literature on the topic. Traditionally, Western literature has focused on the stigma that surrounds mental or behavioral problems in Asia (Ng, 1997). In contrast, East Asian cultures tend to view these issues as integrated mental, physical, and spiritual concerns, a view that Western medicine is now coming to appreciate and

utilize (Nap et al., 2015). Related to this integrated perspective, East Asian cultures are more likely to consult non-medical sources of healing. These “alternative” sources should be considered within their cultural context.

In the second manuscript, Chapter 3, information gathered from the EASS (Iwai, Li, Kim, & Chang, 2010) about culturally preferred sources of assistance for mental health problems will be applied to the issue of Internet addiction (IA). IA is a relatively complex issue diagnostically and in terms of treatment; however, the issue is one of growing concern for professionals, parents, and policy makers in East Asia (China Internet-Based Information Center, 2014; Dong et al., 2011; Ni et al., 2009; Tao et al., 2010). As the World Wide Web becomes more integrated into our regular routines, professional counselors around the world are likely to see increases in help-seeking from people whose Internet use is having a negative impact on their lives. More research is needed to provide information that can help counselors make valid judgments in their clinical assessments and treatment of Internet-related problems. This information must include sensitivity to the social, familial, and cultural assumptions and preferences of clients about help-seeking, self-control, and appropriate treatment.

Internet addiction is still a relatively controversial phenomenon, with competing conceptualizations of the issue that are still being debated by diagnosticians, mental health providers, and social commentators (Liu & Potenza, 2007; Spada, 2014; Shapira et al., 2000; Weinstein & Lejoyeux, 2010; Young, 2004). This study will present these alternate conceptualizations, but with a focus on their implications for establishing treatment. A priority for the counseling profession is

placing culture at the center of healing (Fisher-Borne, Cain, & Martin, 2015; Foronda, Baptiste, Reinholdt, & Ousman, 2016). In an increasingly diverse and globalized world, professional counselors must be particularly aware of their personal and cultural assumptions in order to best serve a range of clients (Atkinson et al., 2001; Comas-Diaz, 2014; Whaley & King, 2007). This research will fill a gap in the counseling literature by offering a culturally indigenous perspective on treatment preferences for mental health problems in non-Western societies.

Dissertation Organization

This dissertation is divided into four chapters. Chapter 1 is the general introduction that includes an overview of the major research on the topics of interest and linkages between major themes. Chapter 2 is an original manuscript that uses data from the East Asian Social Survey (EASS; Iwai et al., 2010) to identify culturally preferred sources of assistance for mild to moderate mental health problems. Chapter 3 is a separate original manuscript that applies information obtained in Chapter 2 to Internet addiction, an emerging concern in East Asia. Chapter 4 presents the overall research results, conclusions, and implications. The References sections contain all the references cited in the dissertation and other sources used in the research.

Chapter 2: A Research Manuscript

Sources of Psychological Support for East Asians Reporting a Low Level of Mental
Health

Stephen P. Wong and Cass Dykeman

Oregon State University

Author Note

Stephen Wong, Counseling Academic Unit, Oregon State University; Cass Dykeman, Counseling Academic Unit, Oregon State University.

The research contained in this manuscript was conducted under the approval of the Oregon State University Institutional Review Board (Study ID No. 7825) and was part of the first author's dissertation research project.

Correspondence concerning this article should be addressed to Cass Dykeman, Counseling Academic Unit, Oregon State University, 104 Furman Hall, Corvallis, OR 97331-3502. E-mail: dykemanc@onid.oregonstate.eduAbstract

This page is intended to be blank.

Keywords: East Asian, mental health, alternative medicine

Abstract

Most research about preferred sources of mental health assistance has been completed in the West. Mental health research with non-Western cultures is needed. Using data from the East Asian Social Survey (EASS), this study examined help-seeking preferences for individuals with low mental health in four countries – China, Japan, South Korea, and Taiwan. Preferences for kin versus non-kin support, use of alternative medicine, and professional mental health assistance were examined, as were between-country differences in support preferences. The results align with previous research in East Asian countries that found a strong preference for using kin support to address mental health concerns, followed by non-kin support (i.e., close friends and co-participants in religious institutions), alternative medicine, and professional mental health services, respectively. While there is a strong preference for family support, many East Asians are open to seeking formal or informal mental health support outside the family. There were some significant differences between countries, with South Koreans being more likely to seek non-kin support and professional support for mental health concerns than Chinese. These differences are discussed in the context of cultural and policy developments in East Asian countries. Findings suggest the need for a more holistic approach to treating low mental health concerns.

Keywords: East Asian, family support, mental health, alternative medicine

Sources of Psychological Support for East Asians

Reporting a Low Level of Mental Health

Overview

Mental illness affects individuals of all backgrounds, regardless of racial, ethnic, cultural, gender, or social boundaries (Vigo, Thornicroft, & Atun, 2016). East Asian countries are not immune from this global phenomenon of mental illness. Hundreds of millions of East Asians suffer from mental illness, and despite the great need for treatment for this ever-increasing population, professional mental health workers and treatment providers are scarce (Hossain, 2006). Evidence shows that in addition to seeking help from professionals, people suffering from low mental health rely on different supports sources, such as family (Hanzawa et al., 2009; Lam et al., 2010) and alternative medicines (Eguchi, 1991; Hanzawa et al., 2009; Hohenshil et al., 2015; Kleinman, 1980; Thirthalli et al., 2016). Studies also show that East Asians tend to use alternative medicines for treatment of low mental health (Thirthalli et al., 2016). Despite the importance of these resources for East Asians suffering from mental illness, there is a paucity of research on their prevalence in this particular population. Moreover, we know little about how these support sources differ by country. The purpose of the present study is to examine where East Asians seek assistance for low mental health and how these help-seeking behavior patterns differ across four East Asian countries.

Mental illness is prevalent in East Asian countries (Cabinet office, 2008; Kessler et al., 2005; Lim et al., 2010; Tsai & Cho, 2011). According to the 2008 *Annual Report on Government Measures for Persons with Disabilities*, there were

over 3 million individuals who reported to be suffering from mental disorders in Japan (Cabinet office, 2008). In neighboring China, 100 million individuals were reported to suffer from mental illness (Lim, Lim, Michael, Cai, & Schock, 2010). Taiwan's prevalence rate for common mental disorder was 23.8% in 2010 (Fu, Lee, Gunnell, Lee, & Cheng, 2013). In South Korea, the lifetime rate was 33.5% (Kessler et al., 2005). Despite such prevalence, professional treatment for mental illness in East Asian nations is still considered to be in the early stages of development. Merely applying Western mental health knowledge and treatment to East Asian patients is not sufficient (Au, 2017); it is critical to understand the cultural background of each individual East Asian nation in order to develop effective, culturally based treatment modalities. It is common among East Asians who suffer from mental illness to seek, in addition to professional treatment (if it is utilized and/or accessible), alternative medicine and support from friends and family (Eguchi, 1991; Kleinman, 1980; Thirthalli et al., 2016). A more in-depth study on prevalence rates of different types of psychological support would contribute to treatment development in the future (Eguchi, 1991; Hanzawa et al., 2009; Kleinman, 1980; Lam et al., 2010; Thirthalli et al., 2016).

Literature Review

In the review of the literature on mental illness and usage of support resources among East Asian cultures, the following four topics are the most prominent. A majority of the literature is about the prevalence of mental illness in East Asian cultures (e.g., anxiety disorders, mood disorders, psychotic disorders). Second is literature on professional psychological support for persons with such disorders.

Third is information on familial support and stigma regarding mental health problems. Finally, traditional and alternative medicinal practices for persons with mental health problems are addressed. After these areas of the literature are examined, the research questions that guided this study are presented.

Prevalence of mental illness in East Asian cultures. Lim, Lim, Michael, Cai, and Schock (2010) discussed mental illness as the most widespread disease in China, with an estimation of 100 million Chinese citizens, which is about 7.5% of the Chinese population suffering from various psychological disorders. The highly competitive educational system and business environment, along with the rapid urbanization of the rural Chinese population, make mental health worthy of both local and global attention (Hohenshil, Amundson, & Niles, 2015). Similarly, Japan also has a continuously increasing need for mental health treatment availability. According to a study by the Japanese government (Cabinet Office, 2008), there are an estimated 3 million Japanese citizens, which is about 2.3% of the population suffering from mental health disorders. Several recent studies have demonstrated that the Japanese family unit has experienced increasing divorce rates, along with child abuse and domestic violence, increasing significantly (Iwasaki, 2005). Bullying and violence among teenagers has become a more severe issue (Iwakabe, 2008), and suicide rates have increased significantly since 1998, with over 30,000 suicides every year since the late 1990s (National Police Agency, 2009). These mounting social and mental issues demonstrate the need for implementation of effective mental health interventions and treatments among these populations.

Neighboring Taiwan also demonstrates a great need for mental health services. The prevalence of probable common mental disorders rose from 11.5% in 1990 to 23.8% in 2010 (Fu, Lee, Gunnell, Lee, & Cheng, 2013). From 1976 to 2009, the suicide rate increased to as high as 19.30 per 100,000 persons (Tsai & Cho, 2011). Societal issues such as transnational marriage (Shu, Lung, & Chen, 2011) have raised significant mental health issues for families and individuals in Taiwan. In South Korea, the lifetime and 12-month prevalence for all types of DSM-IV disorders were 33.5% and 20.6%, respectively. Among the four East Asian countries that are the focus of the current study, the prevalence of psychiatric disorders in South Korea was the highest (Kessler et al., 2005). Despite the urgent need for mental health treatment as a result of increasing need in East Asian countries, knowledge of the prevalence of societal support for persons with mental disorders is lacking.

Current societal psychological support for persons with such disorders.

China currently has some existing sources of psychological support. Hou and Zhang (2007) identified three such sources: psychiatric hospitals, school counselors, and private practitioners. The psychiatric hospitals mainly focus on severely ill patients, with medications prescribed by physicians. In school settings, many school counselors are also homeroom teachers who hold psychological-counseling responsibilities (Hohenshil et al., 2015). However, such school counselors are scarce, with only 10% employed in urban schools and less than 1% employed in the rural provinces (Jiang, 2007, as cited in Cook, Lei, & Chiang, 2010). There are other counselors who work for the private sector, most of whom are located in larger coastal cities (Hohenshil et al., 2015).

Compared to China, the counseling profession in South Korea is more developed, with greater availability of mental health professionals. School counseling was first introduced to South Korea in the 1950s (Hohenshil et al., 2015), full-time counselors are currently employed in 2,045 out of 11,170 schools (Hohenshil et al., 2015). Out of 178 school boards, 124 of them built their own school-counseling centers with on-site psychologists, registered school counselors, and social workers (Lee et al., 2012). Other non-school counseling resources available to the public include university counseling centers and community counseling centers (Hohenshil et al., 2015).

By contrast, Taiwan's overall mental health system is still in its infancy. While guidance counseling in school systems was first introduced to Taiwan more than 60 years ago, during the 1950s (Chen, 1999), the availability of guidance counselors remains scarce. A survey indicated that one school counselor is responsible for 20 or more classes (Ministry of Education, 2011). Besides school counselors, community-related mental health counselors are beginning to be more readily available to the public (Lin, 2000).

As in other East Asian countries, the availability of counseling services in Japan remains insufficient, but the number is steadily growing. In 2011, a total of 24,660 certified clinical psychologists worked in various settings, such as hospitals, schools, private clinics, universities, and companies (Foundation of the Japanese Certification Board for Clinical Psychologists, n.d.). The total number of school counselors has also increased. In 2006, there were school counselors in 10,158 schools, which was a significant increase from 154 schools in 1995 (Hohenshil et al.,

2015). While societal counseling support might not be widely available to individuals in East Asian countries for various reasons, familial assistance seems to serve as a major source of support to persons with mental illness.

Familial support and stigma for persons with such disorders. The need of familial assistance in East Asian countries can be understood from the role of stigma for persons with mental health disorders. Fabrega (1991) argued that individuals in Chinese society suffering from mental illness carry extreme shame, as they blame themselves for their illness. The families of individuals who suffer from mental illness also experience much shame (Jenni, 1999). This seems to be true among individuals from both the Chinese mainland and its neighbor Taiwan (Mellor et al., 2012). Similar to Chinese society, individuals and families with mental illness in Japan and Korea also demonstrate feelings of embarrassment and shame (Hanzawa et al., 2009). As a result, some individuals with mental illness and their caregivers tend to choose familial assistance over outside support and attempt to keep the illness a family secret (Hanzawa et al., 2009; Lam et al., 2010). While societal resources are scarce, and mental illness carries such enormous shame and stigma among individuals from East Asian countries, many turn to traditional and alternative medicine for assistance.

Traditional and alternative medicine practices for mental health issues. It is common practice for East Asians with different health conditions to seek alternative medicine. Up to 80% of Chinese individuals with various health conditions consult practitioners of traditional, alternative, and complementary medicine at some point (Thirthalli et al. 2016). Many individuals with mental illness

consider traditional, alternative, and complementary medicine in addition to biomedicine provider (Kleinman, 1980). Some of these alternative-medicine strategies include traditional medicine such as acupuncture, moxibustion, massage therapy, qigong, tai chi, and folk therapy (Thirthalli et al., 2016). Similar practices and beliefs are shared by individuals in Japan (Eguchi, 1991), Korea (Hohenshil et al., 2015), and Taiwan Hohenshil et al., 2015).

Despite cultural similarities among Asians, research suggests that there might be significant differences among Asian subgroups in attitudes toward mental health issues (Fung & Wong, 2007). One study found that Korean immigrants were less likely to endorse marital violence than their Chinese counterparts (Yoshioka, DiNoia, & Ullah, 2001). Another study suggested that Koreans are more likely to endorse “traditional, non-Western beliefs, including both ‘non-Western physiological’ and supernatural beliefs” compared to Chinese (Fung & Wong, 2007).

With all the above sources of assistance, we know little about the prevalence of usage by individuals with low mental health. There is also lack of quantitative analysis studies on how East Asian countries differ from each other in assistance usage. The present study addresses this gap in the literature.

The present study was guided by eight research questions about persons reporting a low level of mental health: 1) What is the usage rate of kin as a support resource? 2). Are there statistically significant differences in the use of kin as a support resource by country? 3). What is the usage rate of non-kin as a support resource? 4). Are there statistically significant differences in the use of non-kin as a support resource by country? 5). What is the usage rate of alternative medicine as a

support resource? 6). Are there statistically significant differences in the use of alternative medicine as support resource by country? 7). What is the usage rate of professional mental health services as a support resource? 8). Are there statistically significant differences in the use of professional mental health services as support resource by country?

Method

Design. This study employed a retrospective, cross-sectional observational analysis in order to determine between-country differences in the utilization of different types of health assistance and the prevalence of East Asians' reporting a low level of mental health. Data were obtained from the East Asian Social Survey (EASS) (Iwai, Li, Kim, & Chang, 2010). EASS is a biennial, cross-national social survey project of the following four types of General Social Surveys in East Asia: (1) the Chinese General Social Survey (CGSS); (2) the Japanese General Social Survey (JGSS); (3) the Korean General Social Survey (KGSS); and (4) the Taiwan Social Change Survey (TSCS). The purpose of these surveys is to compare and contrast the varieties of social life in these geographic areas to produce and disseminate academic survey data sets in East Asia. The information derived from the surveys includes general human health issues, such as specific illnesses or diseases, physical functioning, caretaking and assistance received from family members or friends when needed, and lifestyle choices. EASS utilized multistage sampling procedures to gather data: China, three-stage PPS; Japan, two-stage stratified random sampling (stratified by regional block and population size); Korea, multistage area probability

sampling; Taiwan, three-stage stratified PPS sampling (PSU [township], village, and individual person).

Although EASS assessed a number of variables, the current dissertation focuses on mental health and different sources of assistance. The specific variables of the study were level of mental health (continuous), use of kin (ordinal), use of non-kin (ordinal), use of alternative medicines (ordinal), use of mental health professionals (ordinal), and country (nominal).

Participants. The demographics for participants by country were as follows. The initial sample size of the 2010 Chinese General Social Survey was 5,370, with 3,866 responding; the sample was composed of Chinese aged 18 and above. The initial sample size of the 2010 Japanese General Social Surveys was 4,500, with 2,496 responding; the sample was composed of men and women aged 20–89 living in Japan. The initial sample size of the 2010 Korean General Social Survey was 2,500, with 1,576 responding; the sample was composed of adult citizens aged 18 and over who lived in South Korean households. The initial sample size of the 2011 Taiwan Social Change Survey 2011 was 4,424, with 2,199 responding; the sample was composed of population registers.

A total of 3,451 respondents who identified as low mental health were selected in which consisted of a total 1,495 males and 1,956 females. The majority of the sample was from the age 20 to 59 which consisted about 71.2% of the total sample. In addition, 71% was reported married while 15.6% reported never married.

The range for the number of years of education was 21 years with a mean of 10.14 years.

Measures. All data were drawn from measures contained in the East Asian Social Survey (EASS; Iwai et al., 2010). The item numbers that appear in this subsection refer to the item numbers in the data codebook and files of EASS.

Mental health. Mental health was assessed using the Short-Form Health Survey, Version 2, Mental Health subscale (sf12_mh). The Medical Outcomes Study's Short-Form 12-Item Health Survey (SF-12) is a briefer form of the Medical Outcomes Study's 36-Item Short-Form Health Survey (SF-36), which assesses the general health, physical functioning, social functioning, physical role, emotional role, mental health, vitality, and bodily pain (Salyers, Bosworth, Swanson, Lamb-Pagone, and Osher, 2000; Ware, Kosinski, & Keller, 1996). Previous studies suggested that the SF-12 is a reliable and valid instrument for assessing overall mental and physical health in the general population and of people with severe mental illness (Salyers et al., 2000).

The Mental Health (MH) subscale of the SF12 is composed of two items: "SF_Q11. Have you felt downhearted and depressed during the past 4 weeks?" and "SF_Q12. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)" The response options for each question were "(a) All of the time = 1," "(b) Most of the time = 2," "(c) Some of the time = 3," "(d) A little of the time = 4," "(e) None of the time = 5," "(f) Not asked = 7," and "(f) DK, refused = 8." Subscale

scores can range from 0 to 100, with 100 representing the most favorable state. A low level of mental health was operationalized by use of a median split.

Use of kin as a support resource. The use of kin as a support resource was assessed using a single-item: “During the past 12 months, did your kin (i.e., family or relatives) do the following things for you when you needed it? If yes, how often?” The possible responses to this question were “Very often (1),” “Often (2),” “Sometimes (3),” “Seldom (4),” “Not at all (5),” “No, do not have such needs (6),” “No such persons available (7),” “Not asked (77),” and “Don’t know/Refused (88).” Because the question specifically asked if the respondents received support when they needed it, response number 6 is not useful as an indicator of frequency of support. Similarly, because the question is whether kin provided support “no such persons available” implies that the person does not have kin, so “no such persons available” is not a useful indicator of frequency of support. Thus, responses 6 and 7 were excluded. In addition, scores of 77 and 88 were excluded from all analyses (i.e., Japan). The item was recoded so that a high score meant higher rate of support

Use of non-kin as a support resource. The use of non-kin as a support resource was assessed using a single item: “During the past 12 months, did your non-kin (friends, colleagues, or neighbors) do the following things for you when you needed it? If yes, how often?” The possible responses to this question were “Very often (1),” “Often (2),” “Sometimes (3),” “Seldom (4),” “Not at all (5),” “No, do not have such needs (6),” “No such persons available (7),” “Not asked (77),” and “Don’t know/Refused (88).” Because the question specifically asked if the respondents received support when they needed it, response number 6 is not useful as an indicator

of frequency of support. Similarly, because the question is whether non-kin provided support “no such persons available” implies that the person does not have a person described as such, so “no such persons available” is not a useful indicator of frequency of support. Thus, responses 6 and 7 were excluded. In addition, the score of 77 was excluded from all analyses (i.e., Japan). The item was recoded so that a high score signified a higher frequency of support.

Use of mental health professionals. The use of mental health professionals as a support resource was assessed using a single item (v55): “During the past 12 months, did your professional workers (e.g., social workers, caretakers, or therapists) do the following things for you when you needed it? If yes, how often?” The possible responses to this question were “Very often (1),” “Often (2),” “Sometimes (3),” “Seldom (4),” “Not at all (5),” “No, do not have such needs (6),” “No such persons available (7),” “Not asked (77),” and “Don’t know/Refused (88).” Similar to the above two measures, responses 6 and 7 were excluded. In addition, the score of 77 was excluded from all analyses (i.e., Japan). The item was recoded so that a high score signified higher rate of support.

Use of alternative medicine. The use of alternative medicine as a support resource was assessed using three items (v46, v47, and v48): “Have you ever received the following treatment during the last 12 months?” The three categories of alternative medicines were “(a) Acupuncture or moxibustion (cupping)” (v46), “(b) Oriental herbal medicine (v47),” and “(c) Acupressure or clinical massage” (v48). The possible responses to each item were “Yes (1)” or “No (2).” “Yes” responses were recoded into “1” and “No” responses were recoded into “0”. Answers with no

on any of the items were recoded as “0” and answers with yes on any one or more of the items were recoded as “1”. Note that cupping is not included in JGSS due to its lack of popularity in Japan.

Country. The country/region of respondents, China, Japan, South Korea, and Taiwan, were respectively coded as “1,” “2,” “3,” and “4.”

Data Analysis. First, data screening and cleaning including detection of anomalies, outliers, and missing value patterns were conducted. Second, Listwise deletion was used to treat missing cases or observations. For Research Questions 1, 3, 5, and 7 (rates), frequencies and percentages were calculated. For Research Questions 2, 4, and 8, ordinal variables involved in the study could be treated as interval variables given their specific Likert structure and the large sample size (Jamieson, 2004). As such, differences between countries were analyzed using a one-way ANOVA. To fully understand differences among countries, *post hoc* tests were conducted. The Chi-square test was used to address Research Question 6, where the dependent variable is alternative medicine, and the independent variable is country.

Results

Although the overall EASS survey included 10,137 respondents across the four East Asian countries, the Taiwan sample was not asked questions regarding mental health. Thus, the analytic sample of this study included 3,451 respondents (42.4% Chinese, 32.9% Japanese, and 27.7% South Korean) who scored below the median on the SF-12 mental health subscale. Prior to conducting the primary analysis, the data were screened for missing values and outliers on the study variables as well as violations of specific statistical assumptions. Analysis of missing value

patterns indicated that missing values were well below 1.2% for the alternative medicine types. The Japanese sample was not asked the question on social support sources. Thus, the Japanese sample did not have data on kin, non-kin and professional mental health services. For the remaining two countries, there were 8.8% missing data for non-kin support, 9.1% for kin support and 57.2% for professional mental health services. Examination for outliers revealed that four participants had scores above 3 standard deviations from the mean for non-kin support and six participants had a score above 3 standard deviations for professional support. In this study, complete case analysis was used without having to exclude outliers. Although one-way ANOVA is robust to assumptions of normality, in the current study, the author tested for this assumption using *skewness* and *kurtosis* values for each of the continuous variables. Results of the analysis showed that in absolute value terms, the skewness values ranged from .24 (SE = .08) for kin support to 1.88 (SE = .08) for professional support. Similarly, again in absolute value terms, the kurtosis values ranged from .62 (SE = .16) for kin support to 3.24 (SE = .18) for professional support. The range of values for the two statistics indicate that the continuous variables appear to range from normally distributed to relatively skewed.

The first research question sought to determine the usage rate of kin as a support resource among East Asians reporting low mental health. To address this research question, we calculated descriptive statistics of kin-support as indicated by the respondents. Table 1.2 presents how often the respondents' kin extended emotional support to respondents. The majority (75.6%) of East Asians reporting low mental health received emotional support from their kin at least sometimes in the past

12 months. Indeed, about 42% of the participants reported having received emotional support from their kin often or very often.

The second research question was concerned with whether there were statistically significant differences in the use of kin as a support resource by country. A one-way ANOVA was conducted to compare if mean frequency of reported kin emotional support differed by country. The results indicated that there was statistically significant difference between countries in the use of kin as a support resource, $F(1, 2103) = 83.149, p = .000$). The Chinese respondents reported higher use of kin emotional support ($M = 3.37, SD = 1.02$) than South Korean respondents ($M = 2.92, SD = 1.19$).

Similar to the first research question, the third research question sought to determine the prevalence of non-kin as a support resource among East Asians reporting low mental health. Again, the descriptive statistics were calculated for non-kin support as reported by the respondents. Table 2.1 presents how often respondents received emotional support from non-kin. The majority (67%) of East Asians reporting low mental health received emotional support from non-kin at least sometimes in the past 12 months. About 27% reported having received emotional support from such source often or very often.

The fourth research question aimed at determining whether there are statistically significant differences in the use of non-kin as a support resource by country. A one-way ANOVA was conducted to compare if mean frequency of non-kin support differed by country. The results indicated that there was statistically significant difference between countries in the use of non-kin as a support resource,

$F(1, 2103) = 6.51, p = .01$). The South Korean respondents reported higher use of non-kin support ($M = 2.92, SD = 1.14$) than Chinese respondents ($M = 2.79, SD = 1.02$).

The fifth research question sought to determine the usage rate of alternative medicine as support resource by East Asians reporting low mental health. We calculated percentages of respondents who reported using three types of alternative medicine: Acupuncture/Moxibustion, Oriental herbal medicine, and Acupressure/Clinical massage. Table 2.2 presents the number and percentage of East Asians reporting low mental health who used alternative medicine in the past 12 months. One quarter (25%) of East Asians reporting low mental health used herbal medicine in the past 12 months, while about 16% used acupressure, and 17% used acupuncture.

In addition to determining the usage rate of alternative medicine as support resource by East Asians reporting low mental health, in the sixth research question, we sought to determine whether there are statistically significant differences in the use of alternative medicine as support resource by country. Three chi-square tests of independence were calculated: one for each alternative medicine type. Table 2 presents cross tabulations and chi-square tests for alternative medicine by country. As can be seen from the table, there are significant differences in the use of acupuncture among the three countries, $X^2(2, 3) = 270.33, p = .00$. Acupuncture seems to be most common type of alternative medicine in South Korea with 34% of the South Korean participants reporting its use in the past 12 months. The table also shows that there are significant differences in the use of herbal medicine among the

three countries, $X^2(2, 3) = 270.34, p = .00$. Herbal medicine seems to be the most common type of alternative medicine in China with 38% of the Chinese participants reporting its use in the past 12 months. Finally, there are significant differences in the use of acupressure among the three countries, $X^2(2, 3) = 82.48, p = .00$. Acupressure seems to be the most common type of alternative medicine in Japan with about 23% of the participants reporting its use in the past 12 months.

The seventh research question sought to determine the usage rate of professional mental health services as a support resource. We calculated descriptive statistics of the use of professional mental health services as indicated by the respondents. Table 2.1 presents how often the respondents' received professional mental health services. The majority (70%) of East Asians reporting low mental health did not receive professional mental health services during the last 12 months. Indeed, only about 14% reported having used professional mental health services as a support resource at least sometimes.

The last research question was concerned with whether there are statistically significant differences in the use of professional mental health services as support resource by country. A one-way ANOVA was conducted to compare if mean frequency of reported use of professional mental health services differed by country. The results indicated that there was a statistically significant difference between countries in the use of professional mental health services as a support resource, $F(1, 2103) = 18.47, p = .00$). The Chinese respondents reported higher use of professional mental health services ($M = 1.60, SD = .90$) than South Korean respondents ($M = 1.36, SD = .83$).

Discussion

This study examined support preferences for mental health care assistance among East Asians reporting low mental health. The study examined whether there are differences between countries in rates of usage of support sources. More specifically, this study addressed the following research questions. What is the usage rate of kin as a support resource? Are there statistically significant differences in the use of kin as a support resource in each country? What is the usage rate of non-kin as a support resource? Are there statistically significant differences in the use of non-kin as a support resource in each country? What is the usage rate of alternative medicine as a support resource? Are there statistically significant differences in the use of alternative medicine as support resource in each country? What is the usage rate of professional mental health services as a support resource? Are there statistically significant differences in the uses of professional mental health services as support resource in each country? Next, results are presented and discussed. Toward the end of the section, limitations and implications of the findings are presented.

The first research question sought to determine the usage rate of kin as a support resource among those reporting low mental health. The findings indicated that among East Asians reporting low mental health about 76% reported having received emotional support for their mental health problems. Given what we know from the literature on mental health, this prevalence rate seems to confirm the findings from previous studies. One reason for this high level of the usage of kin as a support resource among East Asians is that individuals suffering from mental illness carry a tremendous sense of shame in the East Asian societies and exposing such

shame to outside of family is socially unacceptable (Fabrega, 1991; Hanzawa et al., 2009; Jenni, 1999; Mellor et al., 2012). Losing face due to mental illness not only reflects negatively on the individual, but also on families and their ancestors (King & Bond, 1985). Comparison of this finding with that of other studies confirms that East Asians tend to rely on kin support for mental health problems. For instance, it was found in studies that East Asians with mental illness and their caregivers would tend to choose familial assistance over outside support to keep the illness a family secret (Hanzawa et al., 2009; Lam et al., 2010). Another possible reason may be due to the scarcity of professional assistance. Indeed, previous studies have found that the ratio of Chinese professional counselors to patients is about 2.4 per 1 million (Chinese Psychological Society, 2004) compared to 3,000 counselors per 1 million people in the US (Hohenshil, Amundson, & Niles, 2015). In Japan, more than half of certified clinical psychologists earn less than the national average and 46.1% work only part-time (Hohenshil, Amundson, & Niles, 2015). With the lack of professional assistance, individuals with low mental health have no choice but to rely on the more accessible familial assistance. While both explanations contributed to the findings, the cultural reason is the most influential one. Studies have shown that East Asians are deeply influenced by Confucian philosophy which views disabilities in terms of fate and one should accept one's role handed down by destiny (Lam et al., 2010). Furthermore, as collective societies, having a family member with mental illness is seen as loss of face for the family (Lam et al., 2010). As a result, many are reluctant to both publicly state that their relatives are afflicted with mental illness and to seek assistance outside of the family.

Concerning the second research question which was concerned with whether there are significant differences in the use of kin as a support resource by country, the results indicated that there was a statistically significant difference between the two East Asian countries of China and South Korea. More specifically, the Chinese respondents reported higher use of kin emotional support than South Korean respondents. One possible explanation for this finding is the relatively more accessibility to professional mental health assistance in South Korea compared to China. Currently, 2,045 out of 11,740 schools in South Korea have onsite full-time school counselors, registered or unregistered (Lee, Suh, Yang, & Jang, 2012). That is about 17% compared to 10% of urban Chinese schools staffed with mental health educators whose job descriptions are primarily dealing with administrative aspects of students' education and development (Hohenshil, Amundson, & Niles, 2015). However, this explanation conflicts with this study's finding on professional mental health assistance usage which will be discussed later. Another plausible explanation is that South Korean citizens have higher accessibility to religious support systems than their counterparts in China. Previous studies have suggested that religious social support and church attendance might reduce mental health issues (Nooney & Woodrum, 2002; Schwadel & Falci, 2012). Compared to China, South Korea has experienced a tremendous increase in its religious population. The Protestant population in South Korea has increased from 2.5% to 19.7% between 1960 and 1995 (Hong, 1999). The accessibility of religious social support is abundant compared to neighboring China. It is estimated that China has only about a 3% Protestant population because most belong to underground churches without proper resources

and support (Fiedler, 2010). Moreover, a study showed that Protestantism in South Korea has a negative association with suicide rate and stress level (Jung & Olson, 2014). Such accessible and useful religious social support in South Korea might have contributed to the reduction of needs of kin support.

Between these two explanations, the most probable is the widely accessible non-kin religious assistance in South Korea. Various studies have shown that South Koreans have greatly increased their religious participation (Kim, 2003; Lee 2009), with much of their religious activities involving spiritual support and assistance (Lee, 2009). Such a high level of organized non-kin support is not available or accessible to individuals in China where religious activities are largely restricted (Fiedler, 2010).

Turning to the third research question which focused on the usage rate of non-kin support, the findings showed that the majority (67%) of East Asians reporting low mental health received emotional support from non-kin at least sometimes in the past 12 months. This finding is consistent with previous studies where it was found that individuals with mental health issues prefer seeking help from informal sources such as family and friends (Na, Ryder, & Kirmayer, 2016; Picco et al., 2016). One study conducted in Hong Kong supported this finding. Out of 10,179 adult respondents, 46.5% of the participants preferred using friends and family as assistance for depression symptoms, 24.9% preferred psychiatrist, 22.8% preferred psychologist, and 19.9% chose general practitioner (Chin, Chan, Lam, Lam, & Wan, 2015). While 67.6% of the participants indicated that they prefer receiving help from professionals such as psychiatrists, psychologists, and general practitioners when asked, only 24.3% of the participants which have screened-positive with depression reported

receiving professional mental health services over a period of 12 months. One plausible explanation for such a finding is the high accessibility to non-kin assistance. Another plausible explanation of the higher rates of non-kin assistance seeking behavior is that it is a more socially acceptable assistance than receiving professional help. For instance, it is a norm in Chinese culture that one expects help within one's social network, and it would be uncomfortable for an individual considering resources from outsiders (Tata & Leong, 1994). This mentality influences help-seeking behavior in which non-kin assistance might be a better choice (Tata & Leong, 1994). The latter offers a stronger explanation since previous studies have also suggested such help-seeking behavior.

Similar to research question 2, the fourth research question sought to determine if countries differ in the use of non-kin as a support resource. The results indicated that there was statistically significant difference between countries in the use of non-kin as a support resource such that South Korean respondents reported higher use of non-kin support than Chinese respondents. No prior studies were identified that compared the prevalence of Chinese and South Korean individuals with low mental health using non-kin assistance. However, one study indicated that while Chinese respondents expect help within their social network (Tata & Leong, 1994), they showed concern about sharing their thoughts and problems with friends as this could affect their relationships negatively (Diego, 2016). Other studies suggested that Chinese culture focuses on the repression of feelings, rather than focusing on the expression of feelings or emotional vulnerability (Ots, 1990; Parker, Gladstone & Chee, 2001). In contrast, a study on Korean American's help-seeking

behaviors indicated that most tend to seek advice about their mental health problems from non-mental health professionals such as friends and religious healers (Cheung, Leung, & Cheung 2011). These studies seemed to suggest the significant difference between Chinese and South Korean participants on the prevalence of utilizing non-kin as a resource is embedded in the culture. It is more acceptable with less cultural hindrance in the Korean culture for individuals with mental health issues to express their concerns and seek for assistance from non-kin. Another plausible explanation is the availability of social support from religious organizations in South Korea. Approximately one-fourth of South Korean self-identified as Protestants (Hong, 1999). Further, South Korean Protestantism is known for a high level of religious attendance where it is not unusual for a church to offer multiple events and services weekly (Jung & Olson, 2014). With such a wide availability of social support, South Koreans would be more likely to receive non-kin religious support than their Chinese counterparts where religious activities are largely restricted (Zhang & Zhu, 2011). The most probable explanation that both of the aforementioned reasons equally contributed to the finding.

Concerning the fifth research question that sought to determine the usage rate of alternative medicine as support resource by East Asians reporting low mental health, the findings indicated that 25% of respondents reported using herbal medicine; about 17% used acupuncture whereas 16% reported using acupressure. This usage rate is much higher than the rates reported in studies from Western countries. According to a U.S. national survey conducted in the year of 2000, of the 9,566 respondents, 1,576 reported the use of alternative medicine in the past 12 months

which is about 14.5% of the total sample (Unützer et al., 2000). Among those who reported using alternative medicine in the past 12 months, only about 15.0% reported using alternative medicine to treat mental or emotional problems (Unützer et al., 2000). The definition of alternative medicine on this particular survey included homeopathic medicine, acupuncture, massage therapy, herbal medicine, and spiritual healing (Unützer et al., 2000).

Although usage rates for acupuncture and acupressure are not as high as that of herbal medicine, acupuncture and acupressure are considerably common among East Asians reporting low mental health compared to the U.S. For instance, studies found that only about 6.3% of Americans used acupuncture as a conjoint treatment for medical conditions (Zhang, Lao, Chen, & Ceballos, 2012). While acupressure has recently gained some acceptance by in the Western world as a valid means for treating symptoms of illness, its usage rate in the U.S. is yet to be studied (Hakverdioglu & Turk, 2006). The usage rate for mental health purposes is assumed to be much lower. One explanation for the high rate of using alternative medicine for treating mental health issues among East Asians is that herbal medicine, acupuncture, and acupressure have been practiced in East Asia for more than 2000 years (Hakverdioglu & Turk, 2006; Leslie, 1976). The trust in alternative medicine to treat health issues is much higher for East Asians than for individuals in the Western world. Another plausible explanation is that East Asian countries have institutionalized alternative medicines into the healthcare system which greatly increased the accessibility (Shim, 2016). For instance, traditional Chinese medicine doctors are granted the right to practice biomedical tests and treatments as well as

alternative treatments in China (Xu & Yang, 2009). While South Korea has a different healthcare system where alternative medicine doctors and biomedicine doctors are licensed and practiced under separate systems, both China and South Korea grant alternative medicine a legal recognition and greater accessibility than the Western societies. Consequently, compared to Western world, East Asians have a higher usage rate of alternative medicine. Both the credibility of alternative medicine and its accessibility contributed to its high usage rate in East Asia.

The sixth research question addressed the topic do East Asian countries differ in the usage rate of alternative medicine. The results showed that there are indeed significant differences in the use of alternative medicine among the three countries. More specifically, the results indicated that acupuncture seems to be the most common type of alternative medicine in South Korea whereas herbal medicine and acupressure, respectively, appear to be the most common type of alternative medicine in China and Japan. While there are previous cross-national studies comparing the three countries on traditional East Asian medicine (Shim & Kim, 2018), the present research was the first study comparing the three countries' alternative medicine use as a treatment for individuals with low mental health. One plausible explanation for herbal medicine is the most common alternative medicines used in China compared to Japan and South Korea is that herbal medicine is more accessible than Japan and South Korea. In the Chinese healthcare system, biomedical doctors are allowed to practice traditional Eastern alternative medicine (Shim, 2016). Likewise, traditional East Asian medicine doctors can practice biomedicine (Shim, 2016). In contrary, the South Korean healthcare system has more restricted practice rights where biomedical

doctors and traditional East Asian medicine doctors are exclusively separated on their scope of practice (Shim, 2016). Furthermore, Japan has no professional category of traditional East Asian medicine that are comparable to biomedical doctors, and there are no medical schools designated for traditional East Asian medicine. The accessibility to non-biomedical treatment is relatively limited compared to other East Asian countries. Consequently, individuals in China have higher accessibility to herbal medicine than individuals of neighboring countries.

Another plausible explanation is that most herbal medicine is not covered by South Korean government insurance which limited the accessibility to many patients (Kim, Kim, Noh, Kang, Kim, Yang, & Lee, 2012). On the other hand, the South Korean government has increased its support of promoting traditional Korean medicine since 2008 in which acupuncture has grown as the most popular type traditional medicine (Woo, Park, Lee, Ahn, Kwon, & Koo, 2014). One explanation for South Korean having the highest acupuncture usage rate is the increased availability and affordability of acupuncture. Treatments including dry cupping, moxibustion, and acupuncture are fully covered by the South Korean government insurance (Kim, Kim, Noh, Kang, Kim, Yang, & Lee, 2012) whereas an average acupuncture treatment fee in China was 19.32 CNY (2.8 USD) (Zhao, 2011).

While herbal medicine and acupuncture are popular in China and South Korea, Japan has a significantly lower usage rate of these two types of traditional medicine but has a significant higher usage rate of acupressure among individuals reported low mental health. One plausible explanation is the lack of general trust of traditional medicine. The Japanese government does not grant a license to traditional

medicine practitioners (Shim 2016). In Japan, there are only vocational schools for Eastern medicine technicians, such as acupuncturists and acupressure therapists (Shim, 2016). In addition, doctors are discouraged from using traditional medicine as conjoint treatment with biomedicine (Shim, 2016). Therefore, the accessibility of traditional medicine is significantly limited compared to its neighboring countries. However, one explanation for Japan having the highest usage rate of acupressure is its nonintrusive nature. While both herbal medicine and acupuncture require an individual to consume medicine and muscle penetration by needles, acupressure requires only placing pressure on the surface of the body (Hakverdioglu & Turk, 2006). Another potential explanation is its similarities to the traditional Japanese treatment called Shiatsu. Shiatsu can be dated back to the 14th century and was popularized in the 17th century. The Shiatsu techniques are based on traditional Chinese medicine which explains its similarity to acupressure. This researcher's belief that all of the above explanations contributed to the findings.

The seventh research question sought to determine the usage rate of professional mental health services as a support resource. Only about 14% of the respondents reported having used professional mental health services as a support resource at least sometimes. Previous studies on the use of professional mental health services in East Asia indicate similar findings (Park et al., 2012; Xiang, Yu, Sartorius, Ungvari, & Chiu, 2012). One plausible explanation of such finding is the scarcity of qualified, trained mental health professional assistance. For instance, China has approximately 15,000 trained psychiatrists to serve a population of 1.3 billion (Ma, 2011). In South Korea, there is still no licensure system for counselors. Another

plausible explanation is the stigma of mental illness which brings shame not only to the individual but also the family (Fabrega, 1991; Hanzawa et al., 2009; Jenni, 1999; Schomerus et al., 2012). Such stigma prevents those who are in need to seek outside assistance. As a result, individuals with mental illness tend to choose assistance within their families or social circle instead of professionals (Hanzawa et al., 2009; Lam et al., 2010). In addition to the above reasons, another explanation would be the emphasis of familial social support in the East Asian culture in which decreases the need for professional assistance. One study found that higher social support was associated with decreased perceived need for mental health assistance (Arnault, Gang, & Woo, 2018). Another plausible explanation might be affordability. Patients cannot afford to see a mental health professional even if there is one available especially in rural area (Ma, 2011). While all of the above explanations played a role to the finding, previous studies have shown that the major contributors are the paucity of professional mental health assistance and the stigma of mental illness (Fabrega, 1991; Hanzawa et al., 2009; Jenni, 1999; Lam et al., 2010; Ma, 2011; Schomerus et al., 2012).

The findings for the final question indicated that there was a statistically significant difference between China and South Korea in the use of professional mental health services as a support resource with China being higher. This finding needs to be interpreted in light of the fact the level of the reported professional mental health support is generally low across the two countries. This difference between the two countries can be explained by again the higher accessibility to non-kin religious social support in South Korea in which reduce the self-perceived need for

professional assistance (Arnault, Gang, & Woo, 2018). Another plausible explanation lies in the Chinese healthcare system. As mentioned above, the Chinese healthcare system allows biomedical doctors to practice traditional Eastern alternative medicine while the South Korean defined the two practices exclusively (Shim, 2016). As a result, Chinese respondents who seek traditional medical treatment would also receive treatment from mental health professionals such as psychiatrists. The most plausible explanation is the high level of accessibility to non-kin social support in South Korea which reduce the help-seeking behavior for mental health professionals. It seemed to be in line with a recent study conducted on South Korean women (Arnault, Gang, & Woo, 2018).

Overall there are several limitations to this research. The major limitation of this study is that, while the data shows an association between resources types among individuals reported with low mental health, it is unclear if the usage was for the purpose of treating mental health concerns. Another limitation of this study is the use of self-report measures. Since mental illness is highly stigmatized in East Asia, the self-report data might be subject to bias and underreport. Still another limitation of this study is the lack of data for Taiwan and Japan. The Japanese participants were not asked the question on social support sources, and the Taiwanese participants were not asked the mental health question. Finally, the scope of this study was limited to understanding the prevalence and country-level difference in mental health support sources. As a consequence, the study did not examine the mechanisms through which such support sources can influence mental health.

Notwithstanding, these limitations the findings of this study have important implications for both theory and practice. In terms of theory, the findings warranted further study on a more holistic approach in conceptualizing the overall mental health treatments. The fact that the prevalence rate of kin, non-kin, and alternative medicine are high among this particular sample is important to know because it influences how practitioners should approach East Asian patients and devise therapeutic interventions. Practically, with East Asian patients, practitioners should integrate family members, social support, and alternative medicines as part of the intervention process. Moreover, providing psychoeducation on mental illness and its treatment to family members might improve treatment outcome. On treatment implementation, practitioners should consider the cultural aspect and ensure patient confidentiality to save family's face which might improve treatment compliance and increase the professional help-seeking rate. On the macro level, the government should promote mental illness education to reduce stigma.

References

- Au, A. (2017). Low mental health treatment participation and Confucianist familial norms among East Asian immigrants: A critical review. *International Journal of Mental Health, 46*(1), 1–17. doi:10.1080/00207411.2016.1264036
- Busiol, D. (2016). Help-seeking behaviour and attitudes towards counselling: A qualitative study among Hong Kong Chinese university students. *British Journal of Guidance & Counselling, 44*(4), 382-401.
- Cabinet Office. (2008). *Annual report on government measures for persons with disabilities 2008*. Retrieved from <http://www8.cao.go.jp/shougai/english/annualreport/2008/pdf/p1-11.pdf>
- Chen, P. W. (1999). Towards professionalism: The development of counseling in Taiwan. *Asian Journal of Counseling, 6*(2), 21–46.
- Cheung, M., Leung, P., & Cheung, A. (2011). Depressive symptoms and help-seeking behaviors among Korean Americans. *International Journal of Social Welfare, 20*(4), 421-429.
- Chin, W. Y., Chan, K. T. Y., Lam, C. L. K., Lam, T. P., & Wan, E. Y. F. (2015). Help-seeking intentions and subsequent 12-month mental health service use in Chinese primary care patients with depressive symptoms. *BMJ Open, 5*(1), 1-10. doi:10.1136/bmjopen-2014-006730
- Cho, M. J., Kim, J. K., Jeon, H. J., Suh, T., Chung, I. W., Hong, J. P., ... Lee, C. K. (2007). Lifetime and 12-month prevalence of DSM-IV psychiatric disorders among Korean adults. *The Journal of Nervous and Mental Disease, 195*(3), 203–210. doi:10.1097/01.nmd.0000243826.40732.45

- Cook, A. L., Lei, A., & Chiang, D. (2010). Counseling in China: Implications for counselor education preparation and distance learning instruction. *Journal for International Counseling Education, 2*, 60–73. Retrieved from <https://pdfs.semanticscholar.org/a9f8/ff1dff10cfef389a5ff9fc73aef5d0d37ec7.pdf>
- Eguchi, S. (1991). Between folk concepts of illness and psychiatric diagnosis: Kitsune-tsuki (fox possession) in a mountain village of Western Japan. *Culture, Medicine and Psychiatry, 15*(4), 421–451. doi:10.1007/bf00051327
- Fabrega, H. (1991). Psychiatric stigma in non-Western societies. *Comprehensive Psychiatry, 32*, 534–551. [https://doi.org/10.1016/0010-440X\(91\)90033-9](https://doi.org/10.1016/0010-440X(91)90033-9)
- Fiedler, K. (2010). China's "Christianity Fever" revisited: Towards a community-oriented reading of Christian conversions in China. *Journal of Current Chinese Affairs, 39*(4), 71-109.
- Foundation of the Japanese Certification Board for Clinical Psychologists. (n.d.). *Rinshyou shinrishi shikakunintei no joist* (The implementation of the certification in clinical psychology). Tokyo, Japan: Author.
- Fu, T. S., Lee, C., Gunnell, D., Lee, W., & Cheng, A. T. (2013). Changing trends in the prevalence of common mental disorders in Taiwan: A 20-year repeated cross-sectional survey. *The Lancet, 381*(9862), 235–241. doi:10.1016/S0140-6736(12)61264-1
- Hakverdioğlu, G., & Türk, G. (2006). Acupressure. *Journal of Hacettepe University School of Nursing, 13*(2), 43-47.

- Hanzawa, S., Bae, J., Tanaka, H., Tanaka, G., Bae, Y. J., Goto, M., ... Nakane, Y. (2009). Family stigma and care burden of schizophrenia patients: Comparison between Japan and Korea. *Asia-Pacific Psychiatry, 1*(3), 120–129.
[doi:10.1111/j.1758-5872.2009.00039.x](https://doi.org/10.1111/j.1758-5872.2009.00039.x)
- Hohenshil, T. H., Amundson, N. E., & Niles, S. G. (Eds.). (2015). *Counseling around the world: An international handbook*. Alexandria, VA: John Wiley & Sons.
- Hong, Young-Gi. 1999. Nominalism in Korean Protestantism. *Transformation, 16*(4), 135–141.
- Hossain, R. (2006). Atlas: Child and adolescent mental health resources, global concerns: Implications for the future: World Health Organisation (2005). *International Journal of Migration, Health and Social Care, 2*(1), 67.
<https://doi.org/10.1108/17479894200600009>
- Hou, Z, & Zhang, N. (2007). Counseling psychology in China. *Applied Psychology, 56*(1), 33–50. [doi:10.1111/j.1464-0597.2007.00274.x](https://doi.org/10.1111/j.1464-0597.2007.00274.x)
- Iwai, N., Li, L., Kim, S., & Chang, Y. (2010). *East Asian Social Survey (EASS), Cross-National Survey Data Sets: Health and Society in East Asia, 2010*. Ann Arbor, MI: EASSDA [distributor], Inter-university Consortium for Political and Social Research [distributor], 2014-05-01.
<https://doi.org/10.3886/ICPSR34608.v2>
- Iwakabe, S. (2005). Mental health and counseling in Japan: A path toward societal transformation. *Journal of Mental Health Counseling, 27*, 129–141.
<https://doi.org/10.17744/mehc.27.2.ttm606ectpw5vfd>

- Iwakabe, S. (2008). Psychotherapy integration in Japan. *Journal of Psychotherapy Integration, 18*, 103-125. doi:10.1037/1053-0479.18.1.103
- Jamieson, S. (2004). Likert scales: How to (ab) use them. *Medical Education, 38*, 1217–1218. doi:10.1111/j.1365-2929.2004.02012.x
- Jenni, C. B. (1999). Psychologists in China: National transformation and humanistic psychology. *Journal of Humanistic Psychology, 39* (2), 26–47.
doi:10.1177/0022167899392003
- Jung, J. H., & Olson, D. V. A. (2014). Religion, stress, and suicide acceptability in South Korea. *Social Forces, 92*(3), 1039-1059. doi.org/10.1093/sf/sot129
- Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 617–627. doi:10.1001/archpsyc.62.6.617
- Kim, A. E. 2003. Religious influences on personal and societal well-being. *Social Indicators Research, 62*(1-3):149–170.
- Kim, K. H., Kim, Y. R., Noh, S. H., Kang, K. W., Kim, J. K., Yang, G. Y., & Lee, B. R. (2013). Use of acupuncture for pain management in an academic Korean medicine hospital: A retrospective review of electronic medical records. *Acupuncture in Medicine, 31*(2), 228-234. doi: 10.1136/acupmed-2012-010257
- King, Y.C., & Bond, M. H. (1985) The Confucian paradigm of man: A sociological view. In W. S. Tseng & Y. H. Wu (Eds), *Chinese Culture and Mental Health*, (pp. 29-45). London, England: Academic Press.

- Kleinman, A. (1980). *Patients and healers in the context of culture*. Berkeley, CA: University of California Press.
- Lam, C. S., Angell, B., Tsang, H. W. H., Shi, K., Corrigan, P. W., Jin, S., ... Larson, J. E. (2010). Chinese lay theory and mental illness stigma: Implications for research and practices. *Journal of Rehabilitation, 76*, 35–40.
- Lee, S. M., Oh, I., & Suh, S. (2007). Comparison study of Korean and American school counseling for developing a Korean school counseling model. *Korean Journal of Counseling and Psychotherapy, 19*, 539–567.
- Lee, S. M., Suh, S., Yang, E., & Jang, Y. J. (2012). History, current status, and future prospects of counseling in South Korea. *Journal of Counseling & Development, 90*(4), 494-499. doi:10.1002/j.1556-6676.2012.00061.x
- Lee, T. S. (2009). *Born again: Evangelicalism in Korea*. Honolulu, HI: University of Hawaii Press.
- Lim, S., Lim, B., Michael, R., Cai, R., & Schock, C. K. (2010). The trajectory of counseling in China: Past present, and future trends. *Journal of Counseling & Development, 88*, 4–8. doi:10.1002/j.1556-6678.2010.tb00141.x
- Lin, J. C. H. (2000). A comparative study on title preference, work settings, and direct services time of mental health professionals. *Bulletin of Educational Psychology, 34*(1), 83–102. doi:10.1002/j.1556-6676.2013.00101.x
- Ma, S. (2011). China struggles to rebuild mental health programs. *Canadian Medical Association Journal, 183*(2), E89-E90.
- Mellor, D., Carne, L., Shen, Y., McCabe, M., & Wang, L. (2012). Stigma toward mental illness: A cross-cultural comparison of Taiwanese, Chinese

immigrants to Australia and Anglo-Australians. *Journal of Cross-Cultural Psychology*, 44(3), 352–364. doi:10.1177/0022022112451052

Ministry of Education. (2011). 國民小學與國民中學班級編制及教職員員額編制準則 (Guidelines for classroom sizes and employee numbers in public elementary and middle schools). Retrieved from <http://edu.law.moe.gov.tw/LawContentDetails.aspx?id=FL008932&KeyWorldHL=&StyleType=1>

Na, S., Ryder, A., & Kirmayer, L. (2016). Toward a culturally responsive model of mental health literacy: Facilitating help-seeking among East Asian immigrants to North America. *American Journal of Community Psychology*, 58(1-2), 211-225.

National Police Agency. (2009). *Suicide statistics 2008*. Tokyo, Japan: Author.

Nooney, J., & Woodrum, E. (2002). Religious coping and church-based social support as predictors of mental health outcomes: Testing a conceptual model. *Journal for the Scientific Study of Religion*, 41(2), 359-368. doi:10.1111/1468-5906.00122

Ots, T. (1990). The angry liver, the anxious heart, and the melancholy spleen. *Culture, Medicine and Psychiatry*, 14(1), 21–58.

Park, S., Cho, M. J., Bae, J. N., Chang, S. M., Jeon, H. J., Hahm, B. J., ... Hong, J. P. (2012). Comparison of treated and untreated major depressive disorder in a nationwide sample of Korean adults. *Community Mental Health Journal*, 48(3), 363–371.

- Parker, G., Gladstone, G., & Chee, K. T. (2001). Depression in the planet's largest ethnic group: The Chinese. *American Journal of Psychiatry*, *158*(6), 857–864.
- Picco, L., Abdin, E., Chong, S., Pang, S., Vaingankar, J., Sagayadevan, V., ... Subramaniam, M. (2016). Beliefs about help seeking for mental disorders: Findings from a mental health literacy study in Singapore. *Psychiatric Services*, *67*(11), 1246-1253.
- Qianfan, Z., & Yingping, Z. (2011). Religious freedom and its legal restrictions in China. *Brigham Young University Law Review*, *2011*(3), 783-818.
- Saint Arnault, D. M., Gang, M., & Woo, S. (2018). Factors influencing on mental health help-seeking behavior among Korean women: A path analysis. *Archives of Psychiatric Nursing*, *32*(1), 120-126.
- Salyers, M.P., Bosworth, H. B., Swanson, J. W., Lamb-Pagone J., & Osher, F. C. (2000). Reliability and validity of the SF-12 Health Survey among people with severe mental illness. *Medical Care*, *38*(11), 1141-1150.
doi:10.1097/00005650-200011000-00008
- Schomerus, G., Auer, C., Rhode, D., Lupp, 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.
- Schwadel, P., & Falci, C. D. (2012). Interactive effects of church attendance and religious tradition on depressive symptoms and positive affect. *Society and Mental Health*, *2*(1), 21-34. doi:10.1177/2156869312442885

- Shim, J. (2016). The relationship between the use of complementary and alternative medicine and the use of biomedical services: Evidence from East Asian medical systems *Asia-Pacific Journal of Public Health*, 28(1), 51–60. doi: 10.1177/1010539515613411
- Tata, S. P., & Leong, F. T. L. (1994). Individualism-collectivism, social network orientation, and acculturation as predictors of attitudes toward seeking professional psychological help among Chinese Americans. *Journal of Counseling Psychology*, 41, 280–287.
- Thirthalli, J., Zhou, L., Kumar, K., Gao, J., Vaid, H., Liu, H., ... Nichter, M. (2016). Traditional, complementary, and alternative medicine approaches to mental health care and psychological wellbeing in India and China. *The Lancet Psychiatry*, 3(7), 660–672. doi:10.1016/s2215-0366(16)30025-6
- Tsai, J.-F., & Cho, W. C. (2011). The secular trend of suicide rate and the socio-economic, media, and climatic factors in Taiwan, 1976-2009: A population-based study. *Journal of Affective Disorders*, 129, 270–274. doi:10.1016/j.jad.2010.08.008
- Unützer, J., Klap, R., Sturm, R., Young, A.S., Marmon, T., Shatkin, J., & Wells, K. B. (2000). Mental disorders and the use of alternative medicine: Results from a national survey. *American Journal of Psychiatry*, 157(11), 1851-1857.
- Vigo, Thornicroft, & Atun. (2016). Estimating the true global burden of mental illness. *The Lancet Psychiatry*, 3(2), 171-178. doi:10.1016/s2215-0366(15)00505-2

- Ware, J. E., Jr., Keller, S. D., & Kosinski, M. (1995). *SF-12: How to score the SF-12 physical and mental health summary scales* (2nd ed.). Boston, MA: The Health Institute, New England Medical Center.
- Ware, J. E., Jr., Kosinski, M., & Keller, S. D. (1996). A 12-item short-form health survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care*, *34*, 220–233. <http://dx.doi.org/10.1097/00005650-199603000-00003>
- Woo, J., Park, E., Lee, M., Ahn, M., Kwon, S., & Koo, K. (2014). Changes in attitudes toward and patterns in traditional Korean medicine among the general population in South Korea: A comparison between 2008 and 2011. *BMC Complementary and Alternative Medicine*, *14*(1), 436-442.
- Xu, J., & Yang, Y. (2009). Traditional Chinese medicine in the Chinese health care system. *Health Policy*, *90*(2-3), 133-139. doi: 10.1016/j.healthpol.2008.09.003
- Zhang, Y., Lao, L., Chen, H., & Ceballos, R. (2012). Acupuncture use among American adults: What acupuncture practitioners can learn from National Health Interview Survey 2007. *Evidence-Based Complementary and Alternative Medicine*, 710-750. doi.org/10.1155/2012/710750
- Zhao, J., & Shi, X. (2011). Investigation and analysis of the present situation of acupuncturist in China. *Chinese Medical Herald*, *8*(18), 152–153.

Table 2.1

Frequency and Percentage of Support Sources from East Asian Social Survey

<i>Rating</i>	Kin Support		Non-Kin Support		Professional Support	
	Frequency	%	Frequency	%	Frequency	%
Not at all	173	8.2	300	14.2	697	70.3
Seldom	340	16.2	397	18.8	157	15.8
Sometimes	713	33.9	853	40.3	97	9.8
Often	627	29.8	463	21.9	26	2.6
Very Often	252	12.0	102	4.8	14	1.4
Total	2105	100	2115	100	991	100

Table 2.2

Cross-Tabulations and Chi-square Test Results for Alternative Medicine by Country

Alternative Medicine Type	China	Japan	South Korea	Chi-Square Tests of Independence
Acupuncture				$X^2 (2, 3) = 270.33$
No <i>n</i> (%)	1224(84.2%)	1041(94.0%)	562(65.9%)	$p = .00$
Yes <i>n</i> (%)	229(15.8%)	67 (6.0%)	291(34.1%)	
Herbal medicine				$X^2 (2, 3) = 266.33,$ $p = .00$
No <i>n</i> (%)	901(61.9%)	992(89.9%)	659(77.6%)	
Yes <i>n</i> (%)	554(38.1%)	111(10.1%)	190(22.4%)	
Acupressure				$X^2 (2, 3) = 84.49,$ $p = .00$
No <i>n</i> (%)	1308(90.4%)	874(77.4%)	702(82.5%)	
Yes <i>n</i> (%)	139(9.6%)	255(22.6%)	149(17.5%)	

Chapter 3: A Research Manuscript

East Asians with Internet Addiction: Prevalence Rates and Support Use Patterns

Stephen Wong and Cass Dykeman

Oregon State University

Author Note

Stephen Wong, Counseling Academic Unit, Oregon State University; Cass Dykeman, Counseling Academic Unit, Oregon State University.

The research contained in this manuscript was conducted under the approval of the Oregon State University Institutional Review Board (Study ID No. 7825) and was part of the first author's dissertation research project.

Correspondence concerning this article should be addressed to Cass Dykeman, Counseling Academic Unit, Oregon State University, 104 Furman Hall, Corvallis, OR 97331-3502. E-mail: dykemanc@onid.oregonstate.edu

Abstract

The issue of Internet addiction has become a serious social and health issue in East Asian countries. There are only a few treatment programs for Internet addiction, and their effectiveness with people from East Asian remains unclear. As support and treatment develop, it is necessary to understand cultural preferences for dealing with this concern. Using data from the East Asian Social Survey (EASS), this study examined preferred sources of assistance for help with internet use problems in four countries – China, Japan, South Korea, and Taiwan. Preferences for kin versus non-kin support, use of alternative medicine, and professional mental health assistance were examined, as were between-country differences in support preferences. The results indicate a strong preference for seeking assistance from close relatives, followed by non-kin support (i.e., close friends and co-participants in religious institutions), alternative medicine, and professional mental health services, respectively. While there is a strong preference for family support, over 80% of survey respondents were open to seeking formal or informal mental health support outside the family. There were some significant differences between countries, with South Koreans being more likely to seek non-kin support and professional support for internet addiction concerns compared to Chinese. These differences are discussed in the context of cultural and policy developments in East Asian countries. Findings suggest the need for a more holistic approach to treating low mental health concerns.

Keywords: East Asian, Internet addiction, mental health, alternative medicine

East Asians with Internet Addiction: Prevalence Rates and Support Use Patterns

Overview

As the fastest-growing addiction, Internet addiction has become a serious global issue, with some of the highest prevalence in East Asia (Ko, Yen, Chen, Chen, Wu, & Yen, 2006; Ko, Yen, Yen, Lin, & Yang, 2007; Mak et al., 2014; Sung, Lee, Noh, Park, & Ahn, 2013; Wu & Zhu, 2004). With such a widespread phenomenon, preferred treatment modality becomes an essential consideration for clinicians and researchers. The purpose of the present study is to examine where East Asians seek help for Internet addiction.

It is suggested that Internet addiction is associated with psychological and behavioral changes. One study has shown that Internet addiction can cause depression, anxiety, hostility, interpersonal sensitivity, and psychoticism (Dong, Lu, Zhou, & Zhao, 2011). The high prevalence of Internet addiction in East Asian countries has become a serious social and health issue (Ko et al., 2006; Sung, Lee, Noh, Park, & Ahn, 2013). Unfortunately, there are only a few treatment programs for Internet addiction, and their effectiveness in the context of East Asian cultures remain unclear. In response to the increasing prevalence of Internet addiction and its adverse effects, it is necessary to understand the different forms of support in order to develop effective treatment modalities in the context of East Asian cultures.

When reviewing the literature on Internet-addiction issues and the usage of support resources among East Asians, five topics stand out for consideration: the definition of Internet addiction, the prevalence of Internet addiction in East Asian

countries, professional Internet-addiction support, alternative assistance for persons with addictions, and social support. After these issues are examined, the research question that guided this study are presented.

Literature Review

Internet addiction is described as uncontrolled and dysfunctional use of the internet, which recent psychiatric literature recognized as one of the impulse-control disorders (Dell’Osso, Altamura, Allen, Marazziti, & Hollander, 2006; Shapira, Goldsmith, Keck, Khosla, & McElroy, 2000). According to the American Psychiatric Association, Internet addiction is a compulsive-impulsive spectrum disorder that involves online and/or offline computer usage (Dell’Osso et al., 2006). There are at least three subtypes: excessive gaming, sexual preoccupations, and e-mail/text messaging (Block, 2007). All three subtypes share four components: (a) excessive use, which associates with a loss of sense of time or a neglect of basic drives; (b) withdrawal, which includes feelings of anger, tension, and/or depression when Internet usage is not accessible; (c) tolerance, such as the urge to pursue better equipment, software, or more hours of usage; and (d) negative repercussions, which include arguments, lying, social isolation, and fatigue (Beard & Wolf, 2001; Block, 2007). This well-formulated definition helps researchers identify patients whose behavior suggests addiction.

With the increasing accessibility of the Internet, the number of Internet-addiction cases has also significantly increased. Internet addiction has become a growing issue in East Asia. For instance, Wu and Zhu (2004) identified 10.6% of Chinese college students as having an Internet addiction. About 3% of Korean

adolescents could be classified as high risk for Internet addiction (Sung et al., 2013). Among this high-risk group, 66.7% of the adolescents reported feeling stressed and unhappy. Another study with Taiwanese students revealed that the prevalence rate of Internet addiction in adolescents is 17.7% (Ko et al., 2007); it suggested that Taiwanese adolescents with Internet addiction were more likely to have substance-use experiences including tobacco, alcohol, or illicit drug use (Ko et al., 2006). In Japan, the prevalence of problematic or addictive Internet use among students was as high as 48% (Mak et al., 2014). Such a high prevalence of Internet addiction is a growing concern for the East Asian countries. The development of professional may be needed to meet the needs of patients.

The availability of cultural-sensitive intervention programs for Internet addiction varies among East Asian countries. There are several existing intervention models in China, where researchers have developed trials to apply psychoanalytic group intervention (Yang, Li, He, & Zhao, 2008), family therapy (Gong, Wang, Ye, & Liang, 2010), sports-exercise prescriptions (Zhang, 2009), and Naikan therapy (Su, Fang, Miller, & Wang, 2011). The availability and accessibility of these interventions are limited, and they can be costly (Su, Fang, Miller, & Wang, 2011). In addition to the traditional interventions, boot-camp-style rehab programs have emerged in both China and Korea (Koo, Wati, Lee, & Oh, 2011). The South Korean government has established about 140 counseling centers and developed treatment programs at almost 100 hospitals (Kim, 2008). In Japan, the government has developed “fasting camps” to help individuals with Internet addictions (Majumdar, 2013). An important limitation of the previous research on Internet-addiction

interventions is its heavy focus on the pathological aspect of Internet addiction.

Studies on professional interventions and their effectiveness are scarce. Additional resources are necessary in order to meet the ever-growing needs.

While professional assistance might be difficult to locate in most East Asian countries, some researchers and practitioners have been exploring other alternatives. For example, there is evidence showing that alternative treatments, such as electroacupuncture, may be effective in treating Internet addiction. One study suggests that electroacupuncture combined with psychologic interference can significantly improve the anxiety states of individuals with Internet addiction (Zhu, Jin, Zhong, Chen, & Li 2008). Another study shows that electroacupuncture in combination with psychointervention may improve the cognitive function of Internet-addicted patients (Zhu et al., 2012). While these studies seem to be promising for treating Internet addiction, they are in their infancy stages, and more research is necessary for development and implementation.

Other than professional support and alternative medicine, social support is one important factor in the recovery process for Internet-addicted individuals. Social support has a strong negative correlation with Internet addiction. Studies show that factors such as parenting attitudes, family communication, and family function are strongly associated with Internet addiction among South Korean adolescents (Cho, 2001; Kim, 2001; Nam, 2002; Park, Kim, & Cho, 2008). Similar studies in Taiwan and Hong Kong echoed the findings, showing a strong association between Internet addiction and parent-adolescent conflict and family function (Yen, Yen, Chen, Chen, & Ko, 2007; Yu & Shek, 2013). A study conducted with Japanese and Chinese

college students indicated the association between perception of parents being less caring and more controlling with Internet addiction (Yang, Yamawaki, & Miyata, 2013). The availability of social support also has an important effect on the treatment of Internet addiction; however, we know little about the prevalence of such support sources among East Asians (Lam, Peng, Mai, & Jing, 2009). Moreover, despite cultural similarities among Asians, research suggested that there are significant differences among Asian subgroups in attitudes toward mental health issues (Fung & Wong, 2007). One study found that Korean immigrants were less likely to endorse marital violence than their Chinese counterparts (Yoshioka, DiNoia, & Ullah, 2001). Another study suggested that Koreans are more likely to endorse “traditional, non-Western beliefs, including both ‘non-Western physiological’ and supernatural beliefs” compared to Chinese (Fung & Wong, 2007). There is little quantitative analysis of how East Asian countries differ regarding the rate of support sources. The present study addresses this critical gap in the literature.

The present study was guided by eight research questions about persons reporting Internet addiction: 1) What is the usage rate of kin as a support resource? 2) Are there statistically significant differences in the use of kin as a support resource by country? 3) What is the usage rate of nonkin as a support resource? 4) Are there statistically significant differences in the use of non-kin as a support resources by country? 5) What is the usage rate of alternative medicine as a support resource? 6) Are there statistically significant differences in the use of alternative medicine as support resources by country? 7) What is the usage rate of professional mental health

services as a support resource?, and 8) Are there statistically significant differences in the use of professional mental health services as support resources by country?

Methods

This study employed a retrospective, cross-sectional observational analysis to determine between-country differences in the utilization of different types of health assistance and the prevalence of East Asians reporting Internet addiction. Data were derived from the East Asian Social Survey (EASS). The EASS is a biennial social survey project that serves as a cross-national network of the following four General Social Survey-type surveys in East Asia: (1) Chinese General Social Survey (CGSS); (2) Japanese General Social Survey (JGSS); (3) Korean General Social Survey (KGSS); and (4) Taiwan Social Change Survey (TSCS). The purpose of these surveys is to compare diverse aspects of social life in these regions. Survey information in this module focused on issues that affected overall health, such as specific conditions, physical functioning, aid received from family members or friends when needed, and lifestyle choices. While EASS assessed a number of variables, this study focused on internet addiction and various sources of assistance. The variables in this study were (a) presence of an Internet addiction, (b) use of kin as support for an Internet addiction, (c) use of non-kin as support for an internet addiction, (d) use of alternative medicines as support for an internet addiction, (e) use of professional mental health as support for an internet addiction, and (f) country. EASS utilized multistage sampling procedures to gather data: China, three-stage PPS; Japan, two-stage stratified random sampling (stratified by regional block and

population size); South Korea, multistage area probability sampling; and Taiwan, three-stage stratified PPS sampling (PSU [township], village, and individual person).

Participants. The initial sample size of the 2010 Chinese General Social Survey was 5,370, with 3,866 responding; the sample was composed of Chinese aged 18 and above. The initial sample size of the 2010 Japanese General Social Surveys was 4,500, with 2,496 responding; the sample was composed of men and women aged 20–89 living in Japan. The initial sample size of the 2010 Korean General Social Survey was 2,500, with 1,576 responding; the sample was composed of adult citizens aged 18 and over who lived in households in South Korea. The initial sample size of the 2011 Taiwan Social Change Survey was 4,424, with 2,199 responding; the sample was composed of population registers. Of the 10,137 participants in this study, 351 reported having addiction issues; none of the 2,199 participants from Taiwan provided information on mental health.

A total of 351 respondents who reported internet addiction were selected in which consisted of a total 251 males and 100 females. Among the samples, 46.6% was between the ages of 20 to 29 and 27.7% was between the ages of 30 to 39. There was 54.9% of the sample reported never married and about 43.3% was reported married. The range of the number of years of education was 21 years with a mean of 13.29 years.

Measures. All data were drawn from items contained in the East Asian Social Survey (EASS; Iwai et al., 2010). The item numbers that appear in this subsection refer to the item numbers in the data codebook and files of EASS.

Internet addiction. Internet addiction was assessed using a single item (V78 EASS 2010) asking for a respondent's self-report of others' perceptions of that the respondent's use was excessive: "Have you ever done or has anyone told you that you have done the following behavior excessively? Video/Internet games (including cell phone games)." The possible responses were "Yes (1)," recorded as "1," and "No (2)," recorded as "0." The validity and reliability of single-item measures and measures that assess third-party perceptions have been supported (Sanders & Williams, 2016). Sanders and Williams (2016) report that third-party perceptions of addictions loaded on the second factor component of the significant problematic internet/gaming use measure.

Use of kin as a support resource. The use of kin as a support resource was assessed using a single item (V49 EASS 2010): "During the past 12 months, did your kin (family or relatives) do the following things for you when you needed it? If yes, how often?" The possible responses to this question were "Very often (1)," "Often (2)," "Sometimes (3)," "Seldom (4)," "Not at all (5)," "No, do not have such needs (6)," "No such persons available (7)," "Not asked (77)," and "Don't know/Refused (88)." Because the question specifically asked if the respondents received support when they needed it, response number 6 is not a useful indicator of frequency of support. Similarly, because the question is whether kin provided support "no such persons available" implies that the person does not have kin, so "no such persons available" is not a useful indicator of frequency of support. Thus, responses 6 and 7 were excluded. In addition, scores of 77 and 88 were excluded from all analyses (i.e.,

Japan). The item was recoded so that a high score signified higher frequency of support.

Use of non-kin as a support resource. The use of non-kin as a support resource was assessed using a single item (V52 EASS 2010): “During the past 12 months, did your non-kin (friends, colleagues, or neighbors) do the following things for you when you needed it? If yes, how often?” The possible responses to this question were “Very often (1),” “Often (2),” “Sometimes (3),” “Seldom (4),” “Not at all (5),” “No, do not have such needs (6),” “No such persons available (7),” “Not asked (77),” and “Don’t know/Refused (88).” Because the question specifically asked if the respondents received support when they needed it, response number 6 is not a useful indicator of frequency of support. Similarly, because the question is whether non-kin provided support “no such persons available” implies that the person does not have a person described as such, so “no such persons available” is not a useful indicator of frequency of support. Thus, responses 6 and 7 were excluded. In addition, the score of 77 was excluded from all analyses (i.e., Japan). A score of 77 was excluded from all analyses (i.e., Japan). The item was recoded so that a high score signified higher frequency of support.

Use of mental health professionals. The use of mental health professionals as a support resource was assessed using a single item (v55): “During the past 12 months, did your professional workers (e.g., social workers, caretakers, or therapists) do the following things for you when you needed it? If yes, how often?” The possible responses to this question were “Very often (1),” “Often (2),” “Sometimes (3),” “Seldom (4),” “Not at all (5),” “No, do not have such needs (6),” “No such persons

available (7),” “Not asked (77),” and “Don’t know/Refused (88).” Similar to the above two measures, responses 6 and 7 were excluded. In addition, the score of 77 was excluded from all analyses (i.e., Japan). A score of 77 was excluded from all analyses (i.e., Japan). The item was recoded so that a high score signified higher frequency of support. The item was recoded so that a high score signified higher frequency of support.

Use of alternative medicine as a support resource. The use of alternative medicine was assessed using three items (V46, V47, and V48 EASS 2010): “Have you ever received the following treatment during the last 12 months?” There were three categories for this question: (a) “Acupuncture or moxibustion (cupping) (v46),” “(b) Oriental herbal medicine (v47),” and (c) “Acupressure or clinical massage (48).” The possible responses to each item were “Yes (1)” and “No (2).” “Yes” answers on items V46, V47, and V48 were recoded as “1.” “No” answers were recoded as “0.” For analysis purposes, the sum of V46, V47, and V48 was used. Note that cupping is not included in JGSS due to its lack of popularity in Japan.

Country. The country/region of respondents, China, Japan, South Korea, and Taiwan was respectively coded as “1”, “2”, “3”, and “4”.

Data Analysis. Data screening and cleaning, including detection of anomalies, outliers, and missing value patterns, was conducted. Listwise deletion was used to treat missing cases or observations. For research questions 1, 3, 5, and 7 (rates), the following descriptive statistics were calculated: frequency, percentage, mean, median, mode, standard deviation, skewness, and kurtosis. Research Questions 2, 4, and 8 (ordinal variables) involved in the study could be treated as interval

variables given their specific Likert structure and the large sample size (Jamieson, 2004). As such, differences between countries were analyzed by means of a one-way ANOVA. If the one-way ANOVA was significant, pairwise post hoc analyses were done. The Chi-square test was used to address Research Question 6, where the dependent variable is alternative medicine, and the independent variable is country.

Results

The data for the current study comes from the EASS survey which included 10,137 respondents across the four East Asian countries: China, Japan, South Korea, and Taiwan. The Taiwanese sample (i.e., 2,199 participants) was not asked questions regarding internet/game addiction. Of the remaining sample (i.e., 7,938), 351 participants reported being perceived by others as being addicted to the internet. Thus, the analytic sample of this study included 351 respondents (118 Chinese, 116 Japanese, and 117 South Korean). Prior to conducting the primary analysis, the data were screened for missing values and outliers on the study variables as well as violations of specific statistical assumptions. Analysis of missing value patterns indicated that missing values were well below 1.8% for alternative medicine types across the three countries. The Japanese participants were not asked the questions about social support sources. Analysis of missing value patterns for support sources among Chinese and South Korean participants indicated 7.7% had a missing value for non-kin support, 9.8% for kin support and 47.7% for professional mental health services. Examination for outliers revealed that four participants had scores below 3 standard deviations from the mean for non-kin support and five participants had a score above 3 standard deviations for mental health professional service support.

Given, the small number of outliers, analyses were done without having to exclude them. Although one-way ANOVA is robust to assumptions of normality, in the current study, the author tested for this assumption using *skewness* and *kurtosis* values for each of the continuous variables. Results of the analysis showed that in absolute value terms, the skewness values ranged from .04 (SE = .22) for non-kin support to 1.75 (SE = .22) for professional mental health service support. Similarly, in absolute value terms, the kurtosis values ranged from .48 (SE = .44) for non-kin support to 2.50 (SE = .44) for professional mental health service support. These ranges of values for the two statistics indicate that the continuous variables appear to range from normally distributed to relatively skewed and kurtotic.

The first research question sought to determine the usage rate of kin as a support resource among East Asians reporting internet addiction. To address this research question, we calculated descriptive statistics of kin-support as reported by the respondents. Table 3.1 presents how often the respondents' kin extended emotional support to the respondents. The majority (76%) of East Asian reporting internet addiction received emotional support from their kin at least sometimes in the past 12 months. More importantly, about 44% of the participants reported having received emotional support from their kin often or very often.

The second research question was concerned with whether there are statistically significant differences in the use of kin as a support resource by country. A one-way ANOVA was conducted to compare if the mean frequency of reported kin emotional support differed by country. The results indicated that there was a statistically significant difference between countries in the use of kin as a support

resource, $F(1, 211) = 15.65, p = .00$). The Chinese respondents reported higher use of kin support ($M = 3.55, SD = 1.02$) than the South Korean respondents ($M = 2.93, SD = 1.26$).

Similar to the first research question, the third research question sought to determine the prevalence of non-kin as a support resource among East Asians reporting internet addiction. Again, we calculated descriptive statistics of non-kin support as indicated by the respondents. Table 3.1 presents how often respondents received emotional support from non-kin. The majority (81%) of East Asians reporting internet addiction received emotional support from non-kin at least sometimes in the past 12 months. About 41% said having received emotional support from non-kin often or very often.

The fourth research was aimed at determining whether there are statistically significant differences in the use of non-kin as a support resource by country. A one-way ANOVA was conducted to compare the mean frequency of non-kin support by country. The results indicated that there were no statistically significant differences between countries in the use of non-kin as a support resource, $F(1, 216) = .02, p = .96$.

The fifth research question sought to determine the usage rate of alternative medicine as a support resource by East Asians reporting internet addiction. We calculated percentages of respondents based on their use of three types of alternative medicine: Acupuncture/Moxibustion, Oriental herbal medicine and Acupressure/Clinical massage. Table 3.2 presents the number and percentage of East Asians reporting internet addiction who used alternative medicine in the past 12

months. The table shows that about one-fifth (19.5%) of East Asian reporting internet addiction used acupressure in the past 12 months. While about 14% used acupuncture, 19% used herbal medicine.

In addition to determining the usage rate of alternative medicine as a support resource by East Asians reporting internet addiction, in the sixth research question, we sought to determine whether there were statistically significant differences in the use of alternative medicine as a support resource by country. To address this research question three chi-square tests of independence were calculated: one for each alternative medicine type. Table 5.3 presents cross-tabulations and chi-square tests for alternative medicine by country. As can be seen from the table, there are significant differences in the use of acupuncture among the three countries, $X^2(2, 3) = 18.99$, $p = .00$. Acupuncture seems to be the most common type of alternative medicine in South Korea, with 23% of the South Korean participants reporting its use in the past 12 months. Table 3.3 also shows that there are small but significant differences in the use of herbal medicine among the three countries, $X^2(2, 3) = 6.29$, $p = .04$. Herbal medicine seems to be the most common type of alternative medicine in China, with 25% of the Chinese participants reporting its use in the past 12 months. Finally, there were no statistically significant differences in the use of acupressure among the three countries, $X^2(2, 3) = 1.44$, $p = .49$.

The seventh research question sought to determine the usage rate of professional mental health services as a support resource. To address this research question, we calculated descriptive statistics of the use of professional mental health services as reported by the respondents. Table 3.1 presents how often the

respondents' received professional mental health services. The majority (68%) of East Asian reporting internet addiction did not receive professional mental health services during the last 12 months. Indeed, only about 16% reported having used professional mental health services as a support resource at least sometimes.

The last research question was concerned with whether there were statistically significant differences in the use of professional mental health services as a support resource by country. A one-way ANOVA was conducted to compare if mean frequency of reported use of professional mental health services differed by country. The results indicated that there were statistically significant differences between countries in the use of professional mental health services as a support resource, $F(1, 122) = 8.03, p = .01$). The Chinese respondents reported higher use of professional mental health services ($M = 1.81, SD = .97$) than South Korean respondents ($M = 1.31, SD = .93$).

Discussion

The aim of this study was twofold. The first aim was to determine the prevalence estimates of support sources of mental healthcare assistance among East Asians reporting internet addiction. The second aim was to examine whether there are differences between countries in rates of usage of these support sources. Towards this end, this study addressed the following research questions: 1) What is the usage rate of kin as a support resource? 2) Are there statistically significant differences in the use of kin as a support resource by country? 3) What is the usage rate of non-kin as a support resource? 4) Are there statistically significant differences in the use of non-kin as a support resource by country? 5) What is the usage rate of alternative

medicine as a support resource? 6) Are there statistically significant differences in the use of alternative medicine as a support resource by country? 7) What is the usage rate of professional mental health services as a support resource? 8) Are there statistically significant differences in the use of professional mental health services as a support resource by country? In this section, the results are presented and discussed in relation to previous work. Towards the end of the section, limitations of this study, and the implications of the findings for researchers and practitioners are presented.

The first research question was concerned with determining the usage rate of kin as a support resource among those reporting internet addiction. The results indicated that, among East Asians indicting internet addiction, about 76% reported having received emotional support for their mental health problems. A more intriguing finding was that about 44% of the participants reported having received emotional support from their kin *often or very often*. One plausible explanation is the scarcity of professional assistance. The ratio of professional counselors to patients is about 2.4 per 1 million in China (Chinese Psychological Society, 2004), which is a much lower ratio compared to the United States where there are 3,000 counselors per 1 million people (Hohensil, Amundson, & Niles, 2015). With little help available from professional counselors, individuals with low mental health have no option but to rely on the more accessible familial assistance. Another plausible explanation for such findings can be found in the East Asian culture. Several studies have shown that beliefs and traditional practices influence Asians' needs for social support. For instance, the Chinese core cultural values endorse family as the core unit of daily life and resource for support, harmonious social and interpersonal relations, and

avoidance of extreme emotional reaction (Tseng, Lin, & Ye, 1995). Having a mental illness such as internet addiction creates a conflict with the core cultural values. As a result, mental illness is judged to be an abnormal aberrant, or a deviance (Haslam, 2005) which brings a tremendous amount of shame to the individual and to his/her family (Fabrega, 1991; Hanzawa et al., 2009; Jenni, 1999; Mellor et al., 2012). In order to avoid bringing shame to the family, individuals with internet addiction would tend to seek familial support. While both explanations contributed to the findings, the latter explanation is the most influential one. Studies have shown that the deep-rooted Confucian philosophy views mental illness as disharmony to the collective society in which it also brings shame to the family. As a result, individuals with mental illness such as addiction would prefer to preserve the family's dignity and only seek assistance within the family.

The second question was concerned with whether there are significant differences in the use of kin as a support resource by country. The findings indicated that there was a significant difference between the two East Asian countries of China and South Korea. The Chinese respondents reported higher use of kin emotional support than South Korean respondents. This result may be explained by the fact that Chinese society is less receptive to assistance from outside the family compared to their South Korean counterparts (citation needed here). One study suggested that even Korean families do not prefer someone outside of the family to care for the family member who has schizophrenia, they are likely to receive non-familial assistance (Hanzawa, 2012). In contrary, approximately 70% of Chinese individuals with schizophrenia depend almost exclusively on their families for care (Chan, 2011;

Chan & Yu, 2004; Sethabouppha & Kane, 2005). Another plausible explanation is the higher availability of non-familial assistance in South Korea compared to China. It is estimated that about 19.7% of the South Korea population is self-identified as Protestant (Hong, 1999) compared to 3% in China (Fiedler, 2010). South Korean Protestant churches promote religious participation which also provides spiritual support and assistance (Lee, 2009). The latter explanation seems to be more plausible since it affirmed previous studies on religious social support and church attendance. It is suggested that religious social support can be effective in reducing mental health issues (Nooney & Woodrum, 2002; Schwadel & Falci, 2012). With the wide availability of religious support in South Korea, the need for kin support would be less than its counterpart in China.

Concerning research question #3, which focused on the usage rate of non-kin support, the results revealed that a vast majority (81%) of East Asian reporting internet addiction received emotional support from non-kin at least sometimes in the past 12 months. Previous studies evaluating the prevalence of social support among mental health patients showed that East Asians prefer seeking help from informal sources such as family and friends (Na, Ryder, & Kirmayer, 2016; Picco et al., 2016). A possible explanation for the high prevalence rate of non-kin support among the current sample could be that non-kin assistance is highly accessible. Another plausible explanation for such a finding is that it is more socially acceptable for one to seek help within one's social circle than assistance outside of the network. Studies have shown that it is a cultural norm for East Asians to expect help within one's

social network (Tata & Leong, 1994). This cultural explanation is the most plausible explanation because it is in line with previous findings.

Regarding research question four, the results indicated that there was no statistically significant difference between countries in the use of non-kin as a support resource. This seems to suggest that non-kin support functions similarly across the two countries. This is the first study that compares the two countries' help-seeking behavior from non-kin among individuals reporting internet addiction.

The focus of the fifth research question was determining the usage rate of alternative medicine as a support resource by East Asians reporting internet addiction. The findings indicated that about one-fifth of the respondents reported using acupressure in the past 12 months. A similar percentage (19%) reported having used herbal medicine. About 14% reported having used acupuncture. Although the use of alternative medicine is not high compared to kin and non-kin support, the prevalence of alternative medicine in this particular study is much higher than those reported in the Western mental health literature. Unützer et al. (2000) found that about 14.5% of the U.S. respondents have reported the use of alternative medicine in the past 12 months. Among the 14.5% who have reported alternative medicine use, only 15% reported using alternative medicine to treat mental health issues (Unützer et al., 2000). The percentage used to treat internet addiction is expected to be much lower. One plausible explanation for a higher rate is the long history of alternative medicine usage in East Asian countries, and the trust of alternative medicine is much higher than in the West. East Asians have been practicing herbal medicine, acupuncture, and acupressure for more than 2,000 years (Hakverdioglu & Turk, 2006; Leslie, 1976).

Another plausible explanation is that alternative medicine is highly accessible in East Asian countries. For instance, Chinese biomedicine doctors are granted the right to practice traditional medicine (Xu & Yang, 2009). Moreover, both China and South Korea have institutionalized alternative medicines into the healthcare system which increased their accessibility (Shim, 2016). Both explanations, higher credibility and accessibility, served an important role in the findings.

The sixth research question of this study addressed the issue of country-level differences in the use of alternative medicine. The findings revealed that there are some significant differences in the use of alternative medicine. In particular, a significantly higher percentage of South Korean participants reported the use of acupuncture compared to Chinese or Japanese participants. On the other hand, a significantly higher percentage of Chinese participants reported the use of herbal medicine compared to South Korean or Japanese participants. Contrary to our expectation, there are no statistically significant differences in the use of acupuncture among the three countries. No prior studies have been conducted comparing East Asian countries' alternative medicine usage rates on the individual's reported internet addiction.

One plausible explanation for herbal medicine as the higher usage rate in China is the higher level of accessibility. As mentioned above, the Chinese healthcare system allowed biomedical doctors to practice traditional Eastern alternative medicine (Shim, 2016). In contrary, the Korean healthcare system separated the biomedical and traditional medicines with separate licensing systems (Shim, 2016). As a result, the chances of Chinese patients receiving traditional

alternative medical treatment such as herbal medicine is higher. Another plausible explanation is affordability. Most herbal medicine in South Korea is not covered by government insurance, which reduces its affordability and accessibility to patients (Kim et al., 2012). Although the South Korean government insurance does not cover most herbal medicine treatment, it does fully cover practices such as dry cupping, moxibustion, and acupuncture (Kim et al., 2012) while Chinese patients need to pay an average of 19.32 CNY (2.8 USD) for such treatment (Zhao, 2011). Acupuncture treatment usually requires multiple sessions a month, and an average (monthly) salary of a Chinese blue-collar worker is between 5,000 and 6,214 CNY (725 USD and 901 USD) (Jing, 2015). The cost of acupuncture might not be a significant burden to most patients in China, although more research is needed on the topic. . On the other hand, Japan has the lowest usage rate of herbal medicine and acupuncture among the three countries. One plausible explanation is the lack of general recognition of traditional medicine. Unlike China and South Korea, the Japanese healthcare system does not integrate traditional medicine as the primary treatment modality. There are only vocational schools for Eastern medicine technicians (Shim, 2016). Moreover, biomedicine doctors are discouraged from integrating traditional medicine as part of a treatment plan (Shim, 2016). As a result, Japan has the lowest usage rate of alternative medicine among the three countries. The above explanations, including institutionalization of traditional Eastern medicine into the healthcare system and government insurance coverage, play an important role on the different usage rate of each country.

The last two questions that this study addressed focused on the use of professional mental health service support. The seventh research question sought to determine the usage rate of professional mental health services as a support resource among those reporting internet addiction. The results indicated that only about 16% of respondents with internet addiction reported having used professional mental health services as a support resource at least sometimes. Previous studies have shown similar findings on professional mental health services use among Asians (Hong Kong Government Information Centre, 2001; Park et al., 2012; Xiang, Yu, Sartorius, Ungvari, & Chiu, 2012). One plausible explanation of such finding is the scarcity of trained mental health professionals to treat internet addiction. No prior study has been conducted on the availability of internet addiction assistance in East Asia. However, with only 15,000 trained psychiatrists serving a population of 1.3 billion Chinese and the licensing system for professional counselors has yet to exist in South Korea, the professional assistance available to recently emerged internet addiction would be assumed to be scarce (Ma, 2011). Another plausible explanation is the stigma of mental illness. Addiction, like other types of mental illness, is considered shameful and brings disharmony to the family (Au, 2017; Fabregas, 1991; Hanzawa et al., 2009; Jenni, 1999; Schomerus et al., 2012). Individuals with mental illness tend to choose assistance within their families and social circle instead of seeking for professional assistance (Hanzawa et al., 2009; Lam et al., 2010). Each of these explanations played an important role in the findings.

Finally, the last research question addressed if there were statistically significant differences in the use of professional mental health services as a support

resource by country. There was no prior study comparing help-seeking behavior of individuals with internet addiction between the two countries; therefore, the findings here represent a contribution to the literature. The results indicated that there were statistically significant differences between countries in the use of professional mental health services as a support resource, with Chinese respondents reporting higher use of such services than South Koreans. A possible reason that Chinese participants reported higher reliance on professional mental health services is that there is higher availability of professional assistance for internet addiction in China. Another plausible explanation is that the accessibility to non-kin social support in South Korea is higher which reduces the need to seek for professional help. A previous study on South Korean women population showed that higher social support is associated with decreased self-perceived need for professional assistance (Arnault, Gang, & Woo, 2018). However, this explanation is inconsistent with this study's finding on non-kin usage where there are no significant statistical differences found between the two countries. This inconsistency could be explained by the fact that the reduction of perceived need to seek professional assistance does not necessarily transform into the action of seeking assistance from non-kin. In that case, it is the availability rather than the participation of non-kin social support which influences one's professional help-seeking behavior. While each of the explanations mentioned here is possible, further study needs to be done to determine the cause of the findings.

There are several limitations to this study. The first limitation is that while the data shows there is an association between the usage rate of different types of assistance among individuals reported with internet addiction, it is unclear if the

usage was for treating mental health reasons. The second limitation of the study is that the data was gathered through self-report measures. Readers need to keep in mind that mental illness including addiction is still highly stigmatized in East Asia, so the self-report data might be subject to bias and underreport. The third limitation of this study involves the lack of data from Taiwan and Japan which limits the representation of East Asian populations. Finally, the scope of this study was limited to understanding the prevalence and country-level difference in support sources; thus, the study did not determine how such support sources can buffer the effect of internet addiction.

Despite these limitations, findings of the current study have important implications for both conceptualization of treatment and treatment practice. The scientific study of internet addiction is in its infancy. This study offered a culturally sensitive perspective on help-seeking resource preferences for internet addiction in East Asia. First, these findings can be used for the development of a more holistic approach to treating internet addiction. Second, the high rates of assistance from kin, non-kin, and alternative medicine warrant a closer look for a more holistic approach to East Asian patients with internet addiction issues. Family members, friends, and alternative medicines should be part of the intervention process. Third, since kin and non-kin play such an important role in the recovery process, systematic psychoeducation should be developed to improve treatment outcome. Finally, East Asian healthcare systems should educate the public about internet addiction to reduce stigma. Once stigma is reduced, help-seeking behavior might be increased across the spectrum.

References

- Au, A. (2017). Low mental health treatment participation and Confucianist familial norms among East Asian immigrants: A critical review. *International Journal of Mental Health, 46*(1), 1-17.
<http://dx.doi.org/10.1080/00207411.2016.1264036>
- Beard, K. W., & Wolf, E. M. (2001). Modification in the proposed diagnostic criteria for Internet addiction. *CyberPsychology & Behavior, 4*, 377–383.
<https://doi.org/10.1089/109493101300210286>
- Block, J. J. (2007). Pathological computer use in the USA. In *2007 International Symposium on the Counseling and Treatment of Youth Internet Addiction. Seoul, Korea, National Youth Commission* (Vol. 433).
- Cho, C. B. (2001). *A study on a relation between the Internet addiction of adolescents and family & school background*. Graduate School of Kyunghee University. Unpublished thesis.
- Chou, C., & Hsiao, M. C. (2000). Internet addiction, usage, gratification, and pleasure experience: the Taiwan college students' case. *Computers & Education, 35*, 65–80. [https://doi.org/10.1016/S0360-1315\(00\)00019-1](https://doi.org/10.1016/S0360-1315(00)00019-1)
- Dell'Osso, B., Altamura, A. C., Allen, A., Marazziti, D., & Hollander, E. (2006). Epidemiologic and clinical updates on impulse control disorders: A critical review. *European Archives of Psychiatry and Clinical Neuroscience, 256*, 464–475. <https://doi:10.1007/s00406-006-0668-0>

- Dong, G., Lu, Q., Zhou, H., & Zhao, X. (2011). Precursor or sequela: Pathological disorders in people with Internet addiction disorder. *PloS One*, *6*(2), e14703. <https://doi.org/10.1371/journal.pone.0014703>
- Du, Y. S., Jiang, W., & Vance, A. (2010). Longer term effect of randomized, controlled group cognitive behavioural therapy for Internet addiction in adolescent students in Shanghai. *Australian & New Zealand Journal of Psychiatry*, *44*, 129–134. <https://doi.org/10.3109/00048670903282725>
- Gong, B. H., Wang, X. M., Ye, J. Q., & Liang, X. (2010). Efficacy of family therapy on Internet addiction among adolescents. *Chinese Journal of School Health*, *31*, 300–301. https://doi.org/http://en.cnki.com.cn/Article_en/CJFDTotale-XIWS201003018.htm
- Hanzawa, S. (2012). Toward an effective family support system in Japan. *International Journal of Mental Health*, *41*(2), 82-96.
- Haslam, N. (2005). Dimensions of folk psychiatry. *Review of General Psychology*, *9*(1), 35-47.
- Jamieson, S. (2004). Likert scales: How to (ab)use them. *Medical Education*, *38*, 1217–1218. doi:10.1111/j.1365-2929.2004.02012.x
- Jing, M. (2015, March 26). *Income rising for blue-collar females*. Retrieved from http://www.chinadaily.com.cn/china/2015-03/26/content_19912384.htm
- Kim, H. W. (2001). Analysis on the characteristics of Internet use and Internet addiction among adolescents. *Korean Journal of Youth Studies*, *8*(2), 91–117.
- Kim, J. U. (2008). The effect of a R/T group counseling program on the Internet addiction level and self-esteem of Internet addiction university students.

International Journal of Reality Therapy, 27(2), 3-9.

<https://doi.org/10.1.1.520.6598>

Ko, C. H., Liu, G. C., Hsiao, S., Yen, J. Y., Yang, M. J., Lin, W. C., ... & Chen, C. S.

(2009). Brain activities associated with gaming urge of online gaming addiction. *Journal of Psychiatric Research*, 43, 739-747.

<https://doi.org/10.1016/j.jpsychires.2008.09.012>

Ko, C. H., Yen, J. Y., Chen, C. C., Chen, S. H., Wu, K., & Yen, C. F. (2006).

Tridimensional personality of adolescents with internet addiction and substance use experience. *The Canadian Journal of Psychiatry*, 51, 887–894.

<https://doi.org/10.1177/070674370605101404>

Ko, C. H., Yen, J. Y., Chen, C. S., Chen, C. C., & Yen, C. F. (2008). Psychiatric

comorbidity of internet addiction in college students: An interview study. *CNS spectrums*, 13, 147–153. <https://doi.org/10.1017/S1092852900016308>

Ko, C. H., Yen, J. Y., Yen, C. F., Chen, C. S., Weng, C. C., & Chen, C. C. (2008).

The association between Internet addiction and problematic alcohol use in adolescents: The problem behavior model. *CyberPsychology & Behavior*, 11,

571–576. <https://doi.org/10.1089/cpb.2007.0199>

Ko, C. H., Yen, J. Y., Yen, C. F., Lin, H. C., & Yang, M. J. (2007). Factors predictive

for incidence and remission of internet addiction in young adolescents: A prospective study. *CyberPsychology & Behavior*, 10, 545–551.

<https://doi.org/10.1089/cpb.2007.9992>

- Koo, C., Wati, Y., Lee, C. C., & Oh, H. Y. (2011). Internet-addicted kids and South Korean government efforts: Boot-camp case. *Cyberpsychology, Behavior, and Social Networking, 14*, 391–394. <https://doi.org/10.1089/cyber.2009.0331>
- Lam, L. T., Peng, Z., Mai, J., & Jing, J. (2009). Factors Associated with Internet Addiction among Adolescents. *CyberPsychology & Behavior, 12*(5), 551-555. doi:10.1089/cpb.2009.0036
- Lenhard, W., & Lenhard, A. (2016). *Calculation of effect sizes*. Dettelbach, Germany: *Psychometrica*. Retrieved from https://www.psychometrica.de/effect_size.html
- Majumdar A. (2013). *Japan plans “fasting camps” for Web-addicted children*. Tech 2. Retrieved from <http://tech2.in.com/news/general/japan-plans-fasting-camps-for-webaddicted-children/91228>
- Mak, K., Lai, C., Watanabe, H., Kim, D., Bahar, N., Ramos, M., ... Cheng, C. (2014). Epidemiology of Internet behaviors and addiction among adolescents in six Asian countries. *Cyberpsychology, Behavior, and Social Networking, 17*(11), 720–728. doi:10.1089/cyber.2014.0139
- Nam, Y. O. (2002). A study on the psychosocial variables of youths' addiction to Internet and cyber and their problematic behavior. *Korean Journal of Social Welfare, 50*, 173–207.
- Park, S., Kim, J., & Cho, C. (2008). Prevalence of Internet addiction and correlations with family factors among South Korean adolescents. *Adolescence, 43*(172), 895–909.

- Shapira, N. A., Goldsmith, T. D., Keck, P. E., Khosla, U. M., & McElroy, S. L. (2000). Psychiatric features of individuals with problematic internet use. *Journal of Affective Disorders, 57*(1), 267–272. [https://doi.org/10.1016/S0165-0327\(99\)00107-X](https://doi.org/10.1016/S0165-0327(99)00107-X)
- Stein, D. J. (1997). Internet addiction, Internet psychotherapy. *The American Journal of Psychiatry, 154*(6), 890. <https://doi.org/10.1176/ajp.154.6.890>
- Su, W., Fang, X., Miller, J. K., & Wang, Y. (2011). Internet-based intervention for the treatment of online addiction for college students in China: A pilot study of the Healthy Online Self-Helping Center. *Cyberpsychology, Behavior, and Social Networking, 14*(9), 497-503. <https://doi.org/10.1089/cyber.2010.0167>
- Sung, J., Lee, J., Noh, H. M., Park, Y. S., & Ahn, E. J. (2013). Associations between the risk of internet addiction and problem behaviors among Korean adolescents. *Korean Journal of Family Medicine, 34*, 115–122. <https://doi.org/10.4082/kjfm.2013.34.2.115>
- Tseng, W. S., Lin, T. Y., & Yeh, E. K. (1995). Chinese societies and mental health. In T. Y. Lin., W. S. Tseng, & E. K. Yeh (Eds) *Chinese societies and mental health* (pp. 3-18). Hong Kong: Oxford University Press.
- Xiang, Y., Yu, X., Sartorius, N., Ungvari, G., & Chiu, H. (2012). Mental health in China: Challenges and progress. *The Lancet, 380*(9855), 1715-1716.
- Yang, C. Y., Sato, T., Yamawaki, N., & Miyata, M. (2013). Prevalence and risk factors of problematic Internet use: A cross-national comparison of Japanese and Chinese university students. *Transcultural Psychiatry, 50*(2), 263–279.

- Yang, J. J., Li, D. B., He, L., He, L., & Zhao S. (2008). The study of mental training of Internet addiction disorder in university students. *China Journal of Health Psychology, 16*, 269–271.
- Yen, J. Y., Ko, C. H., Yen, C. F., Chen, C. S., & Chen, C. C. (2009). The association between harmful alcohol use and Internet addiction among college students: comparison of personality. *Psychiatry and Clinical Neurosciences, 63*, 218-224. <https://doi.org/10.1111/j.1440-1819.2009.01943.x>
- Yen, J. Y., Ko, C. H., Yen, C. F., Wu, H. Y., & Yang, M. J. (2007). The comorbid psychiatric symptoms of Internet addiction: attention deficit and hyperactivity disorder (ADHD), depression, social phobia, and hostility. *Journal of Adolescent Health, 41*, 93–98.
<https://doi.org/10.1016/j.jadohealth.2007.02.002>
- Yen, J. Y., Yen, C. F., Chen, C. S., Tang, T. C., & Ko, C. H. (2009). The association between adult ADHD symptoms and internet addiction among college students: The gender difference. *Cyberpsychology & Behavior, 12*, 187–191.
<https://doi.org/10.1089/cpb.2008.0113>
- Yen, J.-Y., Yen, C.-F., Chen, C.-C., Chen, S.-H., & Ko, C.-H. (2007). *CyberPsychology & Behavior, 10*(3), 323–329. doi:10.1089/cpb.2006.9948
- Yu, L., & Shek, D. T. L. (2013). Internet addiction in Hong Kong adolescents: A three-year longitudinal study. *Journal of Pediatric and Adolescent Gynecology, 26*(3), S10–S17. doi:10.1016/j.jpag.2013.03.010

- Zhang L. J. (2009). The applications of group mental therapy and sports exercise prescriptions in the intervention of internet addiction disorder. *Psychological Science, 32*, 738–741.
- Zhu, T., Jin, R. J., Zhong, X. M., Chen, J., & Li, H. (2008). Effects of electroacupuncture combined with psychologic interference on anxiety state and serum NE content in the patient of internet addiction disorder. *Chinese Acupuncture & Moxibustion, 28*(8), 561–564.
- Zhu, T., Li, H., Jin, R., Zheng, Z., Luo, Y., Ye, H., & Zhu, H. (2012). Effects of electroacupuncture combined psycho-intervention on cognitive function and event-related potentials P300 and mismatch negativity in patients with internet addiction. *Chinese Journal of Integrative Medicine, 18*(2), 146–151.
doi:10.1007/s11655-012-0990-5

Table 3.1

Frequency and Percentage of Support Sources

<i>Rating</i>	Kin Support		Non-Kin Support		Professional Support	
	Frequency	%	Frequency	%	Frequency	%
Not at all	22	10.4	14	6.5	84	68.3
Seldom	29	13.7	28	12.9	19	15.4
Sometimes	67	31.6	86	39.6	13	10.6
Often	61	28.8	65	30.0	4	3.3
Very Often	33	15.6	24	11.1	3	2.4
Total	212	100	217	100	123	100.0

Table 3.2

Frequency and Percentage of Respondents Using Alternative Medicine

<i>Response</i>	Acupuncture		Herbal medicine		Acupressure	
	Frequency	%	Frequency	%	Frequency	%
No	299	86.2	281	80.7	280	80.5
Yes	48	13.8	67	19.3	68	19.5
Total	347	100	348	100	348	100

Table 3.3

Cross-Tabulations and Chi-square Test Results for Alternative Medicine by Country

Alternative Medicine Type	China	Japan	South Korea	Chi-Square Tests of Independence
Acupuncture				$X^2(2, 3) = 18.994,$
No <i>n</i> (%)	97 (85.1%)	112 (96.6%)	90 (76.9%)	$p = .000$
Yes <i>n</i> (%)	17 (14.9%)	4 (3.4%)	27 (23.1%)	
Herbal medicine				$X^2(2, 3) = 6.291,$
No <i>n</i> (%)	87 (75.0%)	101 (87.8%)	93 (79.5%)	$p = .043$
Yes <i>n</i> (%)	29 (25.0%)	14 (12.2%)	24 (20.5%)	
Acupressure				$X^2(2, 3) = 1.436$
No <i>n</i> (%)	90 (77.6%)	92 (80.0%)	98 (83.8%)	$p = .488$
Yes <i>n</i> (%)	26 (22.4%)	23 (20.0%)	19 (16.2%)	

Chapter 4: General Conclusion

General Conclusion

Overview

The overarching goal of this dissertation was to provide a coherent and data-informed approach to mental healthcare in East Asia that reflects cultural preferences for care. Towards this end, the dissertation addressed two critical areas of research. The first was to identify current prevalence estimates of support sources among those reporting low mental health and those reporting Internet addiction. The second major area of research was an examination of between-country differences in these support sources. To address these critical areas of research, I used the East Asian Social Survey (EASS; Iwai et al., 2010) data. This chapter covers the following five sections: (a) a summary of Manuscript #1; (b) a summary of Manuscript #2; (c) a presentation and discussion of linkage between the two manuscripts; (d) a discussion on the contribution of this dissertation to the knowledge base; and (e) future research directions.

Summary of Manuscript #1

The findings of this study showed that, among East Asians reporting low mental health, a large percentage of the sample reported having received kin or non-kin emotional support for their mental health problems. This finding aligns with previous literature showing that many people in East Asia with low mental health are reluctant to reveal mental health problems or seek assistance for such conditions outside the family. East Asians continue to be deeply influenced by Confucian philosophy, which encourages an understanding of disability and illness as one's fate (Lam et al., 2010). East Asian culture also encourages a collective identity, not the

highly individualistic identity that is more common in Western societies. Stigmatized conditions such as mental illness not only reflect negatively on the person who is suffering, but it is also seen as a loss of face for the person's family (King & Bond, 1985; Lam et al., 2010).

Although there is a reluctance to seek support outside the family, approximately two-thirds of East Asians with low mental health report turning to non-kin for informal support. This finding is also consistent with previous literature that shows East Asian preferences for various forms of informal support among over formal support (Na, Ryder, & Kirmayer, 2016; Picco et al., 2016). A possible explanation for the high prevalence rate of non-kin support among the current sample could be that non-kin assistance is highly accessible. Another reason for such a finding is that it is more socially acceptable for one to seek help within one's social circle than assistance outside of a social network. Studies have shown that it is a cultural norm for East Asian to expect help within one's social network (Tata & Leong, 1994). This cultural explanation is the most plausible explanation because it is in line with previous findings.

The results further showed that East Asians reporting low mental health tend to use alternative medicine as a treatment option. Although the proportion of participants using this treatment approach is lower than that of kin and non-kin social support, it is considerably higher than the rate reported in the previous studies. This study found that, among East Asians reporting low mental health, 25% of respondents reported using herbal medicine, 17% used acupuncture, and 16% used acupressure. This usage rate is higher than the rates reported in studies from Western countries.

According to a U.S. national survey conducted in the year 2000 (Unützer et al.), during the previous 12 months about 14.5% of the total sample used alternative medicine and, among those, only about 15.0% used alternative medicine to treat mental or emotional problems. Although usage rates for acupuncture and acupressure are not as high as that of herbal medicine, acupuncture and acupressure are considerably common among East Asians reporting low mental health compared to the U.S. Both the cultural credibility and accessibility of alternative medicine (Hakverdioglu & Turk, 2006; Shim, 2016) probably contribute to its relatively higher usage rate in East Asia.

The findings of this study also revealed the number of East Asians reporting low mental health who receive professional mental health service appears to be low. Only about 14% of the respondents to the EASS reported having used professional mental health services as a support resource at least sometimes. Previous studies on the use of professional mental health services in East Asia indicate similar results (Park et al., 2012; Xiang et al., 2012). Strong cultural preferences for seeking kin and non-kin support for low mental health likely contribute to low utilization of professional mental health services. Another likely contributor, however, is that professional assistance for mental health problems is in scarce supply in East Asian countries. In China, for example, the ratio of professional counselors to the overall population is 2.4 per 1 million (Chinese Psychological Society, 2004) compared to 3,000 counselors per 1 million in the US (Hohenshil, Amundson, & Niles, 2015). In Japan, research suggests that more than half of certified clinical psychologists earn less than the national average wage and almost half work part-time (Hohenshil,

Amundson, & Niles, 2015). Given cultural proscriptions on revealing mental illness outside the family, lack of mental healthcare availability, and little incentive to enter the mental health profession in East Asia, it is unsurprising that many participants in the EASS who were experiencing low mental health reported turning to kin and non-kin for informal support.

While East Asia shares a common cultural heritage, the findings of this study showed that there are significant differences between countries in the preferred treatment options for low mental health. This study is the first to examine these differences between countries. First, this study compared support preferences for low mental health among the four countries contributing to the EASS. Regarding the use of kin as a support resource, the results indicated a statistically significant difference between China and South Korea. Chinese respondents reported higher use of kin emotional support than South Korean respondents. A likely explanation for this finding is the relatively more accessibility to professional mental health assistance in South Korea compared to China.

Second, regarding the use of non-kin support for low mental health, this study again found significant differences between China and South Korea. Chinese culture more strongly encourages repression of feelings compared to South Korean culture (Cheung, Leung, & Cheung 2011; Parker, Gladstone & Chee, 2001). Additionally, South Koreans have higher accessibility to religious support systems than their counterparts in China. Research has shown that South Koreans have greatly increased their religious participation over the past few decades (Kim, 2003; Lee 2009). Most of the growth has been in forms of Christian Protestantism that include

high levels of spiritual support and assistance (Lee, 2009). Such a high level of organized non-kin support is not available or accessible to individuals in China where most religious activities are restricted (Fiedler, 2010).

Third, this study also examined differences among East Asian countries regarding the use of alternative medicine to address low mental health. The results indicated that acupuncture seems to be the most common type of alternative medicine in South Korea whereas herbal medicine and acupressure, respectively, appear to be the most common type of alternative medicine in China and Japan. While there are previous cross-national studies comparing these countries on traditional East Asian medicine (Shim & Kim, 2018), the present research was the first study comparing their use of alternative medicine as a treatment for individuals with low mental health. While cultural and historical variations in medical practice play a role in the use of alternative medicine, accepted medical practices and national policies within each country account for these differences in usage rates.

Finally, this study examined differences among the four EASS countries in use of professional services for low mental health. There was a statistically significant difference between China and South Korea in the use of professional mental health services, with Chinese citizens showing higher use of services; however, the level of professional mental health support is generally low across the two countries. One reason for these differences is higher South Korean accessibility to non-kin religious social support (Arnault, Gang, & Woo, 2018). Another possible reason is that the Chinese healthcare system that allows biomedical doctors to

practice traditional Eastern medicine, while in South Korean these practices are exclusive (Shim, 2016).

In spite of its contribution to the literature, there are some limitations to account for when interpreting the results of this study. The primary limitation of this study is that the data show the association between resources usage rates among individuals with low mental health, but it is unclear whether individuals used resources for the exclusive purpose of treating mental health problems. Another limitation of this study is the use of self-report measures. Since mental illness is highly stigmatized in East Asia, the self-report data might represent an underreporting of mental health problems. Still another limitation of this study is the lack of data for Taiwan and Japan. The Japanese participants were not asked the question on social support sources, and the Taiwanese participants were not asked the mental health question. Finally, the scope of this study was limited to understanding the prevalence and country-level difference in mental health support sources. This study did not examine how these support sources influenced mental health.

Despite its limitations, the results of this study have important research and practical implications. The high usage rates of kin, non-kin, and alternative medicine for low mental health among this East Asian sample is important because it influences how Western practitioners should approach East Asian patients and devise therapeutic interventions. Practically, with East Asian patients, practitioners should consider integrating family members, social support, and alternative medicines as part of the intervention process. At a minimum, these alternatives should not be dismissed or discounted as part of an overall treatment plan. Moreover, providing

psychoeducation on mental illness and its treatment to patients' support system such as family members might improve treatment outcome. When implementing treatment, practitioners should emphasize patient confidentiality to help assuage individual or family fears that information will be shared in ways that identify them. These measures might increase the rates at which East Asian families seek out and comply with treatment. On a macro level, mental health professionals should promote and support public policy efforts aimed at providing information on mental health problems and effective intervention.

This study found that approximately two-thirds of East Asians with low mental health report seeking informal support from non-kin. This was somewhat surprising given the cultural proscriptions on reporting mental health problems to those outside the family. It is not clear if this finding is a departure from historic forms of support-seeking. One study found that Chinese cultural norms include an expectation of assistance from within one's social network (Tata & Leong, 1994); however, this issue deserves additional study. Specifically, have East Asians with low mental health traditionally reached out in large numbers to non-kin for informal support? If not, does seeking non-kin support represent decreased reluctance to talk to those outside the family? Longitudinal research with the EASS data might be useful in addressing this question.

Furthermore, these findings suggested important implications for practitioners who treat East Asian patients residing outside of East Asia. Knowing the expectations for East Asians on assistance might be different from available sources of assistance in the residing countries, it is crucial for the practitioners to provide the

necessary information to inform the patients on the recovery process in the residing countries' context. One study has shown that it is crucial to assist Asian American patients to gauge cultural treatment differences in order to enhance the effectiveness of treatment (Park, Chesla, Rehm, & Chun 2011). On the other hand, practitioners treating East Asian patients need to have a good understanding on East Asian family dynamics and family involvement. When East Asian families are involved in treatment process, practitioners need to be sensitive to the hierarchical roles, family shame, and relationships between family members to improve treatment engagement and outcomes (Park, Chesla, Rehm, & Chun 2011).

Summary of Manuscript #2

The second study found that among East Asians reporting Internet addiction a large percentage of the sample reported having received kin or non-kin emotional support to address the problem. This finding aligns with previous literature showing that many people in East Asia with mental health problems are reluctant to seek assistance for such conditions outside the family. East Asians continue to be deeply influenced by Confucian philosophy, which encourages an understanding of disability and illness as one's fate (Lam et al., 2010). East Asian culture also encourages a collective identity, not the highly individualistic identity that is more common in Western societies. Stigmatized conditions such as mental illness not only reflect negatively on the person who is suffering, but it is also seen as a loss of face for the person's family (King & Bond, 1985; Lam et al., 2010). Individuals with mental illness such as addiction would prefer to preserve the family's dignity and only seek assistance within the family.

Despite reluctance to seek support outside the family, however, over 80% of East Asians with Internet addiction reported turning to non-kin for informal support. This finding is consistent with previous literature that shows East Asian preferences for various forms of informal support among over formal support (Na, Ryder, & Kirmayer, 2016; Picco et al., 2016). One possible explanation for the high prevalence rate of non-kin support for Internet addiction is that non-kin assistance is highly accessible. Another explanation for this finding is that it is more socially acceptable for individuals to seek help within one's social circle than assistance outside of a social network. Studies have shown that it is a cultural norm for East Asian to expect help within one's social network (Tata & Leong, 1994).

The focus of the fifth research question was determining the usage rate of alternative medicine as a support resource by East Asians reporting Internet addiction. These findings extend the literature on Internet addiction in providing preferred treatment options that are used among East Asian patients. The results indicated that about one-fifth of the respondents reported using acupressure in the past 12 months. A similar percentage (19%) reported using herbal medicine. About percentage 14% reported having used acupuncture. Although the use of alternative medicine is not high compared to kin and non-kin support, the prevalence of alternative medicine in this particular study is much higher than those reported in the Western mental health literature. Unützer et al. (2000) reported that about 14.5% of the U.S. respondents have reported use of alternative medicine in the past 12 months. Among the 14.5% who have reported use of alternative medicine, only 15% reported using alternative medicine to treat mental health issues (Unützer et al., 2000). The percentage used to

treat Internet addiction was expected to be much lower. One plausible explanation for higher than expected rates is the long history of alternative medicine usage in East Asian countries, and the trust of alternative medicine is much higher than in the West. East Asians have been practicing herbal medicine, acupuncture, and acupressure for more than 2,000 years (Hakverdioglu & Turk, 2006; Leslie, 1976). Another plausible explanation is that alternative medicine is highly accessible in East Asian countries. For instance, Chinese biomedicine doctors are granted the right to practice traditional medicine (Xu & Yang, 2009). Moreover, both China and South Korea have institutionalized alternative medicines into the healthcare system, which increased the accessibility of these practices (Shim, 2016). Both explanations, higher credibility and accessibility, served an important role in the findings.

The results of this study also revealed the number of East Asians reporting Internet addiction who received professional mental health service appears to be low. The results indicated that only about 16% of respondents reporting Internet addiction used professional mental health services as a support resource at least sometimes. Previous studies have shown similar findings on professional mental health service use among Asians (Hong Kong Government Information Centre, 2001; Park et al., 2012; Xiang, Yu, Sartorius, Ungvari, & Chiu, 2012). One plausible explanation of such finding is the scarcity of trained mental health professionals to treat Internet addiction. No prior study has been conducted on the availability of Internet addiction assistance in East Asia. However, with only 15,000 trained psychiatrists serving a population of 1.3 billion Chinese and the licensing system for professional counselors has yet to exist in South Korea, the professional assistance available to recently

emerged Internet addiction would be assumed to be scarce (Ma, 2011). Another plausible explanation is the stigma of mental illness. Addiction, like other types of mental illness, is considered shameful and bringing disharmony to the family (Au, 2017; Fabregas, 1991; Hanzawa et al., 2009; Jenni, 1999; Schomerus et al., 2012). Individuals with mental illness tend to choose assistance within their families and social circle instead of seeking for professional assistance (Hanzawa et al., 2009; Lam et al., 2010). Each of these explanations played an important role in the findings.

With regard to between-country differences, the results of this study showed that there are significant differences between countries in the preferred treatment options. First, concerning the use of kin support, there was a significant difference between China and South Korea. The Chinese respondents reported higher use of kin emotional support than South Korean respondents. This result may be explained by the fact that Chinese society is less receptive to assistance from outside the family compared to their South Korean counterparts. There was no statistically significant difference between countries in the use of non-kin as a support resource, suggesting that non-kin support functions similarly across the two countries. Second, the results revealed that a significantly higher percentage of South Korean participants reported using acupuncture compared to Chinese or Japanese participants. On the other hand, a significantly higher percentage of Chinese participants reported the use of herbal medicine compared to South Korean or Japanese participants. There are no statistically significant differences in the use of acupressure among the three countries.

The results indicated that there were statistically significant differences between countries in the use of professional mental health services as a support resource, with Chinese respondents reporting higher use of such services than South Koreans. A possible reason that Chinese participants reported higher reliance on professional mental health services is that there is more availability of professional assistance for Internet addiction in China. Another plausible explanation is that the accessibility to non-kin social support in South Korea is higher which reduces the need to seek for professional help. It is important to note that this is one of the few studies documenting preferred treatment options among East Asians with internet addiction problem.

Several limitations that should be considered when interpreting the results of this study. The first limitation is that, while the data shows there is an association between the usage rate of different types of assistance among individuals reported with Internet addiction, it is unclear if the respondents sought support for their mental health concerns. The second limitation of the study is that the data was gathered through self-report measures. Mental illness, including addiction, is still highly stigmatized in East Asia, so the self-report data might be subject to bias and underreporting. The third limitation of this study involves the lack of data from Taiwan on mental health question and Japan on social support resources, which limits the representation of East Asian populations. Finally, the scope of this study was limited to understanding the prevalence and country-level difference in support sources; thus, the study did not determine how such support sources can buffer the effect of Internet addiction.

The results of this study have important research and practical implications for treatment conceptualization and practice. The scientific study of Internet addiction is in its infancy. This study offers a culturally sensitive perspective on help-seeking preferences for Internet addiction in East Asia. First, these findings can be used for the development of a more holistic approach to treating Internet addiction. Second, the high rates of assistance from kin, non-kin, and alternative medicine warrant a closer look for a more holistic approach to East Asian patients with Internet addiction issues. Family members, friends, and alternative medicines should be part of the intervention process. Third, since kin and non-kin play such an important role in the recovery process, systematic psychoeducation should be developed to improve treatment outcome. Fourth, East Asian healthcare systems should educate the public about Internet addiction to reduce stigma. Once stigma is reduced, help-seeking behavior might be increased across the spectrum. Finally, these findings suggested important implications for practitioners who treat East Asian patients with an Internet addiction who reside in foreign countries. As noted in the section on Mental Health, East Asians residing outside of Asia may have expectations for assistance. As such, it is crucial for the practitioners to provide the necessary information to inform East Asian expat patients on the recovery process in the residing countries' context. Like with Mental Health treatment, when East Asian families are involved in the Internet treatment process, practitioners need to be sensitive to the hierarchical roles, family shame, and relationships between family members to improve treatment engagement and outcomes (Park, Chesla, Rehm, & Chun 2011).

Thematic Linkage of the Two Manuscripts

Both studies produced for this dissertation share some common themes. While the first manuscript addressed general mental health concerns in East Asia, the second focused specifically on one mental health concern - Internet addiction. The issue of Internet addiction has been of particular concern to many East Asian parents, educators, and government leaders for the past decade (Block, 2008; Chou & Hsiao, 2000; Du, Jiang, & Vance, 2010; Gong et al., 2010; Kim, 2008). Governments in East Asian countries have also contributed funding toward internet addiction research, though much of the research has been focused on prevalence studies rather than prevention, treatment, or policy initiatives.

The results of the two studies completed for this dissertation share some common themes. First, regarding mental health help-seeking, both studies support previous research in East Asian countries that found a strong preference for using kin support (Chan, 2011; Chan & Yu, 2004; Sethabouppha & Kane, 2005; Tsang, Tam, Chan, & Chang, 2003). In this study, kin support was reported to be the preferred support resource for both general mental health concerns and specific concerns about compulsive internet use. Following kin support, the second most-preferred support resource for both general mental health and Internet addiction was non-kin support. Non-kin support included close friends and co-participants in religious institutions. A minority of participants reported using professional services as supports for general mental health and internet use concerns, with slightly higher numbers of participants willing to use professional services for internet addiction compared to general mental health concerns. These findings suggest that, despite enormous social, economic, and technological changes experienced over the past several decades, many East Asians

remain deeply influenced by traditional ideas about mental illness as stigmatizing to the individual and his/her family (Hanzawa et al., 2009; Mellor, Carne, Shen, McCabe, & Wang, 2012). It is also possible that lower help-seeking from mental health professionals is related to the fact there are fewer trained providers in East Asian countries and limited incentives for people to enter mental health as a profession.

Compared to Western culture, a higher percentage of East Asians report they are comfortable relying on alternative medicine for their problems, which could include general mental health and Internet addiction. East Asian cultures tend to view mental, physical, and spiritual concerns as integrated, a view that Western medicine is now coming to appreciate and utilize (Nap et al., 2015). In addition, alternative medicine is generally more available in East Asian countries compared to Western countries. China, for example, allows physicians to integrate alternative and modern medical practices. The degree of acceptance of alternative medicine and the particular types of alternative medicine preferred (e.g., acupuncture, acupressure, herbal medicine) appears to depend on accessibility, cultural preferences, and nation-specific policies about integrating modern and alternative medicine.

Finally, in cross-country comparisons of countries participating in the East Asian Social Survey (China, Japan, South Korea, and Taiwan), results indicated that there were statistically significant differences between countries in the use of professional mental health services as a support resource, with Chinese respondents reporting higher use of such services than South Koreans. A possible reason that Chinese participants reported higher reliance on professional mental health services is

that there is more availability of professional assistance for Internet addiction in China. Another plausible explanation is that the accessibility to non-kin social support in South Korea is higher which reduces the need to seek for professional help. Otherwise, there were few differences between countries with regard to preferences for kin and non-kin mental health and Internet addiction support.

Contribution to the Knowledge Base

Although a number of studies have been conducted on mental health-related issue among East Asians, there are only a limited number of studies on the prevalence of preferred mental health support resources. Indeed, this dissertation is the first to identify preferred mental health treatments among this population. This is also one of the first studies that compares East Asian countries' help-seeking behavior from non-kin among individuals reporting internet addiction.

A priority for the counseling profession is placing culture at the center of healing (Fisher-Borne, Cain, & Martin, 2015; Foronda, Baptiste, Reinholdt, & Ousman, 2016). The fact that preferences for the use of kin support, non-kin support, and alternative medicine are higher among this sample of East Asians is important to know because it influences how practitioners should approach East Asian patients and devise therapeutic interventions. For professional counselors, the results of this study demonstrate the importance of integrating family members, non-kin social supports, and alternative medicines as part of the intervention process. Providing psychoeducation on mental illness and its treatment to patients' kin and non-kin support systems might improve treatment compliance and outcomes.

Practicing counselors should also emphasize their efforts and obligations to ensure patient confidentiality, as this might reassure families who are struggling with the cultural stigma attached to mental illness. At the same time, professional counselors must guard against stereotyping. The degree to which humans who have relocated outside their native cultures integrate new ideas about mental health, abandon old assumptions, and develop nuanced understanding is likely to vary considerably among individual from a particular region or cultural group. Counselors should include a cultural understanding of Internet addiction and other mental health concerns as part of an individualized assessment of client needs.

Future Research Directions

The results of this study suggest several avenues for future research. First, the results of this research warrant further investigation of more holistic approaches to conceptualizing mental health treatment. This study found that approximately two-thirds of East Asians with low mental health report seeking informal support from non-kin. This was somewhat surprising given the cultural proscriptions on reporting mental health problems to those outside the family. It is not clear if this finding is a departure from historical forms of support-seeking. One study found that Chinese cultural norms include an expectation of assistance from within one's social network (Tata & Leong, 1994); however, this issue deserves additional study. Specifically, have East Asians with low mental health traditionally reached out in large numbers to non-kin for informal support? If not, does seeking non-kin support represent decreased reluctance to talk to those outside the family? Longitudinal research with the EASS data might be useful in addressing this question

Internet addiction, in particular, is a relatively complex issue for psychological assessment and treatment; however, the issue is one of growing concern for professionals, parents, and policy makers in East Asia (China Internet-Based Information Center, 2014; Dong et al., 2011; Ni et al., 2009; Tao et al., 2010). As the World Wide Web becomes more integrated into people's routines, professional counselors around the world are likely to see increases in help-seeking from people whose Internet use is having a negative impact on their lives. More research is needed to provide information that can help counselors make valid judgments in their clinical assessments and treatment of Internet-related problems. This information must include sensitivity to the social, familial, and cultural assumptions and preferences of clients about help-seeking, self-control, and appropriate treatment.

Internet addiction is still a relatively controversial phenomenon, with competing conceptualizations of the issue that are still being debated by diagnosticians, mental health providers, and social commentators (Liu & Potenza, 2007; Spada, 2014; Shapira et al., 2000). While the scientific study of Internet addiction is in its infancy, this study offers a culturally sensitive perspective on help-seeking preferences for Internet addiction in East Asia. These preferences should be accounted for in future intervention research.

Bibliography

- American Psychiatric Association. (2013). *Diagnostic and statistical manual* (5th ed.). Washington, DC: Author. doi:10.1176/appi.books.9780890425596
- American Psychiatric Association. (2000). *Diagnostic and statistical manual* (4th ed.). Washington, DC: Author. doi:10.1176/appi.books.9780890420249
- Atkinson, D. R., Bui, U., & Mori, S. (2001). Multiculturally sensitive empirically supported treatments: An oxymoron? In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of Multicultural Counseling* (2nd ed., pp. 542–574). Thousand Oaks, CA: Sage.
- Au, A. (2017). Low mental health treatment participation and Confucianist familial norms among East Asian immigrants: A critical review. *International Journal of Mental Health, 46*(1), 1-17.
<http://dx.doi.org/10.1080/00207411.2016.1264036>
- Beard, K. W., & Wolf, E. M. (2001). Modification in the proposed diagnostic criteria for Internet addiction. *CyberPsychology & Behavior, 4*, 377–383.
<https://doi.org/10.1089/109493101300210286>
- Betancourt, J. R., Green, A. R., Carrillo, J. E., & Owusu Ananeh-Firempong, I. I. (2016). Defining cultural competence: a practical framework for addressing racial/ethnic disparities in health and health care. *Public Health Reports, 118*(4), 293-302. doi: 10.1093/phr/118.4.293
- Block, J. J. (2007). Pathological computer use in the USA. In *2007 International Symposium on the Counseling and Treatment of Youth Internet Addiction. Seoul, Korea, National Youth Commission* (Vol. 433).

- Bonetti, L., Campbell, M. A., & Gilmore, L. (2010). The relationship of loneliness and social anxiety with children's and adolescents' online communication. *Cyberpsychology Behavior and Social Networking*, *13*(3), 279-285.
doi:10.1089/cyber.2009.0215
- Brownson, R. C., Colditz, G. A., & Proctor, E. K. (2012). *Dissemination and implementation research in health*. New York: Oxford University Press.
doi:10.1093/acprof:oso/9780199751877.001.0001/acprof-9780199751877
- Busiol, D. (2016). Help-seeking behaviour and attitudes towards counselling: A qualitative study among Hong Kong Chinese university students. *British Journal of Guidance & Counselling*, *44*(4), 382-401.
- Byun, S., Ruffini, C., Mills, J. E., Douglas, A. C., Niang, M., Stepchenkova, S., ... Blanton, M. (2009). Internet addiction: Metasynthesis of 1996–2006 quantitative research. *Cyberpsychology, Behavior, and Social Networking*, *12*, 203–207. doi:10.1089/cpb.2008.0102
- Cabinet Office. (2008). *Annual report on government measures for persons with disabilities 2008*. Retrieved from <http://www8.cao.go.jp/shougai/english/annualreport/2008/pdf/p1-11.pdf>
- Canan, F., Ataoglu, A., Ozcetin, A., & Icmeli, C. (2012). The association between Internet addiction and dissociation among Turkish college students. *Comprehensive Psychiatry* *53*, 422–426.
doi:10.1016/j.comppsy.2011.08.006
- Caplan, S. E. (2002) Problematic Internet use and psychosocial well-being: Development of a theory-based cognitive-behavioral measurement instrument.

Computers & Human Behavior, 17, 553–575. doi:10.1016/S0747-5632(02)00004-3

Carroll, B. J. (2015). Challenging psychiatric discrimination in insurance. *Psychiatric Annals*, 45(7), 372-376. doi:10.3928/00485713-20150626-08

Chan, S. W. (2011). Global perspective of burden of family caregivers for persons with schizophrenia. *Archives of Psychiatric Nursing*, 25(5), 339–349. doi:10.1016/j.apnu.2011.03.008

Chan, S., & Yu, I. W. (2004). Quality of life of clients with schizophrenia. *Journal of Advanced Nursing*, 45(1), 72–83. doi:10.1046/j.1365-2648.2003.02863

Chen, P. W. (1999). Towards professionalism: The development of counseling in Taiwan. *Asian Journal of Counseling*, 6(2), 21–46.

Cheung, M., Leung, P., & Cheung, A. (2011). Depressive symptoms and help-seeking behaviors among Korean Americans. *International Journal of Social Welfare*, 20(4), 421-429.

Chin, W. Y., Chan, K. T. Y., Lam, C. L. K., Lam, T. P., & Wan, E. Y. F. (2015). Help-seeking intentions and subsequent 12-month mental health service use in Chinese primary care patients with depressive symptoms. *BMJ Open*, 5(1), 1-10. doi:10.1136/bmjopen-2014-006730

China Internet-Based Information Center. (2014). *Netizen net-lifestyle research*.

Retrieved from

<https://web.archive.org/web/20140328094954/http://www.nanjingmarketinggroup.com:80/23rd-report-internet-development-in-China/user-lifestyle-research>

- China Youth Internet Association. (2009). *Net addiction among Chinese youth*. Retrieved from <http://www.zqwx.youth.cn/web/zuizhong.jsp?id=853>
- Cho, C. B. (2001). *A study on a relation between the Internet addiction of adolescents and family & school background*. Graduate School of Kyunghee University. Unpublished thesis.
- Cho, M. J., Kim, J. K., Jeon, H. J., Suh, T., Chung, I. W., Hong, J. P., ... Lee, C. K. (2007). Lifetime and 12-month prevalence of DSM-IV psychiatric disorders among Korean adults. *The Journal of Nervous and Mental Disease, 195*(3), 203–210. doi:10.1097/01.nmd.0000243826.40732.45
- Chou, C., Condron, L., & Belland, J. C. (2005). A review of the research on Internet addiction. *Educational Psychology Review, 17*, 363–388. doi:10.1007/s10648-005-8138-1
- Chou, C., & Hsiao, M. C. (2000). Internet addiction, usage, gratification, and pleasure experience: the Taiwan college students' case. *Computers & Education, 35*, 65–80. [https://doi.org/10.1016/S0360-1315\(00\)00019-1](https://doi.org/10.1016/S0360-1315(00)00019-1)
- Comas-Díaz, L. (2014). Multicultural psychotherapy. In F. T. L. Leong, L. Comas-Díaz, G. C. Nagayama Hall, V. C. McLoyd, & J. E. Trimble (Eds.), *APA handbooks in psychology. APA handbook of multicultural psychology, Vol. 2. Applications and training* (pp. 419-441). Washington, DC, US: American Psychological Association. doi:10.1037/14187-024
- Comas-Díaz, L. (2012). Psychotherapy as a healing practice, scientific endeavor, and social justice action. *Psychotherapy, 49*(4), 473-474. doi:10.1037/a0027820

- Cook, A. L., Lei, A., & Chiang, D. (2010). Counseling in China: Implications for counselor education preparation and distance learning instruction. *Journal for International Counseling Education, 2*, 60–73. Retrieved from <https://pdfs.semanticscholar.org/a9f8/ff1dff10cfef389a5ff9fc73aef5d0d37ec7.pdf>
- Davis, R. A. (2001). Cognitive-behavioral model of pathological Internet use. *Computers & Human Behavior, 17*, 187–195. doi: 10.1016/S0747-5632(00)00041-8
- Dell’Osso, B., Altamura, A. C., Allen, A., Marazziti, D., & Hollander, E. (2006). Epidemiologic and clinical updates on impulse control disorders: A critical review. *European Archives of Psychiatry and Clinical Neuroscience, 256*, 464–475. <https://doi:10.1007/s00406-006-0668-0>
- Dong, G., Lu, Q., Zhou, H., & Zhao, X. (2011). Precursor or sequela: Pathological disorders in people with Internet addiction disorder. *PloS One, 6*(2), e14703. <https://doi.org/10.1371/journal.pone.0014703>
- Du, Y. S., Jiang, W., & Vance, A. (2010). Longer term effect of randomized, controlled group cognitive behavioural therapy for Internet addiction in adolescent students in Shanghai. *Australian & New Zealand Journal of Psychiatry, 44*, 129–134. <https://doi.org/10.3109/00048670903282725>
- Eguchi, S. (1991). Between folk concepts of illness and psychiatric diagnosis: Kitsune-tsuki (fox possession) in a mountain village of Western Japan. *Culture, Medicine and Psychiatry, 15*(4), 421–451. doi:10.1007/bf00051327

- Fabrega, H. (1991). Psychiatric stigma in non-Western societies. *Comprehensive Psychiatry*, 32, 534–551. [https://doi.org/10.1016/0010-440X\(91\)90033-9](https://doi.org/10.1016/0010-440X(91)90033-9)
- Fiedler, K. (2010). China's "Christianity Fever" revisited: Towards a community-oriented reading of Christian conversions in China. *Journal of Current Chinese Affairs*, 39(4), 71-109.
- Fisher-Borne, M., Cain, J. M., & Martin, S. L. (2015). From mastery to accountability: Cultural humility as an alternative to cultural competence. *Social Work Education*, 34(2), 165-181.
doi:10.1080/02615479.2014.977244
- Foronda, C., Baptiste, D. L., Reinholdt, M. M., & Ousman, K. (2016). Cultural humility: A concept analysis. *Journal of Transcultural Nursing*, 27, 210-217.
doi:10.1177/1043659615592677
- Foundation of the Japanese Certification Board for Clinical Psychologists. (n.d.). *Rinshyou shinrishi shikakunintei no joist* (The implementation of the certification in clinical psychology). Tokyo, Japan: Author.
- Frangos, C., Frangos, C., & Kiohos, A. (2010). Internet addiction among Greek university students: Demographic associations with the phenomenon, using the Greek version of Young's Internet addiction test. *International Journal of Economic Sciences and Applied Research*, 3, 49–74.
- Fu, T. S., Lee, C., Gunnell, D., Lee, W., & Cheng, A. T. (2013). Changing trends in the prevalence of common mental disorders in Taiwan: A 20-year repeated cross-sectional survey. *The Lancet*, 381(9862), 235–241. doi:10.1016/S0140-6736(12)61264-1

- Fung, K., & Lo, T. (2017). An integrative clinical approach to cultural competent psychotherapy. *Journal of Contemporary Psychotherapy*, 47(2), 65-73.
doi:10.1007/s10879-016-9341-8
- Gong, B. H., Wang, X. M., Ye, J. Q., & Liang, X. (2010). Efficacy of family therapy on Internet addiction among adolescents. *Chinese Journal of School Health*, 31, 300–301. https://doi.org/http://en.cnki.com.cn/Article_en/CJFDTotals-XIWS201003018.htm
- Hakverdioğlu, G., & Türk, G. (2006). Acupressure. *Journal of Hacettepe University School of Nursing*, 13(2), 43-47.
- Haller, H., Cramer, H., Lauche, R., & Dobos, G. (2015). Somatoform disorders and medically unexplained symptoms in primary care: a systematic review and meta-analysis of prevalence. *Deutsches Ärzteblatt International*, 112(16), 279-287. doi:10.3238/arztebl.2015.0279
- Hanzawa, S. (2012). Toward an effective family support system in Japan. *International Journal of Mental Health*, 41(2), 82-96.
- Haslam, N. (2005). Dimensions of folk psychiatry. *Review of General Psychology*, 9(1), 35-47.
- Hohenshil, T. H., Amundson, N. E., & Niles, S. G. (Eds.). (2015). *Counseling around the world: An international handbook*. Alexandria, VA: John Wiley & Sons.
- Hong, Young-Gi. 1999. Nominalism in Korean Protestantism. *Transformation*, 16(4), 135–141.
- Hossain, R. (2006). Atlas: Child and adolescent mental health resources, global concerns: Implications for the future: World Health Organisation (2005).

International Journal of Migration, Health and Social Care, 2(1), 67.

<https://doi.org/10.1108/17479894200600009>

Hou, Z., & Zhang, N. (2007). Counseling psychology in China. *Applied Psychology*, 56(1), 33–50. doi:10.1111/j.1464-0597.2007.00274.x

Hsu, S. H., Wen, M. H., & Wu, M. C. (2009). Exploring user experiences as predictors of MMORPG addiction. *Computer Education*, 53, 990–999. doi:10.1016/j.compedu.2009.05.016

Huang, T. P., Liu, P. H., Lien, A. S. Y., Yang, S. L., Chang, H. H., & Yen, H. R. (2014). A nationwide population-based study of traditional Chinese medicine usage in children in Taiwan. *Complementary Therapies in Medicine*, 22(3), 500-510. doi:10.1016/j.ctim.2014.04.002

Ishikawa, H., Kawakami, N., & Kessler, R. C. (2016). Lifetime and 12-month prevalence, severity and unmet need for treatment of common mental disorders in Japan: results from the final dataset of World Mental Health Japan Survey. *Epidemiology and Psychiatric Sciences*, 25(3), 217-229. doi:10.1017/S2045796015000566

Iwai, N., Li, L., Kim, S., & Chang, Y. (2010). *East Asian Social Survey (EASS)*, *Cross-National Survey Data Sets: Health and Society in East Asia, 2010*. Ann Arbor, MI: EASSDA [distributor], Inter-university Consortium for Political and Social Research [distributor], 2014-05-01.

<https://doi.org/10.3886/ICPSR34608.v2>

- Iwakabe, S. (2005). Mental health and counseling in Japan: A path toward societal transformation. *Journal of Mental Health Counseling, 27*, 129–141.
<https://doi.org/10.17744/mehc.27.2.ttm606ectpw5vfed>
- Iwakabe, S. (2008). Psychotherapy integration in Japan. *Journal of Psychotherapy Integration, 18*, 103-125. doi:10.1037/1053-0479.18.1.103
- Jamieson, S. (2004). Likert scales: How to (ab)use them. *Medical Education, 38*, 1217–1218. doi:10.1111/j.1365-2929.2004.02012.x
- Jenni, C. B. (1999). Psychologists in China: National transformation and humanistic psychology. *Journal of Humanistic Psychology, 39* (2), 26–47.
doi:10.1177/0022167899392003
- Jing, M. (2015, March 26). *Income rising for blue-collar females*. Retrieved from http://www.chinadaily.com.cn/china/2015-03/26/content_19912384.htm
- Jung, J. H., & Olson, D. V. A. (2014). Religion, stress, and suicide acceptability in South Korea. *Social Forces, 92*(3), 1039-1059. doi.org/10.1093/sf/sot129
- Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 617–627. doi:10.1001/archpsyc.62.6.617
- Kim, H. W. (2001). Analysis on the characteristics of Internet use and Internet addiction among adolescents. *Korean Journal of Youth Studies, 8*(2), 91–117.
- Kim, J. U. (2008). The effect of an R/T group counseling program on the Internet addiction level and self-esteem of Internet addiction university students.

International Journal of Reality Therapy, 27(2), 3-9.

<https://doi.org/10.1.1.520.6598>

King, Y.C., & Bond, M. H. (1985) The Confucian paradigm of man: A sociological view. In W. S. Tseng & Y. H. Wu (Eds.), *Chinese Culture and Mental Health*, (pp. 29-45). London, England: Academic Press.

Kleinman, A. (1980). *Patients and healers in the context of culture*. Berkeley, CA: University of California Press.

Ko, C. H., Liu, G. C., Hsiao, S., Yen, J. Y., Yang, M. J., Lin, W. C., ... & Chen, C. S. (2009). Brain activities associated with gaming urge of online gaming addiction. *Journal of Psychiatric Research*, 43, 739-747.

<https://doi.org/10.1016/j.jpsychires.2008.09.012>

Ko, C. H., Yen, J. Y., Chen, C. C., Chen, S. H., Wu, K., & Yen, C. F. (2006). Tridimensional personality of adolescents with internet addiction and substance use experience. *The Canadian Journal of Psychiatry*, 51, 887–894.

<https://doi.org/10.1177/070674370605101404>

Ko, C. H., Yen, J. Y., Chen, C. S., Chen, C. C., & Yen, C. F. (2008). Psychiatric comorbidity of internet addiction in college students: An interview study. *CNS spectrums*, 13, 147–153. <https://doi.org/10.1017/S1092852900016308>

Ko, C. H., Yen, J. Y., Yen, C. F., Chen, C. S., Weng, C. C., & Chen, C. C. (2008). The association between Internet addiction and problematic alcohol use in adolescents: The problem behavior model. *CyberPsychology & Behavior*, 11,

571–576. <https://doi.org/10.1089/cpb.2007.0199>

- Ko, C. H., Yen, J. Y., Yen, C. F., Lin, H. C., & Yang, M. J. (2007). Factors predictive for incidence and remission of internet addiction in young adolescents: A prospective study. *CyberPsychology & Behavior, 10*, 545–551.
<https://doi.org/10.1089/cpb.2007.9992>
- Kohn-Wood, L., & Hooper, L. (2014). Cultural competency, culturally tailored care, and the primary care setting: Possible solutions to reduce racial/ethnic disparities in mental health care. *Journal of Mental Health Counseling, 36*(2), 173-188. doi:10.17744/mehc.36.2.d73h217l81tg6uv3
- Koo, C., Wati, Y., Lee, C. C., & Oh, H. Y. (2011). Internet-addicted kids and South Korean government efforts: Boot-camp case. *Cyberpsychology, Behavior, and Social Networking, 14*, 391–394. <https://doi.org/10.1089/cyber.2009.0331>
- Kuss, D. J., Griffiths, M. D., & Pontes, H. M. (2017). Chaos and confusion in DSM-5 Diagnosis of Internet Gaming Disorder: Issues, concerns, and recommendations for clarity in the field. *Journal of Behavioral Addictions, 6*(2), 103-109. doi:10.1556/2006.5.2016.062
- Kuss, D. J., & Lopez-Fernandez, O. (2016). Internet addiction and problematic Internet use: A systematic review of clinical research. *World Journal of Psychiatry, 6*(1), 143-176. doi:10.5498/wjp.v6.i1.143
- Lam, C. S., Angell, B., Tsang, H. W. H., Shi, K., Corrigan, P. W., Jin, S., ... Larson, J. E. (2010). Chinese lay theory and mental illness stigma: Implications for research and practices. *Journal of Rehabilitation, 76*, 35–40.

- Lam, L. T., Peng, Z., Mai, J., & Jing, J. (2009). Factors Associated with Internet Addiction among Adolescents. *CyberPsychology & Behavior, 12*(5), 551-555.
doi:10.1089/cpb.2009.0036
- LaRose, R., & Eastin, M. S. (2004). A social cognitive theory of Internet uses and gratifications: Toward a new model of media attendance. *Journal of Broadcasting & Electronic Media, 48*, 358–377.
doi:10.1207/s15506878jobem4803_2
- Lee, S. M., Oh, I., & Suh, S. (2007). Comparison study of Korean and American school counseling for developing a Korean school counseling model. *Korean Journal of Counseling and Psychotherapy, 19*, 539–567.
- Lee, S. M., Suh, S., Yang, E., & Jang, Y. J. (2012). History, current status, and future prospects of counseling in South Korea. *Journal of Counseling & Development, 90*(4), 494-499. doi:10.1002/j.1556-6676.2012.00061.x
- Lee, T. S. (2009). *Born again: Evangelicalism in Korea*. Honolulu, HI: University of Hawaii Press.
- Lenhard, W., & Lenhard, A. (2016). *Calculation of effect sizes*. Dettelbach, Germany: Psychometrica. Retrieved from
https://www.psychometrica.de/effect_size.html
- Li, W., O'Brien, J. E., Snyder, S. M., & Howard, M. O. (2015). Characteristics of Internet addiction/pathological Internet use in US university students: a qualitative-method investigation. *PLOS One, 10*(2), e0117372.
doi:10.1207/s15506878jobem4803_2

- Lim, S., Lim, B., Michael, R., Cai, R., & Schock, C. K. (2010). The trajectory of counseling in China: Past present, and future trends. *Journal of Counseling & Development, 88*, 4–8. doi:10.1002/j.1556-6678.2010.tb00141.x
- Lin, J. C. H. (2000). A comparative study on title preference, work settings, and direct services time of mental health professionals. *Bulletin of Educational Psychology, 34*(1), 83–102. doi:10.1002/j.1556-6676.2013.00101.x
- Liu, T., & Potenza, M. N. (2007). Problematic Internet use: Clinical implications. *CNS Spectrum, 12*, 453–466. doi:10.1017/S1092852900015339
- Ma, S. (2011). China struggles to rebuild mental health programs. *Canadian Medical Association Journal, 183*(2), E89-E90.
- Majumdar A. (2013). *Japan plans “fasting camps” for Web-addicted children*. Tech 2. Retrieved from <http://tech2.in.com/news/general/japan-plans-fasting-camps-for-webaddicted-children/91228>
- Mak, K., Lai, C., Watanabe, H., Kim, D., Bahar, N., Ramos, M., ... Cheng, C. (2014). Epidemiology of Internet behaviors and addiction among adolescents in six Asian countries. *Cyberpsychology, Behavior, and Social Networking, 17*(11), 720–728. doi:10.1089/cyber.2014.0139
- Marsella, A. J., & White, G. (2012). *Cultural conceptions of mental health and therapy* (Vol. 4). Berlin: Springer Science & Business Media. doi:10.1007/978-94-010-9220-3
- Mellor, D., Carne, L., Shen, Y., McCabe, M., & Wang, L. (2012). Stigma toward mental illness: A cross-cultural comparison of Taiwanese, Chinese

immigrants to Australia and Anglo-Australians. *Journal of Cross-Cultural Psychology*, 44(3), 352–364. doi:10.1177/0022022112451052

Ministry of Education. (2011). 國民小學與國民中學班級編制及教職員員額編制準則 (Guidelines for classroom sizes and employee numbers in public elementary and middle schools). Retrieved from <http://edu.law.moe.gov.tw/LawContentDetails.aspx?id=FL008932&KeyWorldHL=&StyleType=1>

Miniwatts Marketing Group. (2014). *Internet world stats: Usage and population statistics*. Retrieved from <http://www.Internetworldstats.com/stats.htm>

Mok, J. Y., Choi, S. W., Kim, D. J., Choi, J. S., Lee, J., Ahn, H., ... Song, W. Y. (2014). Latent class analysis on Internet and smartphone addiction in college students. *Neuropsychiatric Disease and Treatment*, 10, 817-828. doi:10.2147/NDT.S59293

Na, S., Ryder, A., & Kirmayer, L. (2016). Toward a culturally responsive model of mental health literacy: Facilitating help-seeking among East Asian immigrants to North America. *American Journal of Community Psychology*, 58(1-2), 211-225.

Nam, Y. O. (2002). A study on the psychosocial variables of youths' addiction to Internet and cyber and their problematic behavior. *Korean Journal of Social Welfare*, 50, 173–207.

Nap, A., van Loon, A., Peen, J., van Schaik, D. J., Beekman, A. T., & Dekker, J. J. (2015). The influence of acculturation on mental health and specialized

- mental healthcare for non-western migrants. *International Journal of Social Psychiatry*, 61(6), 530-538. doi:10.1177/0020764014561307
- National Police Agency. (2009). *Suicide statistics 2008*. Tokyo, Japan: Author.
- Niemz, K., Griffiths, M., & Banyard, P. (2005). Prevalence of pathological Internet use among university students and correlations with self-esteem, the general health questionnaire (GHQ), and disinhibition. *Cyberpsychology, Behavior, and Social Networking*, 8, 562–570.
- Nooney, J., & Woodrum, E. (2002). Religious coping and church-based social support as predictors of mental health outcomes: Testing a conceptual model. *Journal for the Scientific Study of Religion*, 41(2), 359-368.
doi:10.1111/1468-5906.00122
- Ots, T. (1990). The angry liver, the anxious heart, and the melancholy spleen. *Culture, Medicine and Psychiatry*, 14(1), 21–58.
- Park, M., Chesla, C. A., Rehm, R. S., & Chun, K. M. (2011). Working with culture: Culturally appropriate mental health care for Asian Americans. *Journal of Advanced Nursing*, 67(11), 2373-2382. doi:10.1111/j.1365-2648.2011.0567
- Park, S., Kim, J., & Cho, C. (2008). Prevalence of Internet addiction and correlations with family factors among South Korean adolescents. *Adolescence*, 43(172), 895–909.
- Parker, G., Gladstone, G., & Chee, K. T. (2001). Depression in the planet's largest ethnic group: The Chinese. *American Journal of Psychiatry*, 158(6), 857–864.

- Pedersen, P. B., Lonner, W. J., Draguns, J. G., Trimble, J. E., & Scharron-del Rio, M. R. (Eds.). (2016). *Counseling across cultures* (7th ed.) Thousand Oaks, CA: Sage Publications. doi:10.4135/9781483398921
- Picco, L., Abdin, E., Chong, S., Pang, S., Vaingankar, J., Sagayadevan, V., ... Subramaniam, M. (2016). Beliefs about help seeking for mental disorders: Findings from a mental health literacy study in Singapore. *Psychiatric Services, 67*(11), 1246-1253.
- Qianfan, Z., & Yingping, Z. (2011). Religious freedom and its legal restrictions in China. *Brigham Young University Law Review, 2011*(3), 783-818.
- Richards, P., & Bergin, A. E. (2014). *Handbook of psychotherapy and religious diversity* (2nd ed.) Washington, DC: American Psychological Association.
- Romano, M., Osborne, L. A., Truzoli, R., & Reed, P. (2013). Differential Psychological Impact of Internet Exposure on Internet Addicts. *PLOS One, 8*(2), e5516. doi:10.1371/journal.pone.0055162
- Saint Arnault, D. M., Gang, M., & Woo, S. (2018). Factors influencing on mental health help-seeking behavior among Korean women: A path analysis. *Archives of Psychiatric Nursing, 32*(1), 120-126.
- Salyers, M.P., Bosworth, H. B., Swanson, J. W., Lamb-Pagone J., & Osher, F. C. (2000). Reliability and validity of the SF-12 Health Survey among people with severe mental illness. *Medical Care, 38*(11), 1141-1150. doi:10.1097/00005650-200011000-00008
- Scherer, K. (1997). College life on-line: Healthy and unhealthy Internet use. *Journal of College Student Development, 38*, 655-665.

- Schneider, A. (2017). The iPhone as an Object of Knowledge. In S. Monteiro (Ed.), *The Screen Media Reader: Culture, Theory, Practice* (pp. 325-351). London: Bloomsbury.
- Schomerus, G., Auer, C., Rhode, D., Luppá, 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.
- Schwadel, P., & Falci, C. D. (2012). Interactive effects of church attendance and religious tradition on depressive symptoms and positive affect. *Society and Mental Health, 2*(1), 21-34. doi:10.1177/2156869312442885
- Sethabouppha, H., & Kane, C. (2005). Caring for the seriously mentally ill in Thailand: Buddhist family caregiving. *Archives of Psychiatric Nursing, 19*(2), 44–57. doi:10.1016/j.apnu.2005.02.004
- Shapira, N. A., Goldsmith, T. D., Keck, P. E., Khosla, U. M., & McElroy, S. L. (2000). Psychiatric features of individuals with problematic internet use. *Journal of Affective Disorders, 57*(1), 267–272. [https://doi.org/10.1016/S0165-0327\(99\)00107-X](https://doi.org/10.1016/S0165-0327(99)00107-X)
- Shim, J. (2016). The relationship between the use of complementary and alternative medicine and the use of biomedical services: Evidence from East Asian medical systems *Asia-Pacific Journal of Public Health, 28*(1), 51–60. doi: 10.1177/1010539515613411
- Stein, D. J. (1997). Internet addiction, Internet psychotherapy. *The American Journal of Psychiatry, 154*(6), 890. <https://doi.org/10.1176/ajp.154.6.890>

- Su, W., Fang, X., Miller, J. K., & Wang, Y. (2011). Internet-based intervention for the treatment of online addiction for college students in China: A pilot study of the Healthy Online Self-Helping Center. *Cyberpsychology, Behavior, and Social Networking, 14*(9), 497-503. <https://doi.org/10.1089/cyber.2010.0167>
- Sung, J., Lee, J., Noh, H. M., Park, Y. S., & Ahn, E. J. (2013). Associations between the risk of internet addiction and problem behaviors among Korean adolescents. *Korean Journal of Family Medicine, 34*, 115–122. <https://doi.org/10.4082/kjfm.2013.34.2.115>
- Tao, R., Huang, X., Wang, J. Zhang, H., Zhang, Y., & Li, M. (2010). Proposed diagnostic criteria for Internet addiction. *Addiction, 105*, 556–564. [doi:10.1111/j.1360-0443.2009.02828.x](https://doi.org/10.1111/j.1360-0443.2009.02828.x)
- Tata, S. P., & Leong, F. T. L. (1994). Individualism-collectivism, social network orientation, and acculturation as predictors of attitudes toward seeking professional psychological help among Chinese Americans. *Journal of Counseling Psychology, 41*, 280–287.
- Thirthalli, J., Zhou, L., Kumar, K., Gao, J., Vaid, H., Liu, H., ... Nichter, M. (2016). Traditional, complementary, and alternative medicine approaches to mental health care and psychological wellbeing in India and China. *The Lancet Psychiatry, 3*(7), 660–672. [doi:10.1016/s2215-0366\(16\)30025-6](https://doi.org/10.1016/s2215-0366(16)30025-6)
- Tsai, J.-F., & Cho, W. C. (2011). The secular trend of suicide rate and the socio-economic, media, and climatic factors in Taiwan, 1976-2009: A population-based study. *Journal of Affective Disorders, 129*, 270–274. [doi:10.1016/j.jad.2010.08.008](https://doi.org/10.1016/j.jad.2010.08.008)

- Tsang, H. W., Tam, P. K., Chan, F., & Chang, W. M. (2003). Sources of burdens on families of individuals with mental illness. *International Journal of Rehabilitation Research*, 26(2), 123-130.
doi:10.1097/01.mrr.0000070761.13531.a1
- Tseng, W. S., Lin, T. Y., & Yeh, E. K. (1995). Chinese societies and mental health. In T. Y. Lin., W. S. Tseng, & E. K. Yeh (Eds.) *Chinese societies and mental health* (pp. 3-18). Hong Kong: Oxford University Press.
- Unützer, J., Klap, R., Sturm, R., Young, A.S., Marmon, T., Shatkin, J., & Wells, K. B. (2000). Mental disorders and the use of alternative medicine: Results from a national survey. *American Journal of Psychiatry*, 157(11), 1851-1857.
- U.S. Pew Research Center, Pew Internet & American Life Project (2012) *College students and technology*. Retrieved from
<http://www.pewInternet.org/Reports/2011/College-students-andtechnology.aspx>
- Vigo, Thornicroft, & Atun. (2016). Estimating the true global burden of mental illness. *The Lancet Psychiatry*, 3(2), 171-178. doi:10.1016/s2215-0366(15)00505-2
- Wampold, B. E., & Imel, Z. E. (2015). *The great psychotherapy debate: The evidence for what makes psychotherapy work*. London: Routledge. doi: 10.4324/9780203582015
- Ware, J. E., Jr., Keller, S. D., & Kosinski, M. (1995). *SF-12: How to score the SF-12 physical and mental health summary scales* (2nd ed.). Boston, MA: The Health Institute, New England Medical Center.

- Ware, J. E., Jr., Kosinski, M., & Keller, S. D. (1996). A 12-item short-form health survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care, 34*, 220–233. <http://dx.doi.org/10.1097/00005650-199603000-00003>.
- Weinstein, A., & Lejoyeux, M. (2010). Internet addiction or excessive Internet use. *American Journal of Drug and Alcohol Abuse, 36*, 277–283. doi:10.3109/00952990.2010.491880
- Whaley, A. L., & Davis, K. E. (2007). Cultural competence and evidence-based practice in mental health services: A complementary perspective. *American Psychologist, 62*(6), 563-574. doi:10.1037/0003-066X.62.6.563
- White, R. G., Jain, S., Orr, D. M., & Read, U. M. (Eds.). (2017). *The Palgrave handbook of sociocultural perspectives on global mental health*. London: Palgrave Macmillan. doi:10.1057/978-1-137-39510-8
- Woo, J., Park, E., Lee, M., Ahn, M., Kwon, S., & Koo, K. (2014). Changes in attitudes toward and patterns in traditional Korean medicine among the general population in South Korea: A comparison between 2008 and 2011. *BMC Complementary and Alternative Medicine, 14*(1), 436-442.
- Xiang, Y., Yu, X., Sartorius, N., Ungvari, G., & Chiu, H. (2012). Mental health in China: Challenges and progress. *The Lancet, 380*(9855), 1715-1716.
- Xu, J., & Yang, Y. (2009). Traditional Chinese medicine in the Chinese health care system. *Health Policy, 90*(2-3), 133-139. doi: 10.1016/j.healthpol.2008.09.003

- Yang, C. Y., Sato, T., Yamawaki, N., & Miyata, M. (2013). Prevalence and risk factors of problematic Internet use: A cross-national comparison of Japanese and Chinese university students. *Transcultural Psychiatry, 50*(2), 263–279.
- Yang, J. J., Li, D. B., He, L., He, L., & Zhao S. (2008). The study of mental training of Internet addiction disorder in university students. *China Journal of Health Psychology, 16*, 269–271.
- Yen, J. Y., Ko, C. H., Yen, C. F., Chen, C. S., & Chen, C. C. (2009). The association between harmful alcohol use and Internet addiction among college students: comparison of personality. *Psychiatry and Clinical Neurosciences, 63*, 218–224. <https://doi.org/10.1111/j.1440-1819.2009.01943.x>
- Yen, J. Y., Ko, C. H., Yen, C. F., Wu, H. Y., & Yang, M. J. (2007). The comorbid psychiatric symptoms of Internet addiction: attention deficit and hyperactivity disorder (ADHD), depression, social phobia, and hostility. *Journal of Adolescent Health, 41*, 93–98.
<https://doi.org/10.1016/j.jadohealth.2007.02.002>
- Yen, J. Y., Yen, C. F., Chen, C.-C., Chen, S. H., & Ko, C. H. (2007). *CyberPsychology & Behavior, 10*(3), 323–329. doi:10.1089/cpb.2006.9948
- Yen, J. Y., Yen, C. F., Chen, C. S., Tang, T. C., & Ko, C. H. (2009). The association between adult ADHD symptoms and internet addiction among college students: The gender difference. *Cyberpsychology & Behavior, 12*, 187–191.
<https://doi.org/10.1089/cpb.2008.0113>

- Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *Cyberpsychology, Behavior, and Social Networking, 1*, 237–244.
doi:10.1089/cpb.1998.1.237
- Young, K. S. (2004). Internet addiction: A new clinical phenomenon and its consequences. *American Behavioral Science, 48*, 402–415. doi: 10.1177/0002764204270278
- Yu, L., & Shek, D. T. L. (2013). Internet addiction in Hong Kong adolescents: A three-year longitudinal study. *Journal of Pediatric and Adolescent Gynecology, 26*(3), S10–S17. doi:10.1016/j.jpag.2013.03.010
- Zhang L. J. (2009). The applications of group mental therapy and sports exercise prescriptions in the intervention of internet addiction disorder. *Psychological Science, 32*, 738–741.
- Zhang, Y., Lao, L., Chen, H., & Ceballos, R. (2012). Acupuncture use among American adults: What acupuncture practitioners can learn from National Health Interview Survey 2007. *Evidence-Based Complementary and Alternative Medicine, 710-750*. doi.org/10.1155/2012/710750
- Zhao, J., & Shi, X. (2011). Investigation and analysis of the present situation of acupuncturist in China. *Chinese Medical Herald, 8*(18), 152–153.
- Zhu, T., Jin, R. J., Zhong, X. M., Chen, J., & Li, H. (2008). Effects of electroacupuncture combined with psychologic interference on anxiety state and serum NE content in the patient of internet addiction disorder. *Chinese Acupuncture & Moxibustion, 28*(8), 561–564.

Zhu, T., Li, H., Jin, R., Zheng, Z., Luo, Y., Ye, H., & Zhu, H. (2012). Effects of electroacupuncture combined psycho-intervention on cognitive function and event-related potentials P300 and mismatch negativity in patients with internet addiction. *Chinese Journal of Integrative Medicine*, 18(2), 146–151.
doi:10.1007/s11655-012-0990-5

Appendices

Appendix A

IRB Determination of Non-Human Subjects



Human Research Protection Program
Institutional Review Board
 Office of Research Integrity
 B308 Kerr Administration Building, Corvallis, Oregon 97331-2140
 (541) 737-8008
IRB@oregonstate.edu | <http://research.oregonstate.edu/irb>

DETERMINATION

Date of Notification	12/06/2016		
Study ID	7825		
Study Title	East Asians' Sources of Psychological Support		
Person Submitting Form	Stephen Wong		
Principal Investigator	Cass Dykeman		
Study Team Members	Cass Dykeman		
Funding Source	None	Proposal #	N/A
PI on Grant or Contract	N/A	Cayuse #	N/A

DETERMINATION: RESEARCH, BUT NO HUMAN SUBJECTS

It has been determined that your project, as submitted, does meet the definition of research but **does not** involve human subjects under the regulations set forth by the Department of Health and Human Services 45 CFR 46.

Additional review is not required for this study.

Please do not include HRPP contact information on any of your study materials.

Note that amendments to this project may impact this determination.

The federal definitions and guidance used to make this determination may be found at the following links: [Human Subject](#)