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# Help-seeking intention among college students: Cross-cultural study between East Asian international students and domestic students in the Unites States

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**PURDUE UNIVERSITY  
GRADUATE SCHOOL  
Thesis/Dissertation Acceptance**

This is to certify that the thesis/dissertation prepared

By Ji Yun Kang

Entitled

HELP-SEEKING INTENTION AMONG COLLEGE STUDENTS: CROSS-CULTURAL STUDY BETWEEN EAST ASIAN INTERNATIONAL STUDENTS AND DOMESTIC STUDENTS IN THE UNITED STATES

For the degree of Doctor of Philosophy

Is approved by the final examining committee:

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Susan L. Prieto-Welch

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6/22/2016

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HELP-SEEKING INTENTION AMONG COLLEGE STUDENTS:  
CROSS-CULTURAL STUDY BETWEEN EAST ASIAN INTERNATIONAL  
STUDENTS AND DOMESTIC STUDENTS IN THE UNITES STATES

A Dissertation

Submitted to the Faculty

Of

Purdue University

By

Ji Yun Kang

In Partial Fulfillment of the  
Requirements for the Degree  
Of  
Doctor of Philosophy

August 2016

Purdue University

West Lafayette, Indiana

## ACNOWLEDGEMENTS

Seven years were long enough. I remember when I first started this journey. I thought I could graduate within four years with my previous clinical experience and knowledge I brought from South Korea. I did not realize that the previous knowledge and experience, in fact, significantly interfered with my acculturation process. I went through lots of challenges and frustration; however, I was able to make it with prayers and enormous support from my family and friends. Looking back, I can say everything happens for a reason. At least, the seven years made me who I am now. I would not regret what I chose to experience.

I would like first to thank my advisor and dissertation chair, Dr. Ayşe Çiftçi, for her support since I joined her research team in 2011. I would also like to thank my dissertation committee members, Drs. Eric Deemer, Susan Prieto-Welch, and Blake Allan for their thoughtful and encouraging comments and feedback on my dissertation.

When I look back on my time in the Purdue Counseling Psychology program, I am so thankful that I had Dr. M. Carole Pistole. From the first year until the last year when I applied for pre-doctoral internship, I used to take her classes every semester, received her supervision for my first counseling practicum in the United States, and even got editorial feedback for my internship application. I regret I could not make her

retirement party when I was in South Korea doing research. However, I would like to say that Dr. Pistole has been one of the most influential people in my academic journey.

I would like to thank my supervisors and my clients who helped me grow as a clinician. In particular, during my internship at the University of Memphis Counseling Center, I got endless support from everyone at the site, and I believe I have become a more confident and competent clinician. Especially, I would like to send my love to my intern friends, Dr. Susi Ferradas and Dr. Linh Luu. This year has been one of the best years of my life because of these two amazing friends.

I appreciate everyone I met during this journey; from people who gave me a life lesson to friends for a lifetime. Especially, I would like to thank my peers and colleagues at the Purdue Counseling Psychology program, friends in South Korea, friends I met in Siloam, and pastor Youn at the ACTS Korean Church of Memphis.

Special thanks go to my family and JJ for their enormous love and support for me. I am so thankful to God that I am a part of this understanding and supportive family. And JJ, I believe I would not have been able to make it without you. Whenever I was in the darkness, you always hold me tight and are there for me. I am so blessed to have you in my life. Last but not least, I believe everything has been done by God's grace. It has been a meaningful journey in my life. Thanks Lord for allowing me to open the next chapter of my life!

## TABLE OF CONTENTS

	Page
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
ABSTRACT .....	ix
CHAPTER 1 INTRODUCTION .....	1
Statement of Purpose .....	6
Importance of the Study .....	7
Relevance to Counseling Psychology .....	8
CHAPTER 2 LITERATURE REVIEW .....	12
Theory of Reasoned Action/Planned Behavior .....	13
Behavioral Belief--Help-Seeking Attitudes .....	15
Normative Belief-Subjective Norm .....	16
Control Belief-Perceived Behavioral Control .....	17
Help-Seeking Research in Counseling Psychology .....	22
Ludwikowski, Vogel, and Armstrong's stigma model .....	24
Help-Seeking across Cultures .....	28
Self-Construal Theory .....	30
Summary, Hypotheses, and Research Questions .....	33
CHAPTER 3 METHODS .....	41
Participants .....	41
Procedure .....	44
Measurement .....	46
Demographic Information .....	46
Anticipated Benefits .....	47

	Page
Attitudes toward Seeking Help.....	47
Public Stigma .....	48
Personal Stigma.....	49
Self-Stigma.....	49
Perceived Behavioral Control .....	50
Intentions to Seek Help .....	51
Data Analysis .....	52
CHAPTER 4 RESULTS .....	55
Preliminary Analysis.....	55
Primary Analysis.....	58
Parceling.....	59
Latent Mean Analysis.....	61
Multigroup analysis.....	65
Analysis of the Hypotheses.....	74
CHAPTER 5 DISCUSSION.....	77
Primary Analyses Findings .....	77
Limitations .....	86
Implications for Research and Practice.....	90
Conclusion .....	95
REFERENCES .....	96
APPENDICES	
Appendix A: IRB .....	115
Appendix B: Recruitment email .....	116
Appendix C: Follow-up email .....	117
Appendix D: Facebook Post .....	119
Appendix E: Web-survey Consent Form .....	120
Appendix F: Intentions of Seeking Counseling Inventory .....	122
Appendix G: Perceived Behavioral Control .....	123
Appendix H: Self-Stigma of Seeking Help.....	124



	Page
Appendix I: Perceptions of Stigmatization by Others for Seeking Help .....	125
Appendix J: Stigma Scale for Receiving Psychological Help .....	126
Appendix K: Attitudes toward Seeking Professional Psychological Help scale .....	127
Appendix L: Disclosure Expectations Scale.....	128
Appendix M: Demographic Information .....	129
VITA .....	132

## LIST OF TABLES

Table	Page
Table 1: Demographic Characteristics of Survey Sample .....	42
Table 2: Preliminary Analysis Descriptive Statistics .....	57
Table 3: Correlation among Variables.....	57
Table 4: Goodness-of-Fit Indices for Configural Invariance Test .....	62
Table 5: Goodness-of-Fit Indices for Metric Invariance Test.....	63
Table 6: Goodness-of-Fit Indices for Scalar Invariance Test.....	64
Table 7: East Asian International Students' Latent means and Effect sizes.....	65
Table 8: Goodness-of-Fit Indices for Configural Invariance Tests.....	66
Table 9: Standardized Factor Loadings.....	67
Table 10: Goodness-of-Fit Indices for Metric Invariance Tests in multigroup analysis....	70
Table 11: Goodness-of-Fit Indices for Structural Invariance Test .....	71
Table 12: Regression Coefficients on Hypothesized Paths.....	74

## LIST OF FIGURES

Figure	Page
Figure 1. Theory of Planned Behavior explaining help-seeking intention .....	15
Figure 2. Ludwikowski, Vogel, and Armstrong (2009)'s stigma model .....	28
Figure 3. Modified TRA/PB for Help-Seeking (Hypothesized model) .....	39
Figure 4. Alternative model .....	39
Figure 5. Hypothesized significant paths among East Asian international students.....	40
Figure 6. Hypothesized significant paths among U.S. domestic students .....	40
Figure 7. Hypothesized structural equation model .....	60
Figure 8. Model with equality constraints specified for all factor loadings. ....	69
Figure 9. Model I: Final model.....	72
Figure 10. Parameter estimates of final model of partial structural invariance.....	73

## ABSTRACT

Kang, Jiyun. Ph.D., Purdue University, August 2016, Help-seeking Intention among College Students: Cross-cultural Study between East Asian International Students and Domestic Students in the United States. Major Professor: Ayşe Çiftçi.

The purpose of this study is to understand East Asian international student's underutilization of counseling services (versus U.S. domestic students) by applying Theory of Reasoned Action/Planned Behavior (TRA/PB) and Ludwikowski, Vogel, and Armstrong (2009)'s stigma model to help-seeking. Participants were 146 East Asian international students and 210 domestic college students at Purdue University. AMOS 23.0 for Structural Equation Modeling was used to conduct a Latent Mean Analysis (LMA) and a multigroup analysis. The multigroup analysis results found that help-seeking intention was explained by the same hypothesized model in both groups, which was based on the TRA/PB (Ajzen, 2012) and the stigma model (Ludwikowski et al., 2009). However, no significant group differences were found for most of the hypothesized paths, except a path from personal stigma to self-stigma. The LMA results revealed that East Asian international students reported significantly higher help-seeking intention and lower self-stigma and perceived behavior control. Historically, Asian students are known to have more stigma and negative attitudes (Sue & Sue, 2008), so this

finding draws our attention to the further cross-cultural studies about the reason for this discrepancy. Implications for theory, research, and practice are addressed.

## CHAPTER 1 INTRODUCTION

Counseling is defined as a “professional relationship that empowers diverse individuals, families and groups to accomplish mental health, wellness, education, and career goals” (Kaplan, Tarvydas, & Gladding, 2014, p. 368). In other words, counseling service is a type of professional help people can seek when they want to dissolve their psychological distress. Even though beneficial effects of counseling have been consistently reported (Gibbard & Hanley, 2008; Wampold, 2000), counseling has been recognized as a last resort for most people (Hinson & Swanson, 1993; Vogel & Wei, 2005). Considering the effectiveness of counseling, it is difficult to understand why most people do not seek counseling when they deal with psychological issues.

College student help-seeking is a particularly important concept given students’ increasing need for counseling. According to Gallagher (2013), 95% of U.S. college counseling center directors report that the recent trend toward a greater number of students with severe psychological problems (e.g., crises requiring immediate response, psychiatric medication issues, etc.) continues to be a major issue on their campuses. This report shows that there is a noticeable increase in terms of severe psychological problems for which college students need to be assisted by mental health professionals. However, only 11.4% of college students on 203 surveyed campuses in the United States sought individual or group counseling in 2013 (Gallagher, 2013). This low proportion of help-

seeking is a critical issue because of increased college student distress and need for counseling (Bishop, Bauer, & Becker, 1998; Gallagher, 2013; Hunt & Eisenberg, 2010; Lee, Olson, Locke, Michelson, & Odes, 2009; Lucas & Berkel, 2005; Zivin, Eisenberg, Gollust, & Golberstein, 2009). Generally, college students benefit from counseling related to normative developmental issues (e.g., relationships, career preparation, stress and anxiety, family issues; Benton, Robertson, Tseng, Newton, & Benton, 2003) or to more severe problems, such as anxiety, depression, suicidal ideation, and personality disorders (Benton et al., 2003; Gallagher, 2013; Hunt & Eisenberg, 2010). In terms of the severity of college students' issues, Gallagher (2013) reported that 44% of clients have severe psychological problems. Also, among 69 students who were reported to commit suicide in 2012, only 14 students were reportedly center clients. In other words, 80% of students who were reported to commit suicide had not sought counseling center assistance (Gallagher, 2013). Counseling services may help college students' adjustment in college and dealing with their personal difficulties, such as depression, anxiety, and suicidal ideation. For example, recent research has found that the retention rate of the first-year and transferred students who received counseling services was higher than that of those who never received counseling services (Lee et al., 2009). These findings indicate that counseling services help college student adjustment and prevent student attrition.

### **International Students**

An international student is any student who is not a U.S. citizen or a permanent resident of the United States and has come to the United States to study from other countries. Among the college student population, international students make up one of

the growing groups and play an increasingly important role in the higher education systems of the United States (Altbach, Reisberg, & Rumbley, 2009). For example, Purdue University, one of the larger public Midwestern universities, reported that their international enrollments (including undergraduate, graduate, and professional school) had increased from 5,990 in 2009 to 8,702 in 2013 (Purdue University, 2013).

The adjustment of international students is likely to include additional acculturative stress (i.e., distinctive type of stress associated with individuals' cross-cultural encounters, which can manifest in physical, social, and psychological problems; Olivas & Li, 2006; Yeh & Inose, 2003) as well as developmental and general adjustment to college stress (Bradley, Parr, Lang, Bingi, & Gould, 1995). In this regard, international students' adjustment difficulties may be more prominent than those of domestic students. Several studies have indicated that international students tend to experience more psychological problems and personal concerns than American students do (Leong & Chou, 1996; Mori, 2000; Yeh & Inose, 2003). Such problems and concerns include language barriers, interpersonal problems with American students, academic and financial difficulties, loss of social support, and homesickness (Leong & Chou, 1996; Mori, 2000; Olivas & Li, 2006). Even though international students tend to experience more psychological problems, several studies reported that international students tend to seek campus-based counseling services less than American students (Eisenberg, Golberstein, & Gollust, 2007; Olivas & Li, 2006). For example, the Association for University and College Counseling Center Directors (AUCCCD) annual survey in 2013 showed that on average 4.8% of international students use counseling services. The percentage shows their underutilization of counseling services because the entire



international student body was reported as average 6.94% in the same survey (Reetz, Barr, & Krylowicz, 2013).

Among the international student populations, Asian international students are the largest population (i.e., 525,849 out of 819,644 international students in 2013; Institute of International Education, 2013). In particular, students from East Asian countries (i.e., China, South Korea, Chinese Taipei, Japan, Macau, and Mongolia; Institute of International Education, 2013) represent 43.4 % of the international student population in the United States (Institute of International Education, 2013). East Asian cultures have their own unique languages, tradition, and customs (Chiu & Ring, 1998; Kim, Atkinson, & Umemoto, 2001). For example, each country's official language is Chinese (Mandarin), Korean, Japanese, Chinese (Cantonese), and Mongolian, respectively. All of them use written symbols different than the alphabet. Also, East Asian cultures share collectivist values rather than individualistic values in the United States (Kim, Atkinson, & Yang, 1999). This cultural difference may generate more acculturation distress beyond the language barrier for East Asian international students, so they may need more assistance and support for their adjustment on campus from campus-based counseling services. However, researchers have consistently reported the Asian international students' underutilization of counseling services (Frey & Roysircar, 2006; Yakunina & Weigold, 2011; Yoon & Jepsen, 2008; Zhang & Dixon, 2003). In AUCCCD annual survey in 2013, Asian/Asian American students tend to utilize counseling services less than White, Black/African American, and Multiracial students, when considering their utilization of the services compared to the size of the student body (e.g., 5.80% of Asian/Asian American clients and 6.37% of Asian/Asian American student body; Reetz, Barr, &

Krylowicz, 2013). However, the statistics includes both domestic and international students, so the percentage of Asian international students utilizing counseling services could be much lower than 5.80%. In sum, although there may be greater needs for counseling services for Asian international students in terms of their additional struggles with adjustments, they utilize counseling services less than other student bodies. Asian groups are very diverse, and East Asian international students are the largest subgroup among Asian international students. Therefore, understanding reasons of East Asian international students' underutilization of counseling services may help counseling professionals to reach out this population more effectively.

Help-seeking attitudes refer to attitudes toward seeking professional help for psychological disturbances (Fischer & Turner, 1970). Research regarding help-seeking attitudes has focused on individual factors, such as level of distress and the desire to reduce this distress (Vogel & Wei, 2005); demographic characteristics such as sex (Kushner & Sher, 1989; Vogel, Wester, & Larson, 2007); and social factors such as counseling-related stigma (Ludwikowski, Vogel, & Armstrong, 2009; Vogel, Wade, & Hackler, 2007) and anticipated benefits (Vogel, Wade, & Hackler, 2008; Vogel & Wester, 2003). Most researchers, however, have examined the relationship between psychological factors and help-seeking attitude, and intention with college students in general, rather than specifically with international college student population. Although some studies have focused on international students' help-seeking (e.g., Bradley et al., 1995; Frey & Roysircar, 2006; Kilinc & Granello, 2003; Mori, 2000), they have examined a single relationship between factors (e.g., stigma, acculturation) and help-seeking attitude or intention to show how the international students differ from the domestic college students

in the United States. A broader framework, therefore, would allow for a better understanding of international students' utilization of counseling service, would provide more relevant outreach services for international students, and would show the predictors of their help-seeking behaviors.

### **Statement of Purpose**

The purpose of this study is to understand the role of anticipated benefits, help-seeking attitudes, stigma (public, personal, and self), and perceived behavioral control on help-seeking intention among international students and U.S. domestic students based on the concepts of Theory of Reasoned Actions/Planned Behavior (TRA/PB). To do so, I modified TRA/PB model and test and compare the model with international student and domestic student groups. More specifically, I revised the TRA/PB model with empirically examined variables in counseling psychology literature (i.e., public, personal, self-stigma, anticipated benefits). Help-seeking stigmas have been one of most studied variables that may relate to minority population's underutilization of counseling (e.g., Yakunina & Weigold, 2011). Therefore, integrating literature from counseling psychology with TRA/PB from social psychology may expand our knowledge on help-seeking of the international students. Thus, no study has examined international students' help-seeking intention within the TRA/PB framework. I hypothesize that international students are likely to report a negative help-seeking attitude and less anticipated benefits, higher stigma (public, personal, and self), and less perceived behavior control that leads to less help-seeking intention than in the case of domestic college students. Based on previous studies (Bayer & Peay, 1997; Liao, Rounds, & Klein, 2005), help-seeking intention is hypothesized to be mostly related to help-seeking attitudes for both groups, but domestic

students' intention to seek help may be less associated with stigmas and perceived behavioral control than the intention of international students.

### **Importance of the Study**

Of high importance becomes an examination of the proposed relationships among psychological factors (e.g., anticipated benefits, help-seeking attitudes, stigmas), perceived behavioral control (i.e., accessibility to resources), and help-seeking intention among international and domestic college students. The importance is worthy for several reasons. First, with the increasing numbers of East Asian international college students in the U.S., their psychological well-being and issues related to their transition and adjustment to the U.S. will continue to be an important concern for counseling psychology professionals. There is evidence of East Asian international students' underutilization of mental health services (Frey & Roysircar, 2006; Yakunina & Weigold, 2011; Yoon & Jepsen, 2008; Zhang & Dixon, 2003). For example, Yoon and Jepsen (2008) reported that more U.S. students (45.2%) than Asian international students (6.9%) appeared to have received counseling. This result shows that the Asian international students in this study appeared less experienced with counseling than U.S. students. Examining factors that influence East Asian international students' intention to seek counseling will help mental health professionals to promote the help-seeking of international students by offering preventative outreach activities regarding help-seeking. Also, this study may offer the mental health professionals insights into cultural differences among their international student clients. For example, mental health practitioners may be able to address international students' potential self-stigma issues regarding their seeking help outside of their family.

Second, this study can contribute to the help-seeking literature by using the TRA/PB model. In an extensive review of help-seeking literature (e.g., keyword search of “Help seeking” and “Theory of Reasoned Action and Planned Behavior” in Google scholar resulting 21 articles), Kim and Park (2009) and Wu and Mak (2012) were shown as the only studies that examine college students’ help-seeking intention using this theory. However, Kim and Park (2009) only used the subjective norm from TRA/PB for their model. Even though Wu and Mak (2012) used three components of TRA/PB (i.e., attitudes, subjective norm, and behavioral control) in their model, their participants were students from mainland China who went to Hong Kong to pursue their education. I did not find any study incorporating the TRA/PB model as a framework to understand international students’ help-seeking intention in the United States. The TRA/PB model can be useful to understand international students’ help-seeking intention because of its consideration of perceived behavioral control (i.e., accessibility to the counseling services). Leong, Wagner, and Tata (1995) suggested one of the reasons for Asian Americans’ underutilization of mental health services to be the lack of knowledge about the availability of services. In this regard, TRA/PB may be a good conceptual framework to consider Asian international students’ perceived availability of mental health services with other significant variables, such as public, personal, and self-stigma, help-seeking attitudes, and anticipated benefits.

### **Relevance to Counseling Psychology**

Gelso and Fretz (2001) identified three roles within which counseling psychologists primarily act and five unifying themes of counseling psychology that can help differentiate counseling psychology from other helping professions. This study

complies with the three roles of counseling psychology, which are remedial, preventive, and educative-developmental roles. The five themes include working with clients with intact personalities, a focus on individual strengths, engaging in short-term counseling, its roots in vocational and career intervention, and emphasis on the person-environment interaction. This study particularly adheres to the first theme, intact personality. Intact personality means that individuals with intact personalities do not suffer from severe pathological disorders like those that are found in state and private psychiatric hospitals. The typical clients for counseling psychologists are those who have "problems in living," which can range from a wide variety of issues, as well as those who have more severe mental health problems. This study includes international students in the United States who may not suffer from severe mental health issues but still need help for their daily life challenges. By focusing on international students in the United States with a wide variety of issues, I address the intact personality theme of counseling psychology.

In regard to the roles of counseling psychology, most counseling psychologists focus on exploring clients' unresolved life issues, which represents the remedial role of counseling psychology. This study aims to understand the barriers of help-seeking for international students who may have potential life difficulties due to additional cultural adjustment.

Besides the remedial role, counseling psychologists are also devoted to the preventive and educative-developmental roles that include providing psycho-educational workshops or classes to help to circumvent individuals' potential future difficulties (Gelso & Fretz, 2001). This study is initiated with the preventive purpose that will inform intervention so as to help international students to receive relevant counseling service for

their life issues. By understanding the potential barriers for international students' help-seeking, counseling psychologists may reach out to the international student population and promote help-seeking before they develop more severe problems. The educative-developmental role of this study will include a potential outreach workshop to address the international students' stigma towards counseling and to increase their awareness of their own issues.

In addition to these roles, counseling psychology has an emerging theme of individual and cultural diversities meant to serve minority populations better (Gelso & Fretz, 2001). Gelso and Fretz (2001) stated that one important aspect of counseling psychology is its diversity. Throughout the history of counseling psychology, counseling psychologists have provided a wide range of services and have worked in diverse settings. Additionally, the profession has also reflected diversity in attending to cultural diversity in its interventions and research as well as in its activities in the broader society (Gelso & Fretz, 2001). The emphasis on diversity is also relevant to this study. The study is designed to gain an understanding of the international student population, which is culturally diverse from the majority of college students in the United States. The group comparison between international student and domestic student populations may help counseling psychologists to develop better outreach strategies that better serve underrepresented populations. Also, this study will expand the knowledge base specifically related to the cultural differences of international students.

Based on the scientist-practitioner model (Gelso & Fretz, 2001), I developed research ideas using my clinical work with international students in a college counseling center. Despite of the large body of Asian international students on my campus, Asian

international students rarely seek counseling, and they tend to come to the counseling center as a last resort for dealing with their problems. Based on the scientist-practitioner training model, I used theory to link research and practice (Gelso & Fretz, 2001). From this perspective, I adopted the Theory of Reasoned Action and Planned Behavior from social psychology to explain international students' unique barriers to seeking counseling. As mentioned earlier, integrating previous findings from help-seeking stigma research in counseling psychology to social psychology literature can expand our knowledge on help-seeking intention research in counseling psychology.



## CHAPTER 2 LITERATURE REVIEW

In this chapter, I will introduce the theory of reasoned action/planned behavior (TRA/PB; Ajzen, 1985; Fishbein & Ajzen, 1975) to describe the role of help-seeking attitudes and other psychological factors (e.g., stigmas, anticipated benefits) in relation to help-seeking intention. Then I will review the literature on help-seeking with psychological factors. I will present stigma as one of the influential factors affecting help-seeking attitudes and intention. In the discussion, I will present the Ludwikowski, Vogel, and Armstrong's (2009) model. Next, I will discuss cultural differences in help-seeking attitudes reflected by previous literature. I will also use the self-construal theory (Markus & Kitayama, 1991) to explain possible cultural difference in terms of TRA/PB. I will describe proposed relationships between help-seeking attitudes, anticipated benefits, public stigma, personal stigma, self-stigma, and perceived behavioral control, integrating TRA/PB and the Ludwikowski et al.'s model. Lastly, I will provide a research summary, research questions, and hypotheses.

Help-seeking attitudes refer to individuals' attitude towards seeking professional help for mental health, that is, their perception of the effectiveness and acceptability of seeking assistance from mental health professionals when they are in crisis or facing emotional and relational challenges (Fischer & Farina, 1995). The help-seeking attitude is

known as the best predictor of help-seeking intention, that is, the willingness to seek help (Vogel, Wester, Wei, & Boysen, 2005).

Social psychology theories about motivation may shed light on how factors including help-seeking attitudes influence help-seeking intention. In this section, I will present an overview of the TRA/PB. As will be discussed, the theory of planned behavior is an extension of the theory of reasoned action. In this study, I will use the term “Theory of Reasoned Action/Planned Behavior (TRA/PB)” instead of theory of planned behavior based on Romano and Netland’s suggestion about this term (see Romano & Netland, 2008 for more detail).

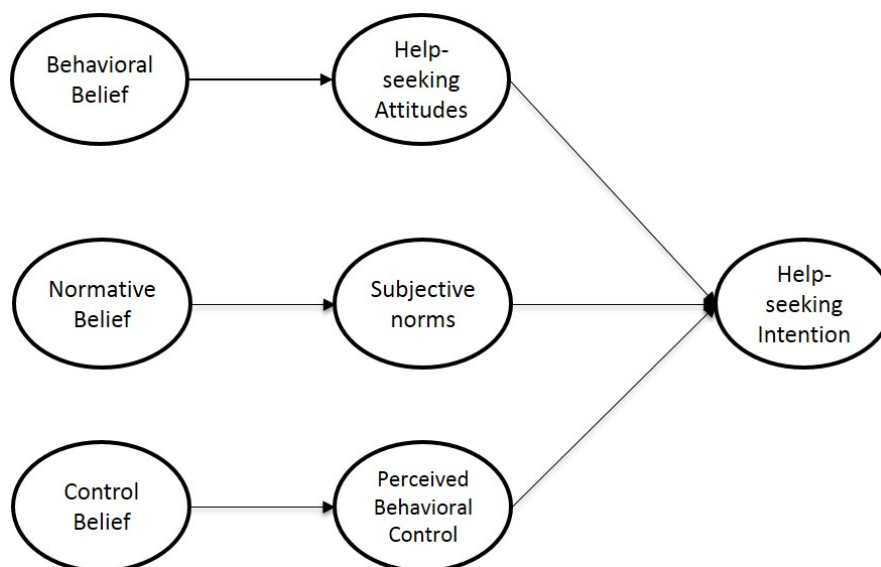
### **Theory of Reasoned Action/Planned Behavior**

The theory of reasoned action (TRA) was proposed by Fishbein and Ajzen in 1975. This theory is an extended theory of the Fishbein’s expectancy-value theory (EVT), which explains attitudes with a combination of beliefs and values, for a better understanding of one’s given behavior (Ajzen, 2012). According to TRA, intention is an indication of a person's readiness to perform a given behavior, and it is considered to be the immediate predictor of actual volitional behavior. TRA is originally formulated to explain the discrepancy between reported attitude (EVT) and actual behavior. In this theory, Fishbein and Ajzen (1975) explained that behavior intention is influenced by not only attitude, but also subjective norm. In other words, the intention to perform a particular behavior is a joint function of a favorable or unfavorable attitude toward the behavior and of subjective norm that encourages or discourages its performance.

Later, Ajzen (1985) extended the theory to consider behavioral control and named it the theory of planned behavior (TPB). Even though the original TRA was

proposed with the assumption of 100% voluntary behavior, Ajzen found that some behavior appeared not to be 100% voluntary and under control. This finding resulted in the addition of perceived behavioral control in the TRA. With this addition, the theory was called the Theory of Planned Behavior because behavior can be deliberative and planned. Therefore, TPB explained that intention is determined by three factors: individuals' attitude toward a given behavior, subjective norms, and individuals' perceived behavioral control. Therefore, in addition to measuring attitudes toward behavior, measuring people's subjective norms, defined as their beliefs about how people they care about think, should also be considered so as to predict behavioral intention (Ajzen, 1991). Finally, according to this model, perceived behavioral control influences intentions. Perceived behavioral control refers to people's perceptions of their ability to perform a given behavior (Ajzen, 2012). Therefore, the best prediction for a given behavior can be a result of combinations of these predictors; in general, the more favorable attitude and subjective norm, and the greater perceived control lead to the stronger intention to perform a given behavior.

Ajzen (2012) added other factors that may affect each predictor in his TPB model. According to Ajzen, attitude, subjective norm, and behavioral control follow from beliefs about the behavior's expected consequences, about normative expectations of important others, and about the presence of factors that control behavioral performance, respectively. In other words, behavior is not performed automatically but rather, it follows reasonably from one's expectation and the behavior-relevant information available to the individual (Ajzen, 2012). Figure 1 shows the relationship of factors that predict behavior intention.



*Figure 1.* Theory of Planned Behavior explaining help-seeking intention (Ajzen, 2012)

Previous research in counseling psychology has indicated that help-seeking attitudes are the most powerful factors that mental health professionals can use to predict help-seeking intention (Bayer & Peay, 1997; Codd & Cohen, 2003; Vogel et al., 2005). However, with this TRA/PB framework, help-seeking intention can be better understood with the consideration of joint functions of help-seeking attitudes and subjective norms regarding help-seeking behavior and perceived behavioral control. Each predictor in the TRA/PB model can be explained in terms of help-seeking in counseling as demonstrated below.

### **Behavioral Belief--Help-Seeking Attitudes**

Behavioral belief is the subjective probability that a given behavior will produce a given outcome (Ajzen, 2012). Also, attitude toward a behavior represents the degree to which performance of the behavior is positively or negatively valued (Ajzen, 2012). According to TRA/PB, attitude is derived from this behavioral belief, a factor which is also revealed in help-seeking literature in counseling psychology (see Vogel et al., 2005).

That is, a person who believes that performing a given behavior will mostly lead to positive outcomes will hold more favorable attitudes than a person who believes that performing the behavior will lead to mostly negative outcomes. In the help-seeking context, this theory proposed that the evaluation of the outcome of the help-seeking contributes to the help-seeking attitudes. For example, if individuals believe that they can obtain more psychological benefits from counseling when they seek help, their attitude towards counseling would be more positive.

### **Normative Belief-Subjective Norm**

Normative beliefs refer to the perceived behavioral expectations of the people about whom an individual cares the most (e.g., their spouse, close friends, etc.) Subjective norm is the perceived social pressure to engage or not to engage in behavior (Ajzen, 2012). According to TRA/PB, these normative beliefs can formulate one's subjective norm with the individual's motivation to comply with the important others. In the help-seeking context, normative belief can be viewed as perceived stigma from one's social group about the person's help-seeking behavior (i.e., personal stigma; see Vogel, Wade, & Aschman, 2009), and subjective norm is the perceived pressure to seek or not to seek help (i.e., public stigma; see Vogel & Wade, 2009). For example, according to TRA/PB, if individuals think their partners have negative connotation about seeking counseling for help, they may feel pressure not to seek counseling, even though they may have a positive attitude toward counseling, because they may want to please their partners with their behavior.

### **Control Belief-Perceived Behavioral Control**

Control beliefs represent the perceived presence of factors that may facilitate or impede the performance of a behavior. Perceived behavioral control refers to people's perceptions of their ability to perform a given behavior. In the help-seeking context, the best example of control belief might be the accessibility of counseling. In other words, even though people have a positive attitude towards counseling and positive subjective norms (e.g., perceived social pressure to seek counseling for their problem), they may not seek counseling if they do not know available services for their own difficulties. For example, Hyun, Quinn, Madon, and Lustig (2006) reported that their international graduate student participants exhibited lower knowledge of on-campus counseling services than did domestic graduate student participants in their study. In terms of utilization of counseling services, Hyun et al. also reported that Asian international students were significantly less likely to use counseling services than other ethnic group international students. Leong and Lau (2001) noted that lack of knowledge about existing services can be a major reason for low utilization of mental health services among Asian Americans. In many Asian countries, utilization of mental health services may not be as popular as it is in the U.S (Ito, Setoya, & Suzuki, 2012). Additionally, as Hyun et al. noted, cultural and language differences may be particular barriers to Asian international students.

TRA/PB has proved effective in providing successful predictions of health-related volitional behaviors, such as weight loss (Schifter & Ajzen, 1985), smoking cessation (Bledsoe, 2006), condom use (Baker, Morrison, Carter, & Verdon, 1996), or alcohol consumption (Codd & Cohen, 2003). According to Romano and Netland (2008),

although TRA/PB can be used as a comprehensive theoretical framework for understanding and enhancing help-seeking behaviors in counseling, TRA/PB has been rarely used or cited in the counseling psychology literature (e.g., Bayer & Peay, 1997; Christopher, Skillman, Kirkhart, & D'Souza, 2006; Codd & Cohen, 2003). One of the possible reasons why TRA/PB has not gained enough attention from counseling psychologists may be that counseling psychologists have been less grounded in prevention research, despite the emphasis on and needs for the prevention role of counseling psychology (see Romano & Netland, 2008). However, after TRA/PB was introduced in *The Counseling Psychologist*, one of major journals in counseling psychology, by Romano and Netland, more studies appeared to apply TRA/PB to help-seeking in counseling psychology (e.g., Hess & Tracey, 2013; Kim & Park, 2009).

Bayer and Peay (1997) tested the TRA model regarding help-seeking intention on participants from a community-based general practice in Australia. Their results showed that help-seeking attitudes and subjective norm were significantly related to help-seeking intention. However, attitude was a more important predictor of help-seeking intention than subjective norm. The participants had a positive attitude toward professional help-seeking and believed that the most important others would approve of their help-seeking.

Christopher et al. (2006) examined the role of persuasive information in increasing intention to seek professional psychological help in college students in Thailand, which is considered a collectivistic cultural nation, and the United States, an individualistic cultural nation. Using the TRA model, the authors hypothesized that American college students would report more help-seeking intention when they perceive behavioral persuasion, which targets the individual benefits of help-seeking, via enhanced

behavioral beliefs and help-seeking attitudes. Thai college students, Christopher et al. hypothesized, would report more help-seeking intention when they receive normative persuasion (i.e., community support for professional help-seeking) because it would enhance normative beliefs and subjective norm, as TRA proposed. Their results support their overall hypothesis that different types of information work better for certain cultures to enhance help-seeking intention. According to their report, American students who were exposed to behavioral persuasion messages reported significantly greater help-seeking intention, more positive help-seeking attitudes, and stronger behavioral beliefs regarding help-seeking in comparison to other three groups (i.e., Thai students who were exposed to behavioral persuasion, American students who were exposed to normative persuasion, and those with no persuasion exposure). By contrast, Thai college students who were exposed to normative persuasion messages reported greater help-seeking intention and normative belief than other Thai student groups (e.g., behavioral persuasion and no persuasion), but no significant differences were found in subjective norms among three groups in Thai students. This research showed that there is a link between persuasion using different information and culture, and this relationship may be moderated by self-construal (Christopher et al., 2006). However, the role of subjective norm in this study remained questionable, possibly due to the limitation regarding single-item assessment for this variable (see Christopher et al., 2006).

Codd and Cohen (2003) examined college students' help-seeking intentions for alcohol abuse using the TRA model. They found that attitudes and subjective norm regarding help-seeking for alcohol abuse significantly predicted the help-seeking



intention for alcohol abuse. However, they found no significant relationships between subjective norm and normative beliefs.

Hess and Tracey (2013) conducted path analysis with 889 college student survey data. They measured attitudes, subjective norm, and perceived behavioral control for seeking help (PBC-Therapy) and for solving the problem individually (PBC-Self) for three different problem types (i.e., anxiety, career choice concerns, alcohol/drug use) based on TPB. They designed the measurements for these variables using Fishbein and Ajzen (2010)'s guideline. Their results showed that the TPB model for anxiety or depression, career choice concerns, and alcohol or drug use were not statistically different from one another (Hess & Tracey, 2013). In other words, the importance of attitudes, subjective norm, PBC-Therapy, and PBC-Self appeared similarly across three different problem types. Hess and Tracey reported that attitudes had a moderate and positive correlation with help-seeking intention. Also, subjective norm and PBC-Self had a significantly negative correlation with help-seeking intention for the three problem types. In particular, subjective norm appeared to be the strongest variable in their study (Hess & Tracey, 2013). On the one hand, these results were consistent with previous research (Codd & Cohen, 2003) that shows help-seeking attitudes and subjective norm to be significantly related to the help-seeking intention. On the other hand, PBC-Therapy path coefficients were positive but small in magnitude in their study (Hess & Tracey, 2013). This study showed that TPB variables (i.e., attitudes, subjective norm, PBC-Self) are important in help-seeking researches regardless the types of problem.

Kim and Park (2009) examined a multiple mediation model of help-seeking intention with 110 Asian American college students. Based on TRA, the researchers

hypothesized that help-seeking attitudes and subjective norm would mediate between Asian cultural values and help-seeking intention. They found that help-seeking attitudes and subjective norm had a strong correlation with help-seeking intention, but subjective norm was the only mediator between Asian value and help-seeking intention. That is, there was no significant relationship between Asian value and help-seeking attitudes in their study (Kim & Park, 2009). Nonetheless, their study showed the important role of attitudes and subjective norms in help-seeking intention among Asian American college students.

These studies illustrated that the TRA/PB model can be used to predict help-seeking intention. In particular, help-seeking attitudes appear to have a stronger association to help-seeking intention than subjective norm does. However, as Christopher et al. (2006) indicated, subjective norm may play more of an important role in some countries (e.g., collectivistic countries) than in other countries (e.g., individualistic countries). Also, some results regarding subjective norm and normative beliefs were not consistent with the theory (see Christopher et al., 2006; Codd & Cohen, 2003). For example, Codd and Cohen (2003) reported they could not find a significant relationship between subjective norm and normative beliefs, which is hypothesized in TRA. Thus, these studies, except Hess and Tracey (2013), used TRA without considering PBC. Yet, it would be worthwhile to include PBC in predicting help-seeking intention. Even though Hess and Tracey examined PBC in a group of college students, loadings on PBC-Therapy can be different for international student population than for domestic students because of each of the group's perceived accessibility to therapy.

### **Help-Seeking Research in Counseling Psychology**

Regardless of the development of motivation theories such as TRA/PB in social psychology, help-seeking has been studied to identify those who may seek counseling more than others and the reasons why they seek it in counseling psychology (Vogel & Wester, 2003). Early help-seeking studies in counseling psychology focused on demographic variables related to help-seeking attitudes. These earlier studies found that women are more favorable toward seeking help than men (Fischer & Turner, 1970; Komiya, Good, & Sherrod, 2000; Vessey & Howard, 1993). Also, individuals in minority cultures, such as Asian and African American groups, are reluctant to seek help outside the family (Masuda, Anderson, Twohig, Feinstein, Chou, Wendell, & Stormo, 2009; Narikiyo & Kameoka, 1992). These demographic findings have also been consistently reported by recent studies (Kakhnovets, 2011; Loya, Reddy, & Hinshaw, 2010; Yakunina & Weigold, 2011). Based on these demographic findings, the focus of help-seeking studies has moved to psychological factors to explain why some groups of people (e.g., men, Asian) do not seek counseling. More recent studies investigating psychological factors that mediate the decision to seek help suggest that psychological factors, such as anticipated benefits and risks (Shaffer, Vogel, & Wei, 2006; Vogel, Wade, & Hackler, 2008; Vogel & Wester, 2003) and public stigma (Vogel, Wade, & Hackler, 2007) influence help-seeking attitudes or intention.

Anticipated benefits indicate the perceived value of the desired outcome of the individual for a given behavior, such as self-disclosure or help-seeking (Nam, Choi, Lee, Lee, Kim, & Lee, 2012). Anticipated risk is the perception of the negative consequences associated with a given behavior (Vogel & Wester, 2003). These definitions are similar to

those of behavioral belief in TRA/PB, which is one's belief about the outcomes of a given behavior (Bayer & Peay, 1997). Vogel and Wester (2003) showed that both anticipated benefits and anticipated risks significantly predicted help-seeking attitudes. In particular, anticipated benefits constituted the strongest factor among other examined factors including anticipated risks (Vogel & Wester, 2003). Later, Shaffer et al. (2006) examined the mediating effects of anticipated risks, benefits, and help-seeking attitudes toward counseling in the relationship between adult attachment and help-seeking intentions for psychological and interpersonal concerns among college students in the United States. According to Shaffer et al., anticipated benefits and risks influenced help-seeking attitudes, and the attitudes were positively related to the help-seeking intention for psychological and interpersonal concerns. Interestingly, whereas anticipated benefits had direct effects on help-seeking intention, anticipated risks did not in their study. However, Vogel et al. (2005) reported slightly different results from Vogel and Wester (2003) and Shaffer et al. (2006). More specifically, Vogel et al. (2005) examined the relationships among ten different psychological factors, including anticipated utility and risks, and help-seeking intention through help-seeking attitudes. They reported that the anticipated utility significantly influenced help-seeking attitudes, whereas the link between anticipated risks and help-seeking attitudes was not significant in their model. This result implies that anticipated risks may not be as strong a factor in predicting help-seeking attitude and intention as it was in previous studies when other psychological factors are considered.

In sum, anticipated benefits have been consistently reported as a strong factor that affects help-seeking attitudes. However, their influence on help-seeking intention is

not clear; there might be either only an indirect effect (Vogel & Wester, 2003; Vogel et al., 2005) or both an indirect and a direct influence (Shaffer et al., 2006). Thus, even though anticipated benefits were consistently reported as one of the strong factors in help-seeking attitudes, the importance of anticipated risks predicting help-seeking attitudes is still unclear. Therefore, in this study, only anticipated benefits will be substituted for behavioral beliefs in TRA/PB, given its similar definition and association with help-seeking attitudes to those of behavioral belief.

Consistent with the effort to examine the relationships among psychological factors on help-seeking, in a recent meta-analysis, Nam and colleagues (2012) examined the relationships between help-seeking attitudes and relevant psychological variables (i.e., anticipated benefits, anticipated risks, depression, distress, self-concealment, self-disclosure, social support, public-stigma, and self-stigma). They found that most variables except distress significantly correlated with help-seeking attitudes. Among the psychological variables that had positive correlations with help-seeking attitudes (e.g., anticipated benefits, self-disclosure, and social support), anticipated benefits had the strongest effect. Also, with negative relationship factors (e.g., stigma, anticipated risks, self-concealment, and depression), self-stigma showed the largest negative effect size.

### **Ludwikowski, Vogel, and Armstrong's stigma model**

In this section, I will demonstrate Ludwikowski, Vogel, and Armstrong's stigma model that is integrated to TRA/PB in this study. Ludwikowski et al. (2009) provided conceptual model about relationship among public, personal, and self-stigma, which in turn were branched from one definition—social stigma.

Stigma has been identified as one of the most significant barriers that can negatively affect help-seeking attitudes. In earlier research on stigma, researchers used the term social stigma that is defined as fear that others would judge a person negatively if she or he sought help for a problem (Deane & Chamberlain, 1994; Vogel, Wester, et al., 2007). Corrigan (2004), however, defined two different types of stigma, public stigma and self-stigma. According to Corrigan, public stigma is the perception held by a group or society that an individual who seeks psychological services is socially unacceptable and often leads to negative reactions toward the individual. Therefore, it is associated with stereotyping, prejudice, and discrimination of individuals who seek professional help for their issues (Corrigan, 2004). Most of the earlier research on social stigma examined Corrigan's definition of public stigma. Many studies have found that social stigma is negatively associated with help-seeking attitudes (Cooper, Corrigan, & Watson, 2003; Corrigan & Matthews, 2003; Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Deane & Todd, 1996; Komiya et al., 2000; Ludwikowski et al., 2009). For example, Komiya et al. (2000) found that among men, social stigma, lack of openness to emotions, and a lower psychological symptom severity uniquely and significantly contributed to the reluctance to seek psychological help. Similarly, Crisp et al. (2000) found that the public's negative perception of individuals with mental illness was also associated with not seeking help.

Corrigan (2004) also presented self-stigma as another type of stigma related to help-seeking attitudes. In his definition, self-stigma is an individual's perception that he or she is socially unacceptable (Corrigan, 2004). Earlier studies show that people with mental illness often internalize stigmatizing ideas that are endorsed widely within society and believe that they are less valued because of their psychiatric disorder (Link, 1987).

Corrigan (2004) argued that self-stigma is strongly related to shame, self-esteem, and self-efficacy. Thus, he pointed out, self-stigma is clearly influenced by public stigma. Later studies endorsed his argument by showing consistent results regarding the relationship between public and self-stigma. For example, Vogel, Wade, and Hackler (2007) examined the mediating effect of self-stigma and attitudes toward counseling in relationship between public stigma and willingness to seek help. They showed that self-stigma mediates the relationship between public stigma and help-seeking attitudes towards counseling, which eventually influences one's willingness to seek counseling. Also, Vogel, Bitman, Hammer, and Wade (2013) found, in their longitudinal study of a 3-month period, that public stigma leads to the development of self-stigma. As mentioned earlier, the meta-analysis on help-seeking studies (Nam et al., 2012) found that out of nine variables in 19 help-seeking studies, the largest effect size was for self-stigma. This finding indicates the important role of self-stigma in influencing whether people seek counseling or not.

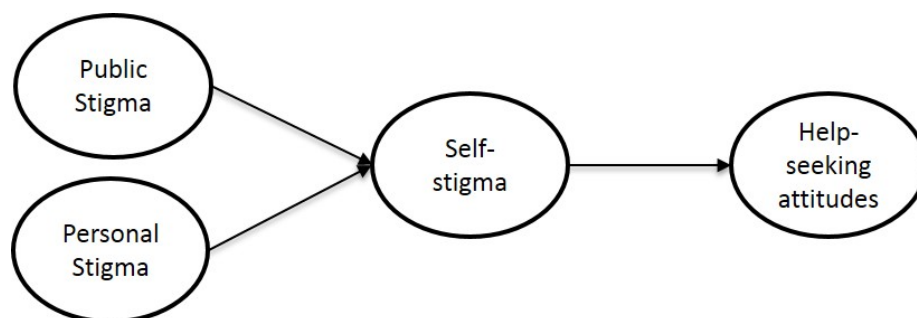
Recently, Vogel, Wade, and Ascherman (2009) added personal stigma to the current literature. In their view, personal stigma is the negative perception against seeking counseling that individuals develop from the personal reactions of those with whom they interact. Compared to public stigma, personal stigma is more related to individuals' fear of being stigmatized by others with whom they interact rather than by society in general. This definition is similar to that of normative belief in TRA/PB, which is one's beliefs about the approval or disapproval of salient referents, such as family and friends (Bayer & Peay, 1997). Conceptually, personal stigma should be considered in relation to help-seeking because the fear of stigma related to others in one's social network would be

strongest (Vogel et al., 2009). Earlier literature on social network also supports this argument (Corrigan, 2004; Vogel, Wade, Wester, Larson, & Hackler, 2007). For example, research shows that when family or friends had a positive view of counseling, people were more likely to have a positive attitude towards counseling in both community and clinical samples (Greenley, Mechanic, & Cleary, 1987). Vogel, Wade, Wester, et al. (2007) found that being prompted to seek help and knowing someone who had sought help were related to more positive attitudes toward help seeking and willingness to seek help. This literature on social networks reveals how strongly one's social network could affect one's decision to seek help. Vogel et al. (2009) developed a scale for personal stigma and examined its relationships with other stigmas (e.g., public stigma and self-stigma). These three types of stigmas were significantly correlated but different enough to differ from each other (Vogel et al., 2009).

Conceptually, public and personal stigmas have external sources, such as public and personal relationships with close people, but self-stigma has an internal source. In other words, self-stigma is the result of the internalization of public and personal stigma. Thus, to differentiate between two external stigmas, Ludwikowski and her colleagues (2009) defined public stigma as a societal-level stigma and the personal stigma as a personal-level stigma that may reflect the stigma in the individual's own network. Ludwikowski et al. found that public and personal stigmas are linked to self-stigma, which in turn, is directly linked to attitudes toward seeking career counseling. That is, high public stigma and high personal stigma are associated with high self-stigma, and high self-stigma is related to low help-seeking attitudes (see Figure 2). Their finding



supports the idea that public and personal stigma can lead to a negative internalization of the stigma (Ludwikowski et al., 2009; Vogel, Wade, & Hackler, 2007).



*Figure 2.* Ludwikowski, Vogel, and Armstrong (2009)'s stigma model

Even though the relationships among three stigmas were examined in Ludwikowski et al. (2009)'s study and conceptually they make sense, only a few studies have examined this relationship. Nevertheless, it is still critical to examine the relationships among the three stigmas and help-seeking attitudes to add clarity to the topic of stigma in help-seeking; more precisely, the way that each stigma shapes an individual's attitudes towards seeking counseling. For example, Ludwikowski and her colleagues specifically focused on career counseling rather than on mental health services. It would be limiting to generalize this result and apply it to attitude toward seeking mental health services. Also, as Ludwikowski et al. noted, the majority of their samples were European American, so results might be different for other ethnic groups. To combine TRA/PB and help-seeking research including Ludwikowski et al.'s stigma model, the hypothesized model is proposed (Figure 3).

### **Help-Seeking across Cultures**

Some minority groups in the United States, such as those of Asian heritage, are known to underutilize mental health services significantly compared to European

Americans (Narikiyo & Kameoka, 1992; Sue & Sue, 2008). Narikiyo and Kameoka (1992) showed that Japanese-American students were more likely than White American students to attribute mental illness to social causes, to resolve problems on their own, and to seek help from family members or friends, or both. They suggested that for their sample of Japanese Americans, possible barriers to using services would be both a preference for informal resources and the stigmatization of mental illness. In a more recent study, Chen and Mak (2008) examined the contributions of lay beliefs about causes of mental illness and prior help-seeking history to help-seeking intention in different cultural groups (i.e., European Americans, Chinese Americans, Hong Kong Chinese, and Mainland Chinese). They found that European Americans and Chinese Americans scored significantly higher in both past help-seeking experience and help-seeking intention than did Hong Kong Chinese. In other words, this study shows the cultural influence on help-seeking intention. Consistent with this finding, Masuda and his colleagues (2009) found that fewer African American and Asian American college students had sought professional psychological services, knew someone who had sought those services, and knew a close person who had been diagnosed with a psychological disorder, compared to the European American students. Also, their results showed that African American and Asian American participants reported less favorable help-seeking attitudes than European American participants. All of these results indicate that some minority cultural groups in the United States tend to report less favorable help-seeking attitudes and intention.

### **Self-Construal Theory**

Given previous findings on the importance of cultural difference in help-seeking, understanding culture appears to be essential in explaining the underutilization in minority cultural groups. According to Markus and Kitayama (2010), culture is an expansive set of symbolic concepts such as environment, contexts, cultural systems, meanings, norms, and values that give form and direction to one's behavior. However, culture is not a stable set of values that influence people inside the culture. Rather, culture is a product of human activity, so it can always change, and the self is the agency that incorporates and reflects these sociocultural patterns. It means that not all people may have similar values even though they belong to the same culture. However, the study about culture and its influence on the self remains important because culture is not separate from the individual (Markus & Kitayama, 2010). The emphasis in the study of culture and self is ultimately an emphasis on how psychological processes may be implicitly and explicitly shaped by sociocultural systems.

Markus and Kitayama (1991) proposed a theory of self-construal in the context of an East-West comparison (e.g., American culture and Asian culture). This theory has been broadly used in multicultural studies. Interdependent self-construal focuses on the individual as being connected to others. With this construal, people are likely to reference others and experience a heightened sensitivity to others' evaluations. In contrast, independent self-construal focuses on the individual as the source of thought, feeling, and action, separate from others. Actions rooted in a certain schema will have different meaning and consequences than actions rooted in another schema (Markus & Kitayama, 2010). In other words, independence and interdependence have significant psychological

consequences for motivation. Markus and Kitayama (2010) stated that every individual self carries elements of independence and interdependence to varying degrees. Consistent with this statement, recent priming approach assumes that everyone can think about the world in an individualistic or collectivistic frame but differ in what is likely to come to mind (Oyserman, Coon, & Kimmelmeier, 2002). As Lykes and Kimmelmeier (2014) noted, the patterns of interdependence and independence may vary widely across cultures as well as within cultures, depending on different contexts.

The independent-interdependent self-construal has been at the heart of the individualism-collectivism distinction (Lykes & Kimmelmeier, 2014). According to the theory of collectivism and individualism (Trandis & Gelfand, 2012), collectivist cultures are characterized by interdependent self-construal, whereas individualist cultures feature with independent self-construal.

In terms of TRA/PB, the theory of self-construal implies that the extent of utilizing each predictor in TRA/PB (e.g., help-seeking attitudes, subjective norm, and perceived behavioral control) may differ across cultures. Trafimow and Finlay (1996) found that a minority of people tend to be under normative control and that may contribute to the reliable effect of subjective norms on intentions. In their study conducted with college student participants, they noted that when people who were under normative control were excluded, subjective norms did not account for any more variance in intentions once attitudes had already been considered. Also, this tendency for people to be controlled by their attitudes or subjective norms correlated with the strength of the collective self. In sum, even though attitude is viewed as a better predictor for intention in TRA/PB, subjective norm is particularly important for people with a stronger collective

self (Trafimow & Finlay, 1996). This claim is consistent with Triandis and Gelfand (2012)'s explanation about collectivist and individualist cultures. Whereas in collectivist cultures, norms, obligations, and duties guide behavior, in individualist cultures, personal needs, individual rights, and the contracts that the individual has established with others are important determinants of behavior (Triandis & Gelfand, 2012).

Consistent with this statement regarding cultural differences, Christopher et al. (2006) also suggested that different information appeared to enhance help-seeking intention across cultures. For example, Christopher and colleagues exposed individualistic culture (e.g., United States) participants to persuasive information targeting behavioral beliefs (e.g., advantages and disadvantages) that influence their help-seeking attitudes. These participants from the individualistic culture reported significantly greater help-seeking intention, attitudes, and behavioral beliefs than any other participant groups in the study. By contrast, participants from a collectivistic culture such as Thai reported greater help-seeking intention when they were exposed to persuasive information targeting normative beliefs (e.g., perceived group norms regarding help-seeking) than another Thai participant group, who were exposed to the information targeting behavioral beliefs. Their results were consistent with previous research that showed that relational information is more effective in the collectivist cultures, and individuating information is more effective in individualistic cultures (Gelfand, Spurlock, Sniezek, & Shao, 2000; Han & Shavitt, 1994). In sum, Christopher et al. (2006) showed that the role of each predictor (e.g., behavioral beliefs and normative beliefs) may differ across cultures.

### **Summary, Hypotheses, and Research Questions**

Given the fact that the number of international students is continuously increasing in most of the colleges in the United States (e.g., 7.2% growth of international student enrollment in 2012 compared to those in 2011; Institute of International Education, 2013), this rise has brought greater attention to the psychological needs of international students. In fact, international students pose many new challenges for counselors working at college counseling centers. Studies have reported that international students tend to experience more psychological problems than American students (Yeh & Inose, 2003). Asian international students have especially been reported to underutilize mental health services compared to European American students (Shea & Yeh, 2008). This study focused on East Asian international students in particular because there are large between-group differences among Asian population (Sue & Sue, 2008). For example, the Asian population is composed of at least 40 distinct subgroups that differ in language, religion, and values (Sue & Sue, 2008). Chun and Akutsu (2003) argued that among Asian groups, there are significant sociocultural differences that may influence their acculturation, but these differences are frequently neglected. Later, Frey and Roysircar (2006) provided the empirical evidence that South Asian and East Asian international graduate students in the United States differ in terms of the relationship between acculturation and the frequency of utilization of help resources. For example, frequency of utilization of help resources among East Asian participants was stable across levels of acculturation, whereas South Asian participants tend to utilize help resources more if their level of acculturation is higher (Frey & Roysircar, 2006). Also, Frey and Roysircar reported that the mean frequency of utilization of help resources was

significantly higher for the South Asian group compared to the East Asian group. This finding implies the need to study subgroups among the Asian population to understand each group better. This study will focus on the East Asian international students because East Asian countries have the largest portion of international students in the United States (i.e., 46.4% in 2012; Institute of International Education, 2013), but they relatively underutilize counseling services (Frey & Roysircar, 2006). Therefore, the present study aims to use the TRA/PB framework so as to understand East Asian international students' underutilization of mental health services, compared to U.S. domestic students.

TRA/PB is a theory that explains one's decision for a given action (Ajzen, 1991). Its basic assumption is that people are rational, and a given action is directly influenced by the intention to act (Ajzen, 2012). According to TRA/PB, help-seeking intention is hypothesized to be determined by one's attitudes toward help-seeking, subjective norms regarding help-seeking behavior, and perceived behavioral control to seek professional help in one's situation. The help-seeking attitude is also influenced by behavioral beliefs, more precisely, by one's evaluation of the consequences of help-seeking. Conceptually, behavioral beliefs are similar to an anticipated benefit, which is the individual's perceived value of the outcome of the help-seeking behavior (Vogel & Wester, 2003). Consistent with the hypothesis of TRA/PB, the relationship between anticipated benefits and help-seeking attitudes was consistently reported in counseling psychology literatures (Nam et al., 2012; Vogel et al., 2005; Vogel & Wester, 2003). Therefore, anticipated benefits from counseling psychology literatures and behavioral beliefs from TRA/PB may be used interchangeably.

The definition of subjective norms in TRA/PB is one's beliefs about what others think that is appropriate behavior. Considering this definition, external stigmas towards help-seeking (e.g., public and personal help-seeking stigma) in counseling psychology literatures appear to be comparable to subjective norms in TRA/PB because these help-seeking stigmas refer to the perception of others' (e.g., public, salient referents) judgment about their help-seeking behavior. However, while TRA/PB only includes external sources in the definition of subjective norms, recent stigma research on help-seeking in counseling psychology (e.g., Ludwikowski et al., 2009) highlights the importance of internalization of the perceived norms, which is one step further from subjective norms, as well as external stigmas. Therefore, it would be worth considering the relationship among stigmas in the framework of TRA/PB.

Thus, even though previous research that cited TRA to understand help-seeking in college student populations has only incorporated the TRA framework, it may be important to include perceived behavioral control, the additional predictor of TPB, to understand the underutilization of mental health services by the international student population. Perceived behavioral control refers to the extent to which people believe that they can perform a given behavior if they are inclined to do so (Ajzen, 2012). In the help-seeking context, the lack of information about mental health services among international students can be considered primary behavioral control factors. For example, mental health services are not as popular in most Asian countries compared to the United States (Ito, Setoya, & Suzuki, 2012). If international students are less exposed to the use of mental health services in their previous education in their home countries (Frey & Roysircar, 2006), it may be hard to expect them to seek relevant information for mental



health services on campus when they have a mental health issues. For example, they may not know what mental health services are for, when they may need them, and what is available to them on campus. Thus, Sentell, Shumway, and Snowden (2007) showed that, for several ethnic minority groups in the United States, limited proficiency in English is independently associated with appreciably lower rates of mental health service use. Therefore, it is possible that international students who may be less proficient in English may not think that mental health services are their possible options for their mental health issues because of their language barrier as well as a lack of information about mental health services and their accessibility. In this regard, it is especially important to consider their perceived behavioral control as one of the predictors of their underutilization of mental health services.

The purpose of the present study is to understand East Asian international students' underutilization of mental health services by applying social psychological theory to help-seeking. More specifically, this study uses the concepts and framework from the TRA/PB to predict the intention to seek professional psychological services. By combining Ludwikowski et al. (2009)'s stigma model and the framework of TRA/PB, I hypothesize that help-seeking intention would be predicted by participants' help-seeking attitudes and stigmas (i.e., public stigma, personal stigma, and self-stigma) as substitutes for subjective norm in the original TRA/PB, and perceived behavioral control related to help-seeking. Further, I hypothesize that anticipated benefits as a behavioral belief in TRA/PB would predict help-seeking attitudes. Also, as Ludwikowski et al. and other researches showed, self-stigma would influence help-seeking attitudes as well. I will compare this modified model with an alternative model that does not include a path

between self-stigma and help-seeking attitudes, which is a part of Ludwikowski et al.'s model. I hypothesize that the modified model would show better fits than the alternative model, and be supported by the similar response patterns of East Asian international student and domestic student participants. However, East Asian international students may report higher mean scores for public, personal, and self-stigmas as well as lower mean scores for help-seeking attitudes, anticipated benefits, perceived behavior control, and help-seeking intention. Also, I hypothesize that the indirect path of anticipated benefits-help-seeking attitudes-help-seeking intention would be stronger in domestic college students than in East Asian international students.

In summary, this study addresses the following research questions:

Question 1. Does the modified TRA/PB model predict help-seeking intention in East Asian international students and domestic students?

Hypothesis 1. The modified TRA/PB (Figure 3), which includes the Ludwikowski et al. (2009) model, will show better fits than the alternative model without the link between self-stigma and help-seeking attitudes (Figure 4) for both East Asian international student and domestic student groups.

Hypothesis 2. East Asian international students in the U.S. will score significantly higher in each stigma and lower in attitudes toward seeking counseling, anticipated benefits, perceived behavioral control, and help-seeking intention than domestic students in the United States. That is, East Asian international students will show significantly more negative stigmas (i.e. public, personal, and self) and help-seeking attitudes, and less anticipated benefits, perceived behavioral control, and help-seeking intention than domestic students will do.

Question 2. Is there a difference in the extent of significance of predictors to predict help-seeking intention of two groups?

Hypothesis 3. Among East Asian international students, the help-seeking intention will be explained by significant direct and indirect relationships among public stigma, personal stigma, self-stigma, and help-seeking attitude, and significant association with perceived behavioral control, as specified below (see Figure 5).

a. Public stigma and personal stigma will be positively associated with self-stigma. That is, high public stigma and high personal stigma will be associated with high self-stigma.

b. Self-stigma will be negatively associated with help-seeking attitudes and help-seeking intention. That is, high self-stigma will be associated with low help-seeking attitudes and low help-seeking intention.

c. Help-seeking attitudes will be positively associated with help-seeking intention. That is, low help-seeking attitudes will be associated with low help-seeking intention.

d. Perceived behavioral control will be positively associated with help-seeking intention. That is, low perceived behavioral control will be associated with low help-seeking intention.

Hypothesis 4. Among domestic students in the U.S., help-seeking intention will be explained by significant association between anticipate benefits and help-seeking attitudes. (see Figure 6).

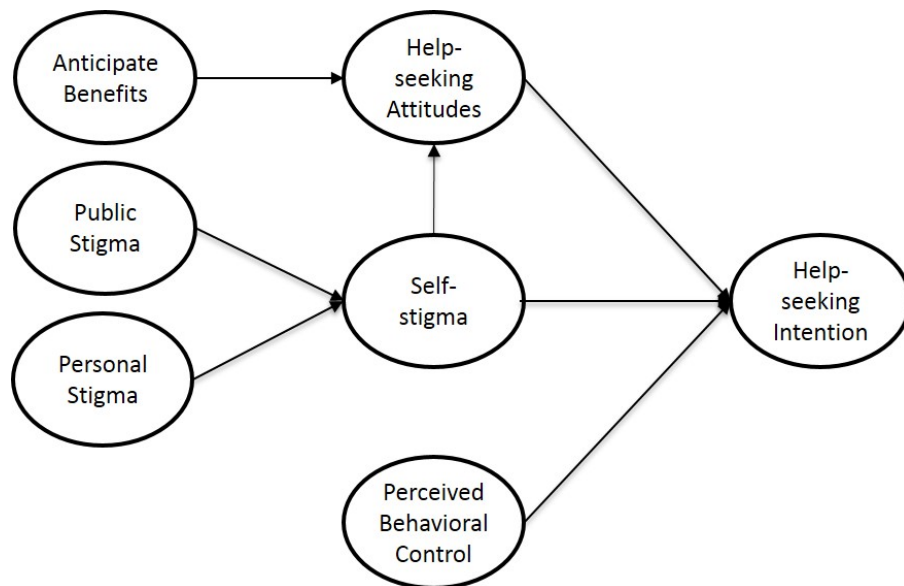


Figure 3. Modified TRA/PB for Help-Seeking (Hypothesized model)

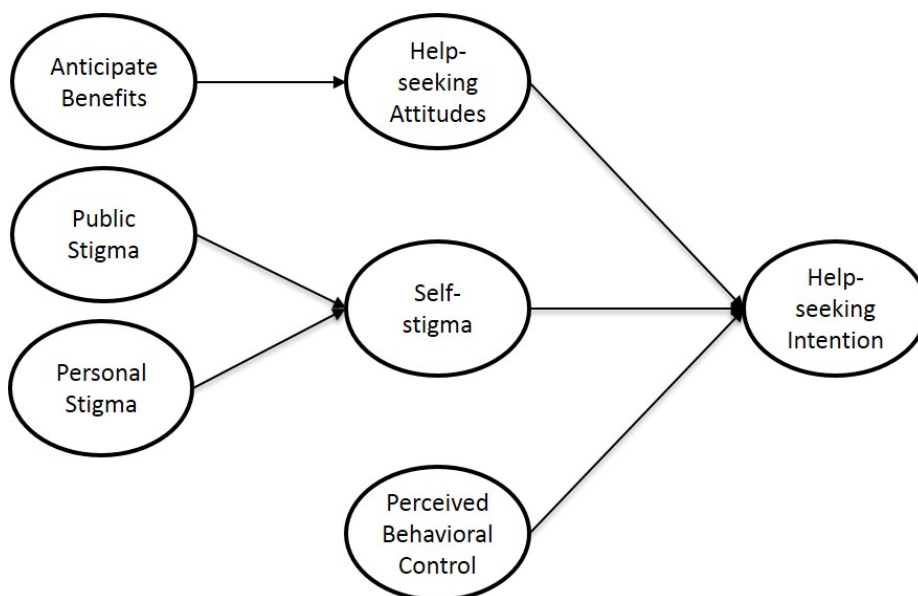


Figure 4. Alternative model

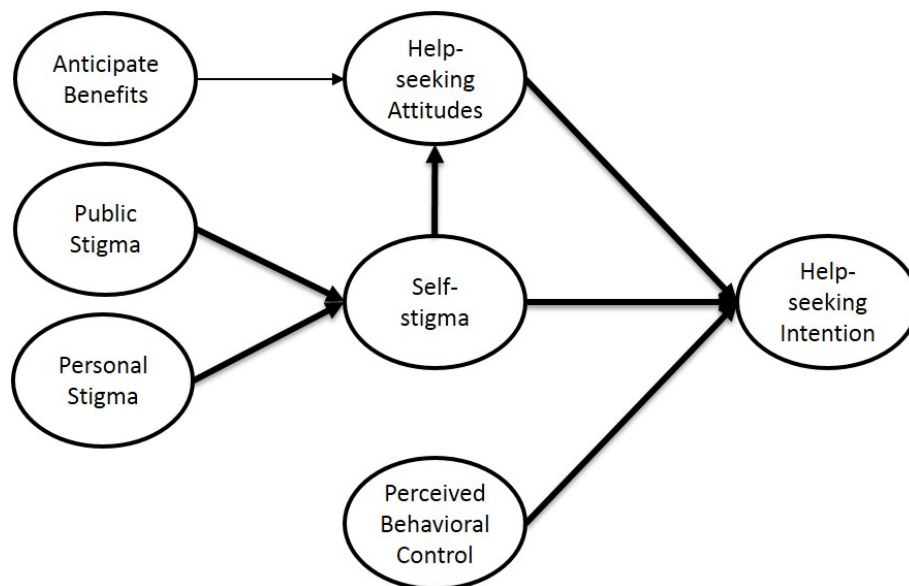


Figure 5. Hypothesized significant paths among East Asian international students (Hypothesis 3) *Note.* Bold lines indicate significant path coefficients.

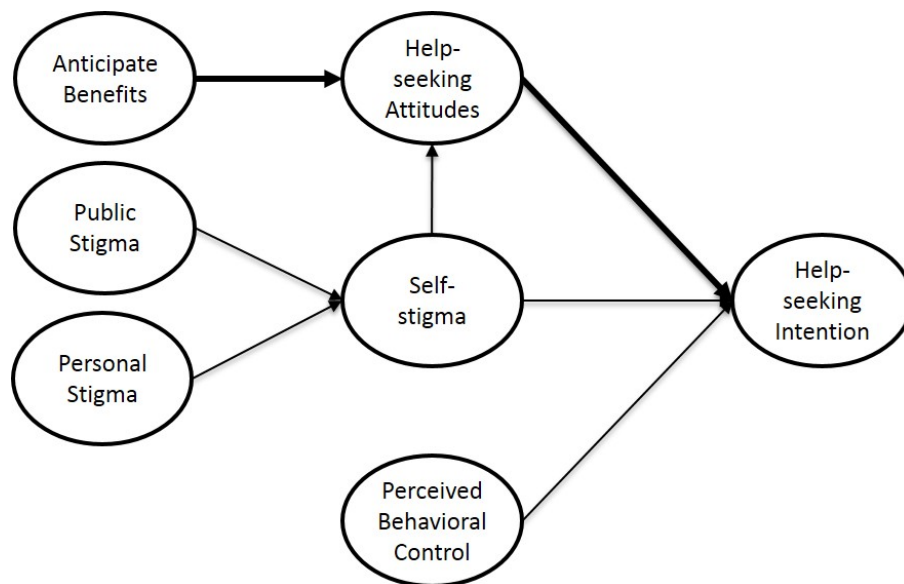


Figure 6. Hypothesized significant paths among U.S. domestic students (Hypothesis 4) *Note.* Bold lines indicate significant path coefficients.

## CHAPTER 3 METHODS

This chapter will describe the participants, measurements, and procedures of this study. The purpose of this study is to understand and compare the relationship between anticipated benefits, help-seeking attitudes, public stigma, personal stigma, self-stigma, perceived behavioral control, and help-seeking intention among international and domestic students in the United States.

### **Participants**

Participants in this study were 146 East Asian international students and 210 domestic college students at Purdue University. The sample consisted of 60 (43.2%) men and 75 (54 %) women for East Asian international students and 82 (39%) men and 127 (60.5%) women for domestic students (Table 1). Ages ranged from 18 to 37 for East Asian international students ( $M = 25.22$ ;  $SD = 5.481$ ) and from 18 to 54 for U.S. domestic students ( $M = 21.46$ ;  $SD = 4.654$ ). Sexual orientation for both groups was as follows: For East Asian international students, 128 (95.5%) Heterosexual, 1 (0.7%) Lesbian, 3 (2.2%) Bisexual, and 2 (1.5%) Other. For U.S. domestic students, 186 (88.6%) Heterosexual, 4 (1.9%) Gay, 3 (1.4%) Lesbian, 7 (3.3%) Bisexual, 1 (0.5%) Queer, 6 (2.9%) Questioning, and 3 (1.4%) Other. The race and ethnicity range for U.S. domestic students was as follows: 11 (5.2%) Asian American, 7 (3.3%) Black or African American, 5 (2.4%) Hispanic or Latino/a, 1 (0.5%) Native American or Alaskan Native, 177 (84.3%)

White or Caucasian, 8 (3.8%) multiracial, and 1 (0.5%) another race or ethnicity. The origin of country range for East Asian international students was as follows: 68 (48.6%) Chinese, 69 (49.3%) South Korean, 1 (0.7%) Taiwanese, and 2 (1.4%) Japanese.

Table 1

*Demographic Characteristics of Survey Sample (N = 356)*

	Domestic (n = 210)		EA international (n=146)	
<b>Gender</b>				
Female	127	60.5%	75	54.0%
Male	82	39.0%	60	43.2%
Unspecified	1	0.5%	4	2.9%
<b>Age</b>				
18-23	179	87.3%	58	46.8%
24-29	18	8.8%	34	27.4%
30-40	5	2.4%	32	25.8%
40 or older	3	1.5%	0	0
<b>Sexual Orientation</b>				
Bisexual	7	3.3%	3	2.2%
Heterosexual	186	88.6%	128	95.5%
Gay	4	1.9%	0	0
Lesbian	3	1.4%	1	0.7%
Queer	1	0.5%	0	0
Questioning	6	2.9%	0	0
Other	3	1.4%	2	1.5%
<b>Race/ Ethnicity (U.S. domestic students only)</b>				
African/African American/ Black	7	3.3%		
Asian/Asian American	11	5.2%		
Caucasian/European American/White	177	84.3%		
Hispanic/Latinas-os	5	2.4%		
Native American/Alaskan Native	1	0.5%		
Multiracial	8	3.8%		
Other	1	0.5%		
<b>Origin of country (International students only)</b>				
China			68	48.6%
Japan			2	1.4%
Korea (South)			69	49.3%
Taiwan			1	0.7%

Length of stay in the U.S.				
Less than 1 year			25	18.2%
1 year – 4 years			69	47.3%
5 years – 7 years			24	17.5%
8 years – 10 years			16	11.7%
More than 10 years			4	2.9%
Age of the first entry in the U.S.				
Younger than 18 years old			29	19.9%
18 years old – 23 years old			64	43.8%
24 years old – 29 years old			33	22.6%
30 years old or older			11	7.5%
Will you consider going to a counseling center if you can receive counseling in your native language?				
Yes			124	89.2%
No			15	10.8%
Academic Standing				
First year	49	23.3%	10	7.1%
Sophomore	22	10.5%	33	23.6%
Junior	46	21.9%	11	7.9%
Senior	68	32.4%	17	12.1%
Graduate student	25	11.9%	69	49.3%
Have you used counseling services?				
Yes, and the outcome was positive.	65	31.1%	28	19.4%
Yes, but the outcome was not positive.	29	13.9%	20	13.9%
No, I do not have any previous experience.	115	55.0%	96	66.7%
Do you know what kinds of student services are available on campus for mental health issues?				
Yes	142	67.9%	67	46.5%
No	67	32.1%	77	53.5%
Do you know how to utilize counseling services near your campus?				
Yes	122	58.4%	35	24.6%
No	87	41.6%	107	75.4%



## Procedure

After obtaining approval from Purdue University's Institutional Review Board (IRB; Appendix A), participants were recruited through an initial recruitment e-mail (Appendix B) and a follow-up recruitment e-mail (Appendix C) from the Registrar's Office to a random sample of 3000 students. A follow-up e-mail was sent two weeks after the initial e-mail. Facebook posts (Appendix D) were also used as a secondary method to recruit participants through the school network on Facebook after email recruiting via the Registrar's Office. Due to low response rate of East Asian international students, e-mail recruitment request was made to Chinese student organization and Korean student organization at Purdue University. Purdue Korean Association responded to the request and sent the same recruitment email, but Chinese student organization did not respond to the request. All students were supposed to access the web-based survey through the URL embedded in the email message or Facebook post. Both email and Facebook posts included the purpose of the study, participation criteria, and a link to the survey. Data gathering continued for four months; complete data for U.S. domestic student was reached to the minimum numbers of a group (i.e., 200 per group) after the follow-up email was sent, however, complete data for East Asian international student was failed to reach to 200 despite multiple attempts.

A sample of adults who are 18 years old or older and who identify as domestic students or international students from East Asian countries was recruited. A domestic student is a U.S. citizen, born in the U.S. and speaks English as a first language. Participants identified as East Asian international students should meet three criteria: a) hold valid student visas, b) are from East Asian countries (i.e., China, South Korea,

Chinese Taipei (a.k.a. Taiwan), Japan, Mongolia, or Macau; Institute of International Education, 2013), and c) do not have English as their first language. All international student participants were asked to indicate for how many years they have resided in the United States. In this study, English proficiency is one of the potential factors that may be related to participants' perceived behavioral control, which in turn, may impact their help-seeking intention. Therefore, participants' English proficiency is the important criteria to differentiate two groups (i.e. domestic students and East Asian international students). For example, if a participant currently holds U.S. citizenship but was born in China and use Mandarin as a native language, the person was not included in this study. A description of international and domestic student inclusion criteria was provided in the e-mails and the consent page of the questionnaire.

The email invitation included criteria for participation, information about the study, a URL to the information sheet and participant consent (Appendix E), and a questionnaire. A highlighter was given to all participants as compensation. In order to receive a highlighter, participants were asked to enter their email address in a separate database at the end of the survey. The database with the email addresses was not connected to the survey responses or any identifying information (e.g., IP address). The location for receiving a highlighter was announced by email, and the email database was deleted at the end of the data collection. The participants received the highlighter after they checked their email address on the list at the location.

Next, participants were guided to the questionnaire through an embedded URL, which led them to the consent form page. Participants were asked to click "Yes" to agree with their participation in the study and were directed to seven measures and a

demographic information sheet. A follow-up email was sent out two weeks later as a reminder. The follow-up email included a thank-you message to those who have already completed the survey and encouraged those who have not completed the survey to do so.

### **Measurement**

Participants responded to a web-based research survey packet. The packet included: a) an information letter (Appendix E), b) the Intentions to Seeking Counseling Inventory (ISCI; Cash, Begley, McCown, & Weise, 1975; Appendix F), c) Perceived Behavioral Control scale (Appendix G), d) the Self-Stigma of Seeking Help scale (SSOSH; Vogel, Wade, & Haake, 2006; Appendix H), e) Perceptions of Stigmatization by Others for Seeking Help scale (PSOSH; Vogel et al., 2009; Appendix I), f) the Stigma Scale for Receiving Psychological Help (SSRPH; Komiya et al., 2000; Appendix J), g) the Attitudes toward Seeking Professional Psychological Help scale: Short form (ATSPPH-S; Fischer & Farina, 1995; Appendix K), h) the Disclosure Expectations Scale (DES; Vogel & Wester, 2003; Appendix L), and i) a demographic information sheet (Appendix M).

### **Demographic Information**

The demographic information included age, sex, ethnicity, nationality, academic standing (e.g., first year, sophomore, junior, senior, or graduate student), first language, and previous knowledge and experience using counseling service for all participants. Also, East Asian international students were asked for how many years they have been living in the United States, and if they would consider getting counseling service if a counselor can provide counseling services in their native language.

### **Anticipated Benefits**

Anticipated benefits were measured by the anticipated benefits subscale from the 8-item Disclosure Expectations Scale (DES; Vogel & Wester, 2003). DES was developed to measure the anticipated risks and anticipated benefits of expressing one's emotions to a counselor or therapist. The anticipated benefits subscale consists of four items rated on a 5-point Likert scale from 1 (*not at all*) to 5 (*very*). In this study, only four items of anticipated benefits subscale were used for analysis. A higher score reflects greater perceptions of benefits of emotional disclosure to a counselor. A sample item is: "How helpful would it be to self-disclose a personal problem to a counselor?"

Vogel and Wester (2003) reported that the two subscales of DES (i.e., anticipated benefits and risk) are minimally correlated ( $r = -.19$ ) in their study with college student participants. The internal consistency estimates for the anticipated benefits were reported ( $\alpha = .83$ , Vogel & Wester, 2003;  $\alpha = .80$ , Shaffer et al., 2006). Also, the test-retest reliability across 2-week period for anticipated benefits was reportedly .75 (Shaffer et al., 2006). In terms of the validity, the anticipated benefits subscale has been shown to correlate positively with help-seeking intention ( $r = .27$ , Vogel & Wester, 2003) and help-seeking attitudes ( $r = .57$ , Vogel et al., 2005). As of now, no study has reported internal consistency among specific racial/ethnic population.

### **Attitudes toward Seeking Help**

The Attitudes towards Seeking Professional Psychological Help scale: Short form (ATSPPH-S; Fischer & Farina, 1995) was used to measure attitudes toward seeking psychological help. The ATSPPH-S is a 10-item unidimensional updated and shorter version of the original 29-item scale (Fischer & Farina, 1995). A sample item is: "I would

want to get psychological help if I were worried or upset for a long period of time.” Items are rated on a 4-point Likert scale from 1 (*disagree*) to 4 (*agree*), with five items reverse-scored. Higher scores reflect more positive attitudes towards seeking professional psychological help.

Fischer and Farina (1995) reported an internal consistency of the scores in a college sample as  $\alpha = .84$ . For construct validity, Fischer and Farina found that ATSPPH-S scores were significantly correlated ( $r = .39$ ) with previous use of professional help for a problem. For the Asian American student population, the alpha coefficient was reported as .80 (Vogel, Wade, & Hackler, 2007).

### **Public Stigma**

Public stigma was measured with the Stigma Scale for Receiving Psychological Help (SSRPH; Komiya et al., 2000). The SSRPH evaluates perceptions of how much social stigma is associated with receiving psychological treatment (Komiya et al., 2000). The SSRPH consists of five items, a sample item being: “People tend to like less those who are receiving professional psychological help.” Each item is rated on a 4-point Likert scale from 0 (*strongly disagree*) to 3 (*strongly agree*), with higher scores indicating a greater perception of stigma associated with receiving psychological treatment.

Komiya et al. (2000) reported the internal consistency of the scores as  $\alpha = .72$ . Moreover, in terms of construct validity, the SSRPH scores correlated significantly and negatively ( $r = -.40$ ) with the Attitudes towards Seeking Professional Psychological Help Scale: Short form (ATSPPH-S; Fischer & Farina, 1995) scores. A previous study with Asian American college and graduate students using SSRPH yielded an alpha coefficient of .80 (Chang & Chang, 2004).

### **Personal Stigma**

Personal stigma was measured with the 5-item version of the Perceptions of Stigmatization by Others for Seeking Help (PSOSH; Vogel et al., 2009) scale. This scale was developed to measure whether the person seeking psychological help would be stigmatized by people with whom the person interacts or not. A sample item is: “To what degree you believe that the people you interact with would ‘react negatively to you’?” Items are rated on a 5-point Likert scale from 1 (*not at all*) to 5 (*a great deal*). Higher scores reflect greater perceptions of personal stigma.

Vogel et al. (2009) reported that the internal consistency ranges from .78 to .89, and test-retest reliability across a 3-week period was .82. According to Vogel et al., PSOSH is positively correlated with the measure of public stigma (SSRPH;  $r = .31$ ,  $p < .002$ ) and negatively correlated with help-seeking attitudes (ATSPPH-S;  $r = -.66$ ,  $p < .001$ ). The internal consistency of the PSOSH for Asian American was .89 (Vogel et al., 2009).

### **Self-Stigma**

Self-stigma was measured using the Self-Stigma of Seeking Help (SSOSH; Vogel et al., 2006) scale. The 10-item SSOSH assesses threats to one’s self-evaluation (e.g., self-regard, satisfaction with oneself, self-confidence, and overall worth as a person) for seeking psychological help. Items are rated from 1 (*strongly disagree*) to 5 (*strongly agree*), with five items reverse-scored. A sample item is: “If I went to a therapist, I would be less satisfied with myself.” Higher scores indicate greater perceptions of self-stigma and reflect a more negative self-stigma.

The SSOSH is reported to be positively correlated with public stigma (SSRPH;  $r = .48, p < .001$ ) and negatively correlated with help-seeking attitudes (ATSPPH-S;  $r = -.63, p < .001$ ). Internal consistencies range from .86 to .90 in college samples (Vogel et al., 2006). In the Asian American sample, internal consistency was reported as .85 (Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011). Test-retest reliability in college student populations was reported as .72 (Vogel et al., 2006). Moreover, it is also positively correlated with personal stigma (PSOSH;  $r = .35, p < .001$ , Vogel et al., 2009).

### **Perceived Behavioral Control**

Perceived behavioral control for help-seeking items were developed with Fishbein and Ajzen (2010)'s reference in constructing a TPB questionnaire. Fishbein and Ajzen stated that there is no standard questionnaire for TRA/PB, and TRA/PB research requires a questionnaire suitable for the behavior and population of interest. They suggested that the behavior of interest should be clearly defined in terms of its target, action, context, and time element. Hess and Tracey (2013) used this guideline to design a measure assessing perceived behavioral control regarding therapy. Their sample item was: “For me to *seek help from a mental health professional to address a problem I would have with anxiety or depression* would be impossible (rated as definitely true – definitely false).” They defined their target action for research as “seek help from a mental health professional to address a problem I would have with anxiety or depression.” For this item construction procedure, I defined help-seeking behavior among college student as: “making an appointment for mental health services (e.g., counseling) today if needed.” A sample item is: “For me to make an appointment for mental health services (e.g., counseling) today if needed would be impossible (rated as definitely true or definitely

false).” According to Fishbein and Ajzen (2010), five to six items are formulated to assess constructs of TRA/PB in general, and seven-point bipolar adjective scales are used.

Participants are asked to circle the number that best describes their opinion.

Following the format proposed by Fishbein and Ajzen (2010), four items are modified to measure perceived behavioral control based on Hess and Tracey (2013)’s items (see Appendix G). The Cronbach’s alpha of Hess and Tracey’s scale was .73, and this scale is .63 for both groups in this study.

### **Intentions to Seek Help**

Intentions of Seeking Counseling Inventory (ISCI; Cash et al., 1975) originally proposed as 17-items scale that asks participants to rate how likely they would be to seek counseling if they were experiencing a problem, rating from 1 (*very unlikely*) to 6 (*very likely*). Later, Cepeda-Benito and Short (1998) identified three subscales in the ISCI that include Interpersonal problems (10 items), Academic problems (4 items), and Drug/Alcohol problems (2 items). Out of the 17 items, only “weight loss” was not included in any of the subscales. Scores can be totaled to reflect intentions to seek counseling for each of the three subscales (Cepeda-Benito & Short, 1998). Due to the focus of this study, which is international students’ utilization of campus-based counseling service for mental health issues, Academic problems and Drug/Alcohol problems were not included in the data analysis of this study. Examples of Interpersonal problems include loneliness and inferiority feelings.

The ISCI has sufficient internal consistency estimates for the three subscales; .90 for Interpersonal problems, .71 for Academic problems, and .86 for Drug/Alcohol problems (Cepeda-Benito & Short, 1998). ISCI was reported to be positively correlated



with help-seeking attitudes (ATTRPH;  $r = .36$ ; Kelly & Achter, 1995). For the Asian American college women population, Cronbach's alpha for ISCI was .81 (Miville & Constantine, 2007).

### **Data Analysis**

I used SPSS 23.0 for preliminary analysis. First, I provided the demographic information, including age, sex, year of school, and previous experience using counseling service, as shown in Table 1. East Asian international students were asked the number of years of living in the U.S. because it is believed to be related to their level of acculturation and may influence stigmas. However, this variable was not included as an independent variable in this study because the purpose of this study is to see the existing structural model that can be applied to different groups in the same way. Also, a correlation matrix was provided to show the relationship among variables before stepping into the main results from the Structural Equation Modeling (Table 3).

AMOS 23.0 for Structural Equation Modeling (SEM) was used to conduct a multigroup analysis to verify if the hypothesized model is universal across the two groups and to determine structural differences among groups. I chose SEM (rather than multiple regressions) in order to test the mediating relationships among the variables at once (Kline, 1998). Specifically, I proposed the model that integrated Ludwikowski et al.'s (2009) stigma model into the TRA/PB framework (Ajzen, 1985; Figure 2).

The item parceling technique was used because the SSOSH, ATSPPH, and ISCI-interpersonal problems scales have 10 items and each of them is unidimensional (Cepeda-Benito & Short, 1998; Fischer & Farina, 1995; Vogel et al., 2006). The item parceling technique is popularly used in counseling psychology studies using SEM, especially

when there are too many items loaded onto one latent construct (e.g., Bandalos & Finney, 2001; Lee & Pistole, 2012; Velez & Moradi, 2012; Weston & Gore, 2006). Little, Cunningham, Shahar, and Widaman (2002) list three reasons why parceling can be more advantageous than using the original items: a) estimating large numbers of items is likely to result in spurious correlations, b) subsets of items from a large item pool will likely share specific sources of variance that may not be of primary interest, and c) solutions from item-level data are less likely to yield solutions more stable than those from parcels of items. Additionally, Yang, Nay, and Hoyle (2010) suggested that parceling method is beneficial because it requires smaller sample size than other methods (i.e. latent scoring and shorten scales) and reduce model complexity. Also, item parceling method may alleviate the issue of missing data and non-normal distributed data when using continuous data (Orcan, 2013). However, it should be noted that there is a potential risk of ignoring measurement errors by using a parcel instead of a single item as an indicator (see Little et al., 2002 for more detail). In this study, I created two parcels for these 10-item SSOSH, ATSPPH, and ISCI-interpersonal problems scales by using the technique of item-to-construct balance (Little et al., 2002; Weston & Gore, 2006; Yang, Nay, & Hoyle, 2010). To do so, I ranked order the items on the basis of the magnitude of their factor loadings and assign pairs of the highest and lowest items to a parcel in order to equalize the average loadings of each parcel on its respective factor. Other four measurements (i.e., DES, SSRPH, PSOSH, and Perceived behavioral control scale) were used for single items as indicators since all measurements have no more than 5 items.

SEM analysis was conducted with the total sample of 356 U.S. domestic and East Asian international students to examine if the hypothesized model (Figure 3) is a

valid model for the sample of this study. This hypothesized model was compared to the alternative model without a path from self-stigma to help-seeking attitudes that is based on previous findings (e.g., Ludwikowski et al., 2009; Figure 4). With the supported model from this analysis, multigroup analysis was conducted with two different groups. To do that, I took three steps, as suggested by Byrne (2012), before comparing the mean differences of two groups: a) the establishment of the configural model, b) testing the measurement invariance, and c) testing the structural invariance.

I evaluated the structural model fit for using  $\chi^2$  goodness-of-fit statistic and multiple fit indexes: (a)  $\chi^2$  goodness-of-fit, which indicates a better fit if it is non-significant; (b) the comparative fit index (CFI), with .95 indicating a good fit; (c) the Tucker-Lewis Index (TLI), with .95 values indicating a good fit; and (d) the root-mean-square error of approximation (RMSEA), with values less than .06 considered a good fit (Hu & Bentler, 1999).

## CHAPTER 4 RESULTS

The purpose of this chapter is to present the results of this study. The results of preliminary analysis, including descriptive data of participants, are presented first, then rationale for latent mean analysis (i.e., LMA) and multigroup analysis will be discussed before showing the primary analysis results. In primary analysis, I explained parceling procedure for all measurements, LMA and multigroup analysis in SEM following steps (e.g., testing the configural, measurement, scalar, or structural invariance), and analysis of four hypotheses of this study. I conducted data analysis using SPSS 23.0 and AMOS 23.0.

### **Preliminary Analysis**

I conducted several preliminary analyses before primary analysis (i.e., LMA and multigroup analysis) in order to make sure reliability and validity for further analysis. First, I checked the SPSS data for accuracy of data entry. The SPSS data file was directly downloaded from the web-based survey software tool provided by Purdue University. Next, 307 cases out of 666 were deleted due to failure of completing all seven measurements. Specifically, 347 students who identified themselves as U.S. domestic students opened the survey and 135 of them (38.9%) withdrew before they completed all measurements. On the other hand, 319 of self-identified East Asian international students opened the survey, and 172 of them (53.9%) withdrew before completing the survey. On

a side note, 132 U.S. domestic students and 103 East Asian international students left the survey right after opening the survey. In other words, 69 East Asian international student participants (40.1%) tried first or second measurement but gave up after completing those measurements, whereas only 3 U.S. domestic students (2%) left in the middle of the survey. Participants who missed some items of each measurement and demographic information sections were included in the dataset. Some items from Self-stigma and Help-seeking attitudes scales were reverse-scored as required by the original scales. I calculated participants' mean scores for all scale/subscale items. *Z* score was used to identify univariate outliers, and 3 cases were removed from this procedure ( $Z \geq \pm 3$ ; Field, 2009). Skewness and kurtosis statistics were calculated and were less than  $\pm 2$  (Field, 2009), indicating that the data were normal and eligible to use for the further analysis. The reported sample size ( $N = 356$ ) is the actual number of cases used in this study.

Reliability is about how consistently the scale reflects the measured construct in sample. Appropriate reliability (i.e., Cronbach's  $\alpha > .7$ , Kline, 1998) indicates the measurement is reliable enough to use in analysis with the dataset I used. The most common way to measure reliability is Cronbach's Alpha ( $\alpha$ ) with range of 0 to 1. The constructs that I used in this study are seven in total; Benefit expectation, Help-seeking attitudes, Public stigma, Personal stigma, Self-stigma, Perceived Behavioral Control, and Help-seeking intention (interpersonal problems). These constructs are all univariate. Means, standard deviations, ranges of the participants' mean scores, and Cronbach's  $\alpha$  for all scales by groups are presented (Table 2).

Table 2

*Preliminary Analysis Descriptive Statistics (N = 356)*

Variable	<i>M</i>		<i>SD</i>		Range		Cronbach's $\alpha$	
	D	I	D	I	D	I	D	I
Anticipated benefits	3.29	3.47	.97	.81	1.0-5.0	1.0-5.0	.880	.853
Help-seeking attitudes	2.60	2.67	.57	.44	1.2-3.8	1.1-3.8	.827	.746
Public stigma	2.45	2.25	.59	.62	1.0-4.0	1.0-4.0	.801	.847
Personal stigma	1.82	2.05	.81	.94	1.0-5.0	1.0-5.0	.883	.837
Self-stigma	2.81	2.48	.83	.62	1.0-5.0	1.0-4.8	.904	.821
Perceived behavioral control	5.39	4.67	1.25	1.21	1.2-7.0	1.5-7.0	.633	.633
Help-seeking intention	2.09	2.30	.62	.57	1.0-4.0	1.0-3.6	.880	.843

*Note.* D = Domestic students ( $n = 210$ ); I = East Asian international students ( $n = 146$ ). Range = the range of participants' mean scores.

Next, zero-order correlations among measurements were also presented (Table 3) to show if there is any multicollinearity issue among variables. Even though most variables are significantly related to each other, they are all below .85, so multicollinearity is likely not an issue in this study.

Table 3

*Correlation among Variables (N = 356)*

Variable	1	2	3	4	5	6	7
1. Anticipated benefits		.64**	-.22**	-.27**	-.39**	.10	.25**
2. Help-seeking attitudes	.71**		-.34**	-.31**	-.60**	.21*	.35**
3. Public stigma	-.32**	-.40**		.60**	.54**	-.11	-.15
4. Personal stigma	-.26**	-.37**	.49**		.40**	-.13	-.08
5. Self-stigma	-.50**	-.65**	.61**	.51**		-.40**	-.22**
6. PBC	.20**	.22**	-.17*	-.38**	-.16*		.10
7. Help-seeking intention	.41**	.52**	-.29**	-.12	-.37**	.09	

*Note.* Domestic students ( $n = 210$ ) = left below matrix; East Asian international students ( $n = 146$ ) = right above matrix, *italic*

### **Primary Analysis**

In this study, I hypothesized that East Asian international students would score significantly higher or lower on each variables than domestic students (Hypothesis 2). To test this hypothesis, I used Latent Mean Analysis (LMA) in Structural Equation Modeling (SEM). SEM is a statistical technique, which integrates Confirmatory Factor Analysis (CFA) and path analysis (Byrne, 2012). LMA requires three different types of invariances before comparing latent means between groups; configural, metric, and scalar invariances. Also, I hypothesized that seven latent variables with multiple indicators would relate to each other in the same way but different levels among domestic students and East Asian international students (Hypothesis 1, 3, and 4). In other words, TRA/PB model would explain domestic and East Asian international students' help-seeking intention but level of significance among variables would be different between these two groups. To examine these hypotheses, I used multigroup analysis in SEM. As mentioned earlier in Chapter 3, there are three steps to do multigroup analysis in SEM: testing a) configural invariance, b) metric invariance, and c) structural invariance among groups (Byrne, 2012). Configural invariance test involves testing the measurement model for each of the groups separately. Following the configural invariance, the second step was to test measurement invariance that involves testing the measurement model for two groups together to examine whether the constructs were measured equivalently across groups. To test this, a freely estimated baseline multigroup model in which the factor loadings were unconstrained was compared with a nested multigroup model in which the factor loadings were constrained to be equal across the groups. A robust chi-square difference test was used to examine invariance. The third step was to test structural invariance to determine

whether the structural parameters were equivalent across groups. Before testing configural invariance, multiple imputations of item-level missing values were conducted using NORM procedures (NORM 2.02, Schafer, 1997), following recommendations of Schlomer, Bauman and Card (2010). These procedures were only used with variables of interest (i.e., anticipated benefits, help-seeking attitude, public stigma, personal stigma, self-stigma, perceived behavioral control, and help-seeking intention) and not with the demographic variables. Item parceling is required to create appropriate observed indicators for latent variables in SEM.

### **Parceling**

Parceling is used to create observed indicators for the latent variables. If the latent variable is multidimensional, the mean score of each subscale can be used as one observed indicator of the latent variable. In the case of univariate variables, there are two ways of creating observed indicators. If the measurement for the unidimensional variable has fewer items (i.e., 3 to 5 items), each item can be served as an observed indicator. In this study, anticipated benefits, public stigma, personal stigma, and perceived behavioral control variables are of this case. They are all unidimensional and have four or five items each. However, if the unidimensional variable has more than five items, item parceling can be used (Hall, Snell, & Foust, 1999; Yang, Nay, & Hoyle, 2010). The item parceling technique is popularly used in most counseling psychology studies using SEM especially when there are too many items loaded onto one latent construct (e.g., Bandalos & Finney, 2001; Lee & Pistole, 2012; Velez & Moradi, 2012; Weston & Gore, 2006). Little, Cunningham, Shahar, and Widaman (2002) list three reasons that parceling can be advantageous over using the original items: 1) estimating large numbers of items is likely



to result in spurious correlations, 2) subsets of items from a large item pool will likely share specific sources of variance that may not be of primary interest, and 3) solutions from item-level data are less likely to yield stable solutions than solutions from parcels of items. It should be noted, though, there is potential risk to ignore measurement errors by using a parcel instead of single item as an indicator (see Little et al., 2002 for more detail).

In this study, I created two parcels for three 10-item scale: SSOSH (self-stigma), ATSPPH (help-seeking attitudes), and ISCI-interpersonal issue (help-seeking intention) subscale by using technique of item-to-construct balance (Little et al., 2002; Weston & Gore, 2006). To do so, I rank ordered the items on the basis of the magnitude of their factor loadings and assign pairs of the highest and lowest items to a parcel in order to equalize the average loadings of each parcel on its respective factor. The hypothesized model with parceling is presented in Figure 7.

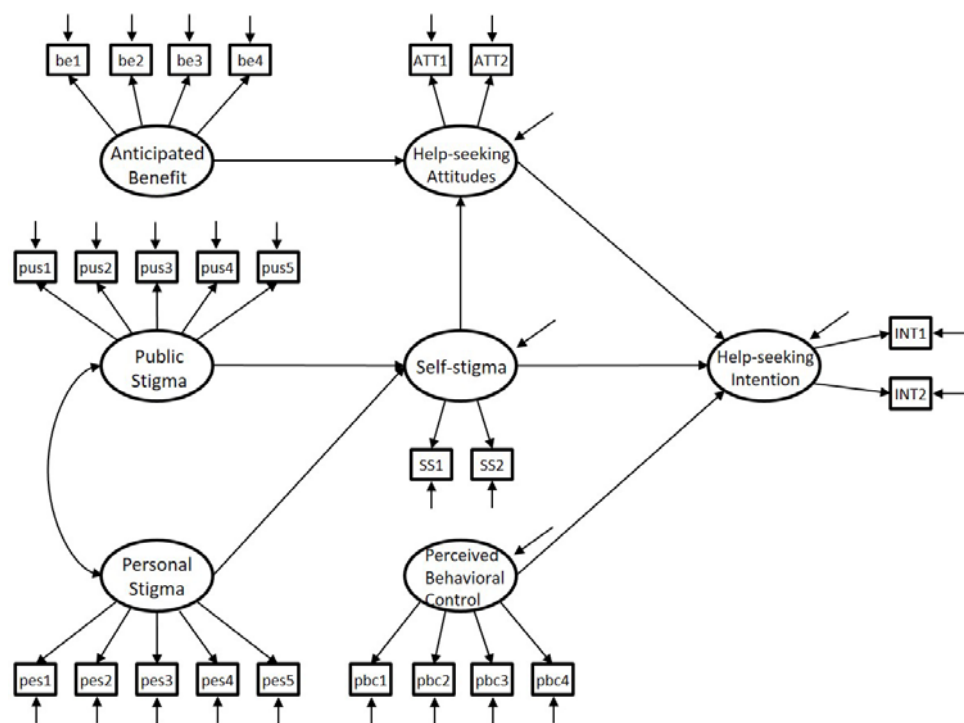


Figure 7. Hypothesized structural equation model. *Note.* Arrows indicate error variables.

### **Latent Mean Analysis**

The first purpose of this study was to examine differences in help-seeking mechanism in U.S. domestic students and East Asian international students. Latent Mean Analysis (LMA) was used to examine differences between observed means because it takes into account potential measurement error whereas t-test or ANOVA does not (Hong, Malik, & Lee, 2003). The mean differences in latent variables can be estimated only if the latent variables are on the same scale in all groups (Miller & Sheu, 2008). The prerequisites for LMA are configural invariance, metric invariance, and scalar invariance across the groups (Hong et al., 2003; Steenkamp & Baumgartner, 1998). In this study, LMA using structural equation modeling (SEM) was performed using AMOS 23.

**Test of configural invariance.** The configural invariance test assesses the degree to which the factor structure or the same pattern of estimated model parameters is appropriate for each group. A confirmatory factor analysis was conducted separately for each group to determine whether the seven latent variables model is fit to both groups or not. As noted in the previous chapter, I used several goodness-of-fit measures as recommended. Chi-square goodness-of-fit examines the magnitude of the discrepancy between the model and the sample covariance matrix. When comparing models,  $\Delta\chi^2$  is used to determine a better fitted model. The range of CFI and TLI is from 0 to 1, with values closer to 1 indicating better fit. RMSEA values less than .06 considered a good fit (Hu & Bentler, 1999).

The goodness-of-fit indices indicated an adequate fit for U.S. domestic students, the  $\chi^2 (231) = 379.01, p < .001, CFI = .946, TLI = .935, RMSEA = .055$ ; for East Asian international students the  $\chi^2 (231) = 315.14, p < .001, CFI = .956, TLI = .948, RMSEA$

= .050. All of the factor loadings of the observed variables on their respective latent variables were significant ( $p < .05$ ), suggesting that the observed indicators adequately associated to their latent constructs. Therefore, the assumption of configural invariance across two student groups was supported. Based on this model, the configural model that fits for the two groups was examined. The model fit results for the baseline model show adequate fit for both groups:  $\chi^2(462) = 694.22, p < .001, CFI = .950, TLI = .940, RMSEA = .038$ . The goodness of fit indices was used for the further analysis (see Model 1 in Table 4).

Table 4

*Goodness-of-Fit Indices for Configural Invariance Test*

Model description	$\chi^2$	$df$	$p$	CFI	TLI	RMSEA
Domestic students	379.01	231	<.001	.946	.935	.055
International students	315.14	231	<.001	.956	.948	.050
Configural model (Model 1)	694.22	462	<.001	.950	.940	.038

**Test of metric invariance.** To test for metric invariance, I compared the baseline measurement model that was obtained in the previous step (i.e., the factor loadings freely estimated) and the metric invariance model (i.e., the factor loadings constrained to be equal across groups). The constraints resulted in an increase in chi-square value from 694.22 to 737.11, with a gain of 17 degrees of freedom (see Table 5). The chi-square difference test was performed because the metric invariance model (Model 2) is nested within the configural model (Model 1). The chi-square difference test for Model 1 versus Model 2,  $\Delta\chi^2(17) = 42.89$ , was significant compared to the critical value ( $\chi^2(17) = 27.59, \alpha < .05$ ). However, CFI was not significantly decreased (i.e.,  $\Delta CFI \leq .01$ ; Cheung

& Rensvold, 2002), so the results supported sufficient metric invariance (Cheung & Rensvold, 2002). It indicated that the participants respond to the items in a similar way across groups, so I proceeded with the following step.

Table 5

*Goodness-of-Fit Indices for Metric Invariance Test*

Models	$\chi^2$	$df$	$\Delta\chi^2$	$\Delta df$	CFI	TLI	RMSEA
Model 1: Baseline Model	694.22	462			.950	.940	.038
Model 2: Constrained model (VS Baseline model)	737.11	479	42.89***	17	.945	.936	.039

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

**Test of scalar invariance.** Scalar invariance is the final step for LMA, indicating that participants with the same value on the latent construct would have equal values on the intercepts. I conducted a test of scalar invariance by constraining the intercepts of the seven variables to be equal across the two groups. Because the intercept values are necessary in the identification of the latent means, I can determine if estimated latent factor means nonequivalence is due to actual differences or variance in intercept values (Miller & Sheu, 2008).

The chi-square difference test was performed, comparing the scalar invariance model (Model 3) and the metric invariance model (Model 2). The chi-square difference was significant at  $\alpha = .05$ , and the CFI, TLI, and RMSEA were also significantly decreased after constraining all the intercepts to be equal. The results showed that the complete scalar invariance was not supported ( $\Delta\chi^2(24) = 259.20$ ), therefore partial scalar invariance was performed (Byrne, Shavelson, & Muthen, 1989; Dimitrov, 2006).

To determine the degree of partial scalar invariance, I conducted the procedure proposed by Dimitrov (2006). Dimitrov suggested modifying the model by setting one of the factor loadings “free” (non-invariant) across the groups, depending on the values of their modification indices. To identify the non-invariant intercepts, I examined modification indices of the Model 3. The significant increase in the chi-square value was due to a lack of scalar invariance of the intercept of Anticipated benefits, Public stigma, Personal stigma, and Perceived Behavioral Control. Relaxing one or two constraints of the constraints of these four variables yielded significant improvement in fit when compared to the full scale invariance model. The chi-square difference for Model 2 versus Model 4 was still significant; however, TLI, CFI, and RMSEA were not significantly decreased (differences  $< .01$ ), supporting partial scalar invariance across groups (Cheung & Rensvold, 2002) and allowing continued analysis (Byrne et al., 1989, Hong et al., 2003).

Table 6

*Goodness-of-Fit Indices for Scalar Invariance Test*

Models	$\chi^2$	$df$	$\Delta\chi^2$	$\Delta df$	CFI	TLI	RMSEA
Model 2: Metric invariance	737.11	479			.945	.936	.039
Model 3: Full scalar model (VS Model 2)	996.81	503	259.20***	24	.894	.884	.053
Model 4: Partial scalar model (VS Model 2)	780.66	498	43.66***	19	.938	.931	.040

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

**Test of latent mean differences.** In LMA, the differences between the means of a latent variable across groups are estimated by fixing one of the construct means to zero (Hong et al., 2003) and estimating the latent mean in the other group. In this study, U.S.

domestic student group was used as a reference group by fixing their latent mean parameters at zero and East Asian international student group's latent means were estimated. Latent mean differences between two groups were found in three variables: Self-stigma, Perceived Behavioral Control, and Help-seeking intention.

According to the results, East Asian international students reported less self-stigma compared to the U.S. domestic students, less perceived behavioral control, and had more help-seeking intention. I computed Cohen's  $d$  effect size index to interpret the latent mean differences, following Hancock (2001)'s suggestion. Estimated variances of  $\eta$  were used as a substitute of variance in the traditional equation of Cohen's  $d$  effect. The Cohen's  $d$  index indicates the difference between the means of the two groups divided by pooled standard deviation across groups (Cohen, 1988). Medium effect sizes were found in most comparisons except Public Stigma.

Table 7

*East Asian International Students' Latent Means and Effect sizes*

Latent variables	Latent means (U.S. domestic student = 0)	Effect size (Cohen's $d$ )
Anticipated Benefits	.12	.20
Help-seeking attitudes	.08	.33
Public stigma	.02	.05
Personal stigma	.17	.25
Self-stigma	-.33***	.67
Perceived Behavioral Control	-.52***	.61
Help-seeking intention	.23***	.71

*Note.* Cohen's  $d < .2$ : small;  $d < .5$ : medium;  $d > .8$ : large.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### **Multigroup analysis**

In SEM, multigroup analysis tests the invariance of the configural, metric, and structural models for groups (i.e., in this study, for U.S. domestic students and East Asian

international students). The null hypothesis of this analysis is that the two groups are equivalent, and the rejection of the null hypothesis indicates significant difference in two groups. Especially, metric invariance is important to have before examining group difference in paths because rejection of null hypothesis in metric invariance test means each group perceived each measurement differently. If so, it would be meaningless to compare their results further. Therefore, null hypothesis of measurement invariance test is expected not to be rejected. The  $\chi^2$  statistic is used to examine these invariance tests.

**Testing the configural invariance.** The first step in testing multigroup invariance is testing the configural model to see if the number of factors and the pattern of the structure of the model are consistent between U.S. domestic students and East Asian international students. I developed two models based on TRA/PB and previous literatures in Counseling Psychology (Figure 3 and 4), and examine the fits for each group. The results are shown in Table 8.

Table 8

*Goodness-of-Fit Indices for Configural Invariance Tests in Multigroup Analysis*

Model description	$\chi^2$	$df$	$\Delta\chi^2$	$\Delta df$	CFI	TLI	RMSEA
Alternative model (Figure 4)							
Domestic students	544.24	245			.891	.877	.076
International students	423.51	245			.907	.895	.071
Hypothesized model (Figure 3)							
Domestic students	495.08	244	49.16***	1	.908	.896	.070
International students	384.47	244	39.03***	1	.927	.917	.063
Configural model (Baseline model)	879.60	488			.916	.905	.048

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

Following the standard for best practice in Structural Equation Modeling (Martens, 2005), an alternative model (Figure 4), without a path from Self-Stigma to Help-seeking Attitude, was also tested. Chi-square difference test indicated that the hypothesized model had a better fit to the data of both groups, compared to the alternative model. Thus, it was used as the baseline model for testing measurement and structural models in further analysis. The baseline  $\chi^2$  value was calculated by computing a model fit for two groups, yielding a  $\chi^2$  value of 879.60 with 488 *df* ( $p < .001$ ). The CFI, TLI, and RMSEA values are .916, .905, and .048, respectively. This value was used as a baseline value to see if the null hypothesis can be rejected or not, in subsequent metric and structural invariance tests. All factor loadings were statistically significant as shown in Table 9.

Table 9

*Standardized Factor Loadings*

Construct and observed indicators	U.S. Domestic students		East Asian International students	
	Standardized Estimate	Standard Error	Standardized Estimate	Standard Error
<b>Anticipated Benefits</b>				
be1 (item)	.741 <sup>***</sup>	.067	.746 <sup>***</sup>	.076
be2 (item)	.861 <sup>***</sup>	.064	.830 <sup>***</sup>	.070
be3 (item)	.814 <sup>***</sup>	.073	.811 <sup>***</sup>	.068
be4 (item)	.813 <sup>***</sup>	.064	.696 <sup>***</sup>	.073
<b>Public stigma</b>				
pus1 (item)	.613 <sup>***</sup>	.049	.807 <sup>***</sup>	.054
pus2 (item)	.585 <sup>***</sup>	.060	.597 <sup>***</sup>	.065
pus3 (item)	.822 <sup>***</sup>	.047	.793 <sup>***</sup>	.053
pus4 (item)	.661 <sup>***</sup>	.054	.661 <sup>***</sup>	.065
pus5 (item)	.719 <sup>***</sup>	.049	.822 <sup>***</sup>	.056
<b>Personal stigma</b>				
pes1 (item)	.808 <sup>***</sup>	.056	.852 <sup>***</sup>	.070



pes2 (item)	.858 <sup>***</sup>	.056	.905 <sup>***</sup>	.069
pes3 (item)	.764 <sup>***</sup>	.061	.863 <sup>***</sup>	.068
pes4 (item)	.870 <sup>***</sup>	.060	.892 <sup>***</sup>	.069
pes5 (item)	.554 <sup>***</sup>	.057	.816 <sup>***</sup>	.073
Self-Stigma				
SS1 (parcel)	.918 <sup>***</sup>	.041	.857 <sup>***</sup>	.044
SS2 (parcel)	.934 <sup>***</sup>	.037	.850	.044
Help-seeking Attitudes				
ATT1 (parcel)	.847 <sup>***</sup>	.028	.854 <sup>***</sup>	.034
ATT2 (parcel)	.802 <sup>***</sup>	.028	.715 <sup>***</sup>	.029
Perceived Behavioral Control				
pbc1 (item)	.529 <sup>***</sup>	.170	.393 <sup>***</sup>	.182
pbc2 (item)	.656 <sup>***</sup>	.158	.782 <sup>***</sup>	.185
pbc3 (item)	.617 <sup>***</sup>	.130	.572 <sup>***</sup>	.134
pbc 4 (item)	.415 <sup>***</sup>	.142	.508 <sup>***</sup>	.176
Help-seeking Intention				
INT1 (parcel)	.854 <sup>***</sup>	.036	.985 <sup>***</sup>	.068
INT 2 (parcel)	.928 <sup>***</sup>	.040	.774 <sup>***</sup>	.055

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

**Testing the metric invariance.** I tested the metric invariance across U.S. domestic students and East Asian international students with the configural model in order to determine if the scores on each variable have the same meaning across the groups. The baseline value that computed from the configural model testing above was compared with a constrained model that has all the factor loadings constrained as equal across groups. To do so, I labeled each factor loading with the letters. For example, I used the letters a1, a2, and a3 to label parcels of anticipated benefits equally across U.S. domestic and East Asian international students. As seen in Figure 8, the value of 1.00 is assigned to the first parcel of each measurement. Therefore, the first parcel is not labeled because this parameter is already equal to 1.00 across the two groups. Letter labeling on

the factor loading means constraining equal value across groups. If the constrained model is significantly different from the baseline model where all parameters are freely estimated across group,  $\chi^2$  difference would be significant. In other words, if the null hypothesis of  $\chi^2$  statistic, which the two models are equivalent, is rejected, I can conclude that the meanings of each variable are significantly different between U.S. domestic students and East Asian international students.

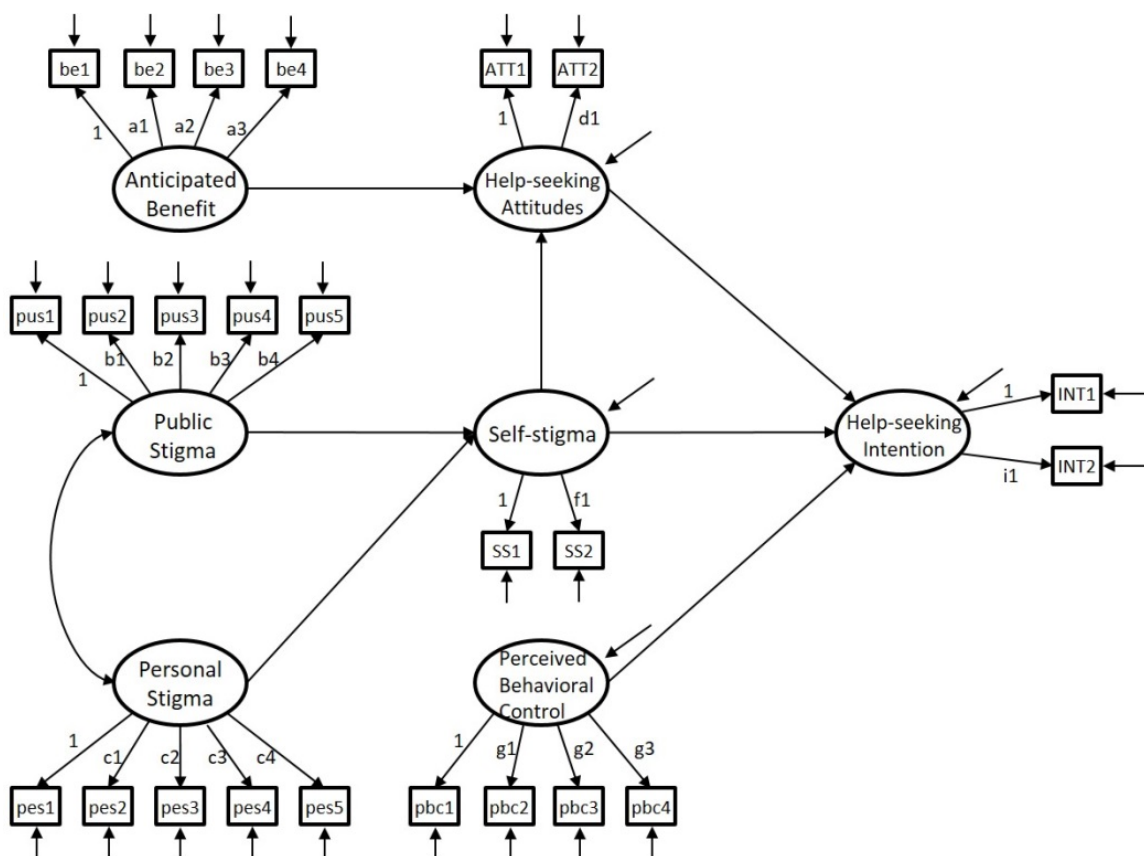


Figure 8. Model with equality constraints specified for all factor loadings. Note. Arrows indicate error variables.

The results indicated that two groups are equivalent (Table 10). The constraints increased the  $\chi^2$  value from 879.60 to 919.45, gaining 17 degrees of freedom. The  $\chi^2$  difference is 39.85, which is the baseline model's  $\chi^2$  value subtracts from the constrained

model's  $\chi^2$  value (i.e.,  $919.45 - 879.60 = 39.85$ ) with 17 degrees of freedom (i.e.,  $505 - 488 = 17$ ), is more than 27.59 at  $\alpha = .05$ . However, CFI, TLI, and RMSEA were not significantly worse (i.e., differences  $< .01$ ), so it can be acceptable (Cheung & Rensvold, 2002). Therefore, the null hypothesis cannot be rejected, and the models are eligible to test structural invariance.

Table 10

*Goodness-of-Fit Indices for Measurement Invariance Test in Multigroup Analysis*

Models	$\chi^2$	$df$	$\Delta\chi^2$	$\Delta df$	CFI	TLI	RMSEA
Baseline Model	879.60	488			.916	.905	.048
Constrained model (Measurement weights)	919.45	505	39.85***	17	.911	.903	.048

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

**Testing structural invariance.** I tested the structural invariance between domestic students and East Asian international students based on the results of metric invariance test. Measurement weights constrained model that I used in the previous procedure was used as a baseline model in this procedure. Then I placed equality constraints on all seven paths, and the  $\chi^2$  difference statistic was computed. The test of structural invariance yielded a  $\chi^2$  value of 942.28 with 513 degrees of freedom. The computation of the  $\chi^2$  difference between this model and the baseline model yielded a difference of 22.83 with the 8 degrees of freedom. The  $\chi^2$  difference value is statistically significant at  $\alpha = .05$  (C.R. = 15.51 with 8  $df$ ). This result indicates that there is at least one of the constrained paths in the model is likely variant across the two groups. To determine non-invariant paths in the model, I conducted series of invariance tests (Table 11).

Table 11

*Goodness-of-Fit Indices for Structural Invariance Tests*

Models	$\chi^2$	$df$	$\Delta\chi^2$	$\Delta df$	CFI	TLI	RMSEA
Baseline Model	919.45	505			.911	.903	.048
<b>Structural model</b>							
Model A: Baseline model with all factor covariance constrained equal	942.28	513	22.83***	8	.908	.901	.049
Model B: Baseline model with Benefits to Attitudes path coefficients constrained equal	919.74	506	.29	1	.911	.903	.048
Model C: Model B with Public stigma to Self-stigma path coefficients constrained equal	922.76	507	3.02	1	.911	.903	.048
Model D: Model C with Personal stigma to Self-stigma path coefficients constrained equal	939.37	508	6.61***	1	.907	.899	.049
Model E: Model C with Self-stigma to Attitudes path coefficients constrained equal	923.77	508	1.01	1	.911	.903	.048
Model F: Model E with Attitudes to Intention path coefficients constrained equal	923.99	509	.22	1	.911	.903	.048
Model G: Model F with Self-stigma to Intention path coefficients constrained equal	924.69	510	.70	1	.911	.904	.048
Model H: Model G with PBC to Intention path coefficients constrained equal	924.75	511	.06	1	.911	.904	.048
Model I: Model H with Public stigma to Personal stigma path coefficients constrained equal	926.95	512	2.20	1	.911	.904	.048

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

As seen in Table 11, the path from personal stigma to self-stigma was revealed as the significantly non-invariant path at  $\alpha = .05$ . Therefore, the final model is model I (Figure 9), which are all paths are equally constrained except the path between personal stigma to self-stigma, and its fit indices were  $\chi^2(512) = 926.95$ ,  $p < .001$ ; CFI = .911, TLI = .904, and RMSEA = .048.

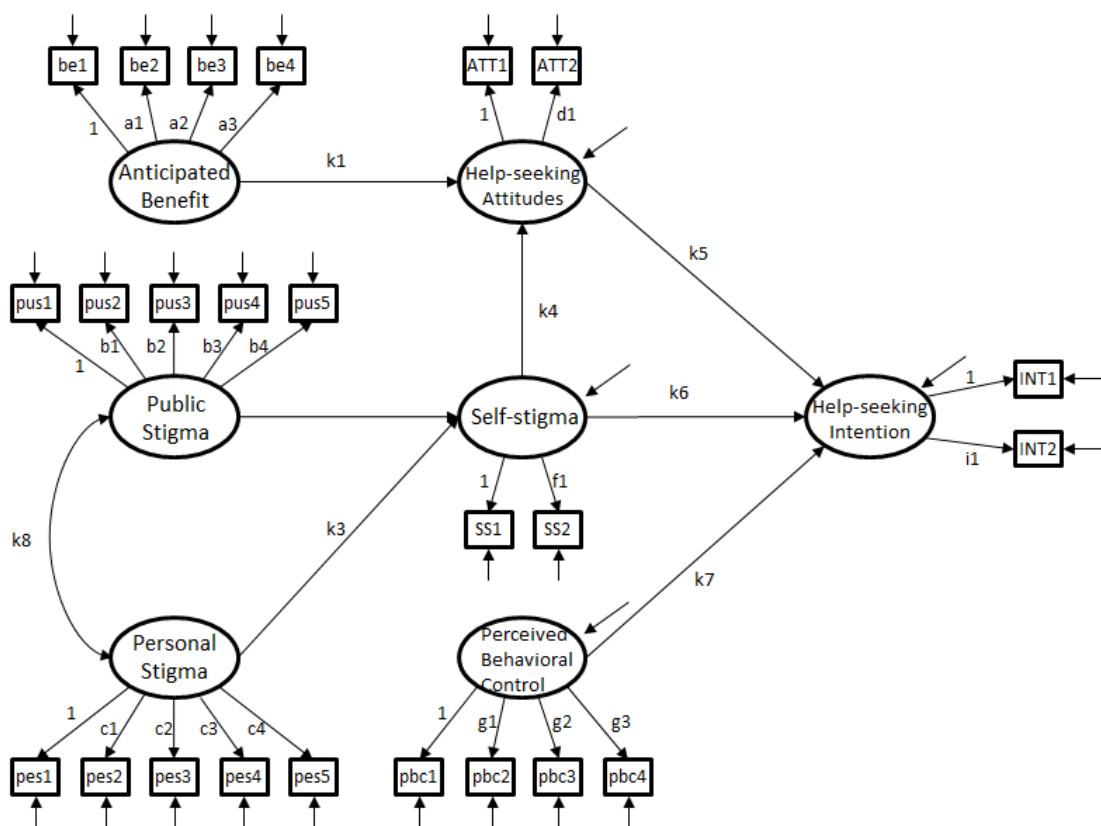


Figure 9. Model I: Final model.

Figure 10 shows standardized regression coefficients of seven paths and their significance at  $\alpha = .05$  among U.S. domestic and East Asian international student groups. In both groups, five paths (i.e., anticipated benefits to help-seeking attitudes, public stigma to self-stigma, personal stigma to self-stigma, self-stigma to help-seeking attitudes, and help-seeking attitudes to help-seeking intention) were significant, but two paths (i.e., self-stigma to help-seeking intention, perceived behavioral control to help-seeking intention) were not significant at  $\alpha = .05$ .

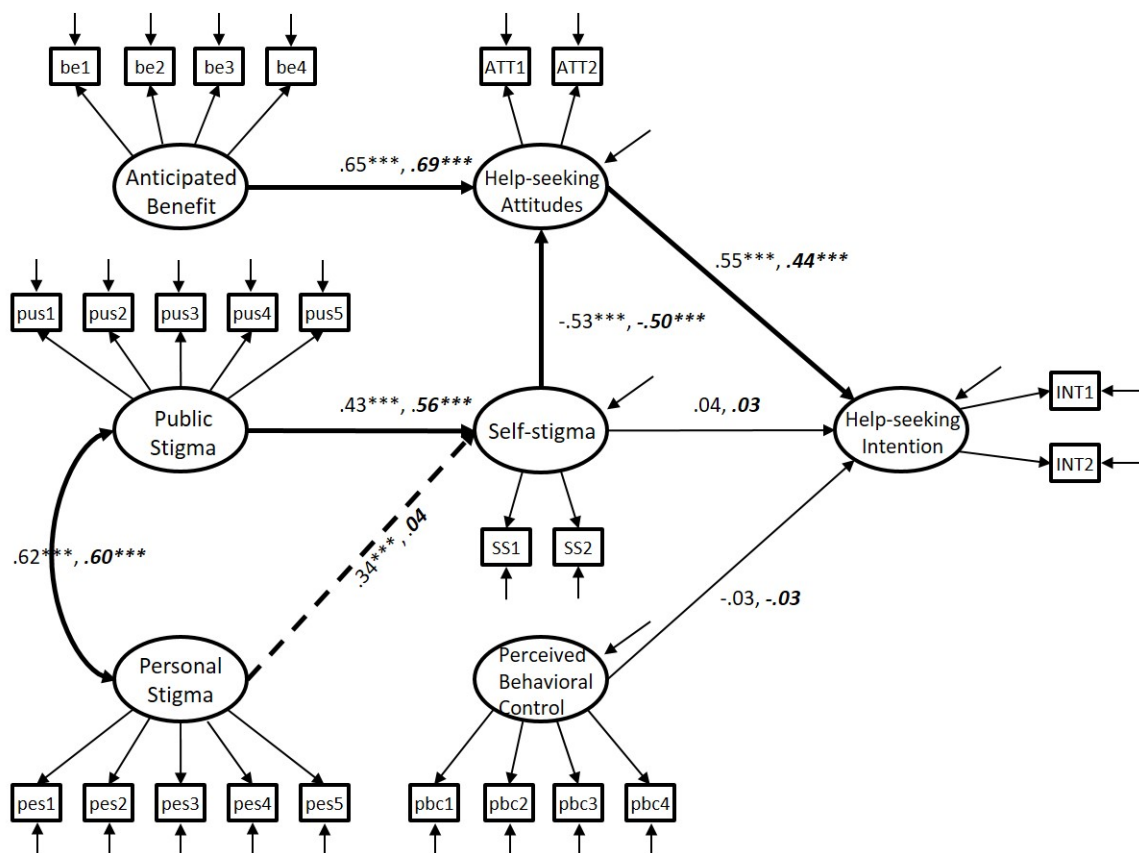


Figure 10. Parameter estimates of final model of partial structural invariance.

Note. Parameter estimates are standardized values. Bold lines indicate that the path coefficients are significant. A dotted line indicates non-invariant path. First numbers are U.S. domestic students; second bold and italic numbers are East Asian international students. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

To confirm the difference of path regression coefficient, I examined the critical ratio for difference of the personal stigma – self-stigma path between two groups. There was a significant difference between two groups regarding the personal stigma – self-stigma path coefficient at  $\alpha = .05$  ( $C.R. \geq 1.96$ ).

Table 12  
*Regression Coefficients on Hypothesized Paths*

Paths			Domestic	International	Critical ratios for differences
			Standardized regression coefficients	Standardized regression coefficients	
Anticipated benefits	→	Help-seeking attitudes	.65***	.69***	
Public stigma	→	Self-stigma	.43***	.56***	
Personal stigma	→	Self-stigma	.34***	.04	-3.941
Self-stigma	→	Help-seeking attitudes	-.53***	-.50***	
Self-stigma	→	Help-seeking intention	.04	.03	
Perceived behavioral control	→	Help-seeking intention	-.03	-.03	
Help-seeking attitudes	→	Help-seeking intention	.55***	.44***	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### Analysis of the Hypotheses

Based on the results above, the four hypotheses and four sub-hypotheses were analyzed. The first hypothesis predicted that the modified TRA/PB (Figure 3), which includes the Ludwikowski et al. (2009) model, would show better fits than the alternative model without the link between self-stigma and help-seeking attitudes (Figure 4) for both East Asian international student and U.S. domestic student groups. The results from the configural invariance test in multigroup analysis (see Table 5) show that the modified model has better fits than the alternative model. Therefore, hypothesis 1 was supported.

The second hypothesis was about mean differences between two groups: East Asian international students will show significantly more negative stigmas (i.e. public, personal, and self) and help-seeking attitudes, and less anticipated benefits, perceived behavioral control, and help-seeking intention than U.S. domestic students will do. Based

on the Latent Mean Analysis (LMA) results, this hypothesis was partially supported (see Table 7). In this study, East Asian international students reportedly have significantly more help-seeking intention and less self-stigma and perceived behavioral control. That is, East Asian international students intended to seek more help, tended to less self-stigmatize about seeking help, but perceived less behavioral control about help-seeking than U.S. domestic students. Differences on anticipated benefits, help-seeking attitudes, public stigma, and personal stigma between groups were not significant.

Hypothesis 3 and 4 were about the different magnitude of relations among the variables between two groups: help-seeking intention would be differently explained between two groups by significant direct and indirect relationships among public stigma, personal stigma, self-stigma, and help-seeking attitude, and significant association with perceived behavioral control. Specifically, hypothesis 3-a predicted that public stigma and personal stigma will be positively associated with self-stigma in East Asian international students. That is, high public stigma and high personal stigma will be associated with high self-stigma. This hypothesis was partially supported by the multigroup analysis results (see Figure 10). In fact, East Asian international student's personal stigma was positively associated with self-stigma, but it was not significant. Hypothesis 3-b said that East Asian international student's self-stigma would be negatively associated with their help-seeking attitudes and help-seeking intention. That is, high self-stigma will be associated with low help-seeking attitudes and low help-seeking intention. This hypothesis was also partially supported (see Figure 10). In this study, help-seeking intention was not related to self-stigma. According to hypothesis 3-c, East Asian international student's help-seeking attitudes will be positively associated with



help-seeking intention. That is, low help-seeking attitudes will be associated with low help-seeking intention. This hypothesis was supported by the multigroup analysis results (see Figure 10). Lastly, hypothesis 3-d hypothesized that East Asian international student's perceived behavioral control would be positively associated with help-seeking intention. That is, low perceived behavioral control will be associated with low help-seeking intention. However, based on the results of multigroup analysis, East Asian international student's perceived behavioral control did not increase or decrease their help-seeking intention.

Even though hypothesis 4 predicted U.S. domestic student's help-seeking intention would be mainly explained by significant association between anticipated benefits and help-seeking attitudes, it was not fully supported. Although U.S. domestic student's help-seeking intention was mainly explained by their help-seeking attitudes, their attitudes were correlated to not only anticipated benefits, but also three stigmas (i.e., public, personal, and self-stigma). There was no difference on magnitude of relations among variables between two groups, except personal stigma. In other words, self-stigma of East Asian international students in this study may not be influenced by their personal stigma, U.S. domestic student's self-stigma revealed to be impacted by personal stigma.

## CHAPTER 5 DISCUSSION

This chapter presents a discussion of the results of the study. I will first discuss the findings from the primary analysis as well as background information of the sample. I will then conclude the section with limitations and implications for research and practice.

### **Primary Analyses Findings**

The primary purpose of this study was to examine the potential differences between U.S. domestic students and East Asian international students in the United States in the relationships between their anticipated benefits, help-seeking attitude, public stigma, personal stigma, self-stigma, perceived behavioral control and their help-seeking intention. The results indicated that help-seeking intention was explained by the same hypothesized model in both groups, which was based on the Theory of Reasoned Action/Planned Behavior (TRA/PB; Ajzen, 2012) and the counseling psychology literature (Ludwikowski et al., 2009). On the contrary of the hypothesis, no significant group differences were found for most of the hypothesized paths, except one path (i.e., personal stigma to self-stigma). Additionally, the results revealed some mean differences in groups.

I hypothesized that East Asian international students were expected to show significantly more negative stigmas (i.e., public, personal, and self) and negative help-seeking attitude, as well as significantly less anticipated benefits, perceived behavioral

control, and help-seeking intention, compared to their U.S. domestic counterparts. However, incongruent with these hypotheses and the existing literature (Masuda et al., 2009, Narikiyo & Kameoka, 1992; Sue & Sue, 2008), Latent Mean Analysis (LMA) of the current study data revealed that the East Asian international student participants reported significantly more help-seeking intention and less self-stigma towards counseling, in comparison to the studied U.S. domestic students. Perceived behavioral control was the only variable that was consistent with the hypothesis; East Asian international students in this study reported significantly less perceived behavioral control. That is, East Asian international students were less certain if they can seek counseling when they had mental health issues (e.g., depression, anxiety) than U.S. domestic students were. However, they were less likely to internalize stigma towards seeking psychological help when they needed to seek help from counseling, compared to the U.S. domestic students. In fact, the international students in the current study reported wanting to seek counseling more than the U.S. domestic students did. These results were inconsistent with most previous research findings (Masuda et al., 2009; Narikiyo & Kameoka, 1992; Sue & Sue, 2008). These unexpected findings may be explained by characteristics of the current sample and the East Asian international student's unique life situation. Particularly, graduate student participants (49.3%) were the majority of the East Asian international student sample, whereas the majority of the U.S. domestic student sample was senior college students (32.4%). Additionally, the two groups seemed to be varied in regard to their age. Majority of the U.S. domestic students (87.3%) were reportedly in in the traditional college student age range (18-23), whereas only 46.8% of East Asian international student participants were in the same age range (18-23). Given

that most existing literature on this topic was based on undergraduate student sample (e.g., Chen & Mak, 2008; Narikiyo & Kameoka, 1992), it is possible that these unique characteristics of the current sample might influence the higher help-seeking intention. This higher level of help-seeking intention is explainable considering graduate students, or older college students' different life demands and related stress level (Hyun et al., 2006).

Although the mean differences between other variables in the study were not significant, they were rather thought-provoking. For example, East Asian international students in this study reported less public stigma and more anticipated benefits and positive help-seeking attitude than U.S. domestic students. Despite the non-statistically significant group difference, it is still worth noting such finding because of its difference from previous knowledge and research findings (Chen & Mak, 2008; Dadfar & Friedlander, 1982; Golberstein, Eisenberg, & Gollust, 2008; Tedeschi & Willis, 1993; Yoon & Jepsen, 2008). Historically, Asian students are known to have more stigma and negative attitude towards counseling, and less help-seeking intention (Narikiyo & Kameoka, 1992; Sue & Sue, 2008). Consistent with this previous research findings, Golberstein, Eisenberg, and Gollust (2008) found that public stigma was significantly higher among Asian and international students. A possible explanation for this inconsistent trend in the current study may be that there have been recent cultural changes and increased acceptance towards counseling in younger generations in East Asian countries (e.g., Korea, China) where most of the international student participant in this study originally moved from (Denney, 2015; Gao, 2015). Majority of the international students in the current study self-identified as Chinese or South Korean international

students. Lee, Suh, Yang, and Jang (2012) reported the counseling profession in South Korea has been enormously grown over the past 20 years, and social demand for counseling has greatly increased and expanded. Similarly, Lim, Lim, Michael, Cai, and Schock (2010) discussed that there has been some progress on providing mental health care in China, even though the ratio of counselors to the population is still very low compared to the U.S. Such findings suggest that the current situation and outlook on mental health and psychological services utilization may be changing in the positive direction. Therefore, further investigation focusing on the current generation of East Asian international students would be necessary to confirm this finding. Furthermore, as previously discussed, the characteristics of the sample in this study (e.g., ratio of graduate students in the current international student sample) can be another reason for this unexpected finding. For example, previous studies about international student's help-seeking were mostly conducted with undergraduate students (e.g., Chen & Mak, 2008; Narikiyo & Kameoka, 1992). The current study finding draws our attention for the further cross-cultural studies that may also address this within group difference (i.e., graduate versus undergraduate).

The present study hypothesized the different magnitude of relations to help-seeking intention among the variables between two groups (Hypothesis 3 and 4). Overall, the results revealed that help-seeking attitude was the main factor that explained help-seeking intention in this study. This finding is consistent with Fishbein and Ajzen (2010)'s TRA/PB theory suggesting that attitudes are the strongest available predictor of individuals' intentions. However, in contrary to the hypothesis about significant differences between East Asian international and domestic students in the U.S., there was

no difference between two groups on magnitude of relations of the variables, except one link from personal stigma to self-stigma. That is, U.S. domestic student's and East Asian international student's help-seeking intentions were both influenced by help-seeking attitudes, and their help-seeking attitudes were equally influenced by anticipated benefits and their stigmas. Hypothesis 3 stated that East Asian international student's help-seeking intention would be explained by significant direct and indirect relationships among public stigma, personal stigma, self-stigma, and help-seeking attitude, and significant positive association with perceived behavioral control. Therefore, hypothesis 3 and its sub-hypotheses regarding East Asian international students were partially supported except insignificant association of personal stigma to self-stigma and perceived behavioral control to help-seeking intention. Also, hypothesis 4 and its sub-hypotheses regarding U.S. domestic students were supported because hypothesis 4 expected that U.S. domestic student's help-seeking intention would be explained by significant association between anticipate benefits and help-seeking attitudes. However, associations between three stigmas and help-seeking attitude were also found as significant. Such results showed that both U.S. domestic and East Asian international student participant's perceived benefits about counseling and their self-stigma strongly influencing their attitudes towards counseling, and their attitude was the strongest determinant of their intention to go to counseling, regardless their existing stigmas or perceived behavioral control. For example, even though a student may hold some stigma towards counseling or is less confident that he/she can seek counseling if needed, he/she can still keep a positive attitude towards counseling and wants to seek help when it is needed, if he/she sees more benefits in receiving counseling.

It is important to note that self-stigma and perceived behavioral control had no significant direct influence on help-seeking intention. In other words, self-stigma may impact one's attitude, but self-stigma per se may not change one's intention to seek counseling services. Additionally, the results show that current knowledge about counseling resources (i.e., perceived behavioral control) may not interfere or promote their willingness to go to counseling. According to Ajzen (2012), intention is referred as an indication of a person's readiness to perform a given behavior, and it is considered to be the immediate predictor of actual volitional behavior (i.e., actual utilization of counseling in this study). This study showed that the current knowledge about counseling resources is not related to individual's readiness to utilize counseling services. That is, even though East Asian international students may be less knowledgeable how to utilize counseling services on their campus, but still they are reportedly willing to get counseling services when they imagine they have interpersonal and/or psychological issues (e.g., loneliness, depression, anxiety, etc.). Therefore, unlike the TRA/PB's suggestion, individual's perceived behavioral control may not be related to one's help-seeking intention, but one's actual help-seeking behavior. Future research may consider adding one's actual help-seeking behavior (e.g., past counseling experience on campus) examine this relationship.

In addition, the multigroup analysis showed that the extent of association between the personal stigma and self-stigma was significantly different between the two groups. Specifically, East Asian international student's personal stigma had significantly less influence on self-stigma compared to those of U.S. domestic students. Personal stigma is the variable that directly reflects subjective norm in TRA/PB model. Therefore, the

potential explanations for this multigroup analysis result are worth to explore. The current result is inconsistent from the results in Hess and Tracey (2013)'s TRA/PB study regarding help-seeking intention. Particularly, these researchers examined the influence of help-seeking attitude, subjective norm, and perceived behavioral control regarding therapy and self on help-seeking intention. In their study, subjective norm was the strongest factor amongst variables (i.e., attitude and perceived behavioral control). In the present study, the direct path from self-stigma to help-seeking intention was not significant. However, this result is consistent with Vogel, Wade, and Hackler (2007)'s finding with 680 U.S. undergraduate participants using the same measurements for the variables (i.e., self-stigma, help-seeking attitude, and help-seeking intention). Their findings suggest that relations between perceived public stigma towards mental illness and help-seeking intention are fully mediated by self-stigma and help-seeking attitudes. In their study, the link from self-stigma to help-seeking intention was not significant, as the present study result showed. This incongruence between Hess and Tracey's results and the current study can be explained in two ways. One possible explanation may be connected to the different definitions of self-stigma and subjective norm. As discussed previously in the Chapter two, self-stigma is about internalization of stigma or subjective norm (Corrigan, 2004; Vogel, Wade, & Hackler, 2007). This study added self-stigma in the model as an effort to integrate findings from counseling psychology literature. In this study, the hypothesized model, which includes self-stigma, showed a good fit for the current sample. Future study may need to closely examine the function of internalization of stigma in explaining help-seeking intention. Another possible reason is different measurements. Hess and Tracey developed three items for subjective norm based on the



guidelines from Ajzen (2006). In this study, the Perceptions of Stigmatization by Others for Seeking Psychological Help Scale (PSOSH; Vogel, Wade, & Aschman, 2009) was used. The PSOSH is to measure being stigmatized by significant others in seeking counseling (Vogel et al., 2009). Even though other studies also used the PSOSH to measure subjective norm in TRA model (e.g., Yakunina, 2012), the instructions of the two measurements (i.e., social norm questions and PSOSH) are quite different. This difference may mislead participants and resulted in different responses. For example, the instruction of the PSOSH includes the following statement, “imagine you had a problem that needed to be treated by a mental health professional. If you sought mental health services, to what degree do you believe that the people you interact with would \_\_\_\_.” Although this scale is developed to measure perceived stigma by significant others, the instruction states significant others as “the people you interact with.” On the other hand, the instruction of the items Hess and Tracey developed to measure subjective norm includes the following statement, “most people who are important to me think \_\_\_\_”. As shown in this statement, this instruction stated significant others as “people who are important to me”. Especially with East Asian international students, “the people they interact with” and “the people who are important to them” can be very different due to the nature of their living situation. Most of East Asian international students live apart from their family and close friends in their home country. Therefore, the PSOSH might not measure significant others’ perception of help-seeking behaviors, especially for East Asian international students in this study, so it may not strongly influence their help-seeking intention.

Even though it is not included in primary analysis, findings from additional questions in demographic questionnaire are noteworthy. Both U.S. domestic students and East Asian international students were asked if they had used counseling services, if they knew what student services were available on campus for mental health issues (e.g., depression, anxiety), and if they knew how to utilize counseling center services near their campus. Regarding their previous counseling experience, approximately 45% of U.S. domestic students and 33.3% of East Asian international students reported they had used counseling services in the past. It is unclear when and where they got services in the past; however, it is impressive that almost half of the U.S. domestic student participants and one third of the East Asian international student participants had previous counseling experience. Unfortunately, 75.4% of East Asian international students responded that they did not know how to utilize counseling services near their campus. It is consistent with their lower mean scores on the perceived behavioral control in this study. Even though this study's results revealed that individual's belief about their ability to utilize counseling services did not directly impact their willingness to seek help, this finding may still be informative to mental health professionals in university counseling centers. Furthermore, majority of the East Asian international students ( $n = 124$ , 89.2%) reported that they would consider going to a counseling center if a counselor at the counseling center can speak their native language. This response may imply that language could be another strong barrier for them not seeking help in their moment of need, which is consistent with previous studies (Sentell, Shumway, & Snowden, 2007; Tedeschi & Willis, 1993; Yoon & Jepsen, 2008). Future research may explore the effect and role of spoken language in international student's help-seeking behavior. For example, a research question may

include if the presence of a counselor who speaks the same language increase the actual service utilization among international students.

### **Limitations**

Despite this study's contribution to the literature, some of its limitations should be noted. The first limitation is the relatively small sample size of the East Asian international students. The study was originally designed to recruit more than 200 East Asian international students. Although the researcher has engaged in two waves of recruitment and data collection, with the survey being sent to a total number of 3,000 undergraduate and graduate students at Purdue University (to both domestic and international students), and student organization listserv (e.g., Purdue Korean Association) as well as posted on social media (e.g., Facebook), only 146 East Asian international students fully completed the survey. It may not be unusual based on the percentage of the East Asian international student population on campus compared to the U.S. domestic students at Purdue University. Even though Purdue University was placed as the second rank of international student enrollment in U.S. public institution in Fall 2014 (e.g., 23.4% of the general student population) and the majority of the international students were from East Asian countries (e.g., China, 51%; South Korea, 8%; Taiwan, 2%; Purdue University, 2015), still the chances of getting the recruitment email might be much lower compared to those of the U.S. domestic students (e.g., 76.6% of the general student population).

Additionally, as Sills and Song (2002) suggested, the length and the language of the survey may be another determining reason for the current study's low response rate among East Asian international students. East Asian international students were asked to

answer 71 items (compared to 69 items for U.S. domestic students), and some items were relatively longer (e.g., PBC items), which was asked at the beginning of the survey than other items in the survey. Because the students' native languages are not English, questionnaire in English may be perceived as too much effort for some students. For example, 319 international students originally attempted to take this survey, and 103 students withdrew right after opening the survey. Additionally, 25 students gave up in the middle of the first set of the measurements (i.e., Help-seeking intention), and the 44 students quit from the survey after completing the PBC questions. In other words, 39.9% of the students who withdrew the survey attempted to participate, however, give up after putting some efforts. This relatively high percentage of survey withdrawal rate suggested that international student's perceived language barrier may play an important role for this kind of cross-cultural study. That is, it reflects difficulty recruiting East Asian international students for cross-cultural studies despite importance of the research to help them better. Asian international student's low response rate has been reported frequently in the past, even with a paper survey and in-person contact (Tedeschi & Willis, 1993). Future research may need to consider using multiple strategies to recruit more international students. For example, Sills and Song suggested addressing the potential respondent by their names and additionally explained the importance of the survey as well as collecting paper surveys from an international student fair on campus. Additionally, this study used a highlighter as compensation. Even though it intended to equally give all participants a small compensation within a limited budget instead of using lottery compensation, it did not seem to be successful to attract students because only 52 participants out of 369 participants claimed the highlighter. Therefore, it may be

another explanation of the low response rate, especially among East Asian international students. Future research may consider using other compensation methods, such as lottery compensation or a dollar donation to various charity options.

Moreover, the second limitation of the current study is in the nature of snowballing sampling method and self-selection bias. The participants might be students who were interested in a web survey or the study's variables, which are related to stigma or counseling or helping others. That is, this sample of participants might be already biased toward lower stigmas regarding counseling and higher desire for counseling than a more general student population on campus. Moreover, the online data collection may have some influence on the results. In general, online surveys have numerous advantages. For example, they eliminate time and space boundaries, data entry, and postage and copying expenses so that they are easy to administer and quickly reach a large population (Tuten, 2010). However, despite these benefits, there are always risks of errors. Tuten (2010) described four types of potential errors in online surveys: coverage error, sampling error, nonresponse error, and measurement error (see Tuten, 2010 for greater detail). Coverage error may be less concerning in this study because all the students at the school have a chance of being selected. The biggest error for this study is nonresponse error, which includes inaccessibility, technical artifacts, and disabled features in the survey. Especially, if the participants tried to complete the survey via smart phone, again, the length of the questions and the entire survey could be one of the major barriers for participants because of the potential technical artifacts.

Third, all measurements were self-report measures; although all measurements except the Perceived Behavioral Control are broadly used in Counseling Psychology (e.g.

Komiya et al., 2000; Vogel, Wade, & Hackler, 2007), they still have limitations due to the self-report nature. Self-report measures are subjective and can be influenced by participant's condition and thoughts at the moment. Although all variables in this study cannot be perfectly observed in nature, observational studies might produce different findings.

Fourth, Perceived Behavioral Control (PBC) measure was developed based on the guidelines provided by the original authors. It was recommended to customize to the target behavior and population by TPB theorists and the item construction procedure is thoroughly guided by the TPB reference for item construction (Fishbein & Ajzen, 2010). Due to this nature of the item development, there was not sufficient information about its psychometric information. The current result shows that the PBC was not related to any other variables in this study, and has the lowest reliability (Cronbach's  $\alpha = .63$ ). Because it is a newly created questionnaire based on the guidelines, it is still unclear if the insignificant result is completely free from the potential reliability and validity issues. More rigorous item analysis and scale validation may be needed prior to using this variable and the questionnaire in future research.

Fifth, given that few U.S. domestic student participants were from racially or ethnically diverse populations in this study (i.e., 84.3% White students versus 15.7% non-white students), care should be exercised in generalizing results to diverse populations. Moreover, this study only targeted East Asian international students among the international student population in order to investigate a clear set of cultural differences. Therefore, this result should not be generalized to other international students from other regions (e.g., South America, South Asia). Moreover, it is most likely that cultural

differences regarding help-seeking attitudes exist within East Asian international students. Especially, China and South Korea seem to be different in terms of their availability of mental health services (e.g., Lee et al., 2012, Lim et al., 2010). Future research should examine this relationship among various national groups.

Lastly, 97.9% of the East Asian international student participants were from China and South Korea. The enrollment proportion of the South Korean students and Chinese students in 2014 at Purdue University are 8% and 51%, respectively (Purdue University, 2015). The breakdown of East Asian international students in this study was not reflective of this enrollment trend. There were more South Korean participants (49.3%) than Chinese participants (48.6%) in this study, which may be influenced by the recruitment methods (i.e., additional email from the Korean Association) and the researcher's nationality. The same request to Chinese student organization at Purdue University was sent as well. However, the request was not responded despite several request attempts. Future research should be performed with enough samples in diverse groups.

### **Implications for Research and Practice**

This study has several implications for research and practice. First, the results of the current study contribute to help-seeking literature and research. This study is the first study to integrate TRA/PB model in social psychology and help-seeking literature from counseling psychology. The results revealed the usefulness and applicability of the TRA/PB model in explaining both U.S. domestic and East Asian international student's help-seeking intention. Especially, the results of this study confirmed that attitude is the strongest factor that predicts individual's willingness to take an action, as Fishbein and Ajzen (2010) proposed. Also, this study focused on particularly East Asian among

international students and compared their help-seeking intention and other related psychological factors to those of U.S. domestic students. Even though within group differences may still exist, this study provides some reference to future researchers that East Asian international student's help-seeking intention may be different from other international students from different regions and cultures, and their help-seeking intention and stigmas may have changed over times (e.g., Narikiyo & Kameoka, 1992; Sue & Sue, 2008).

As discussed earlier, within group cultural experience should be examined for clearer understanding of East Asian international students' help-seeking behavior. One way in which future research can clarify the current findings would be to examine the relative influence of culture (e.g., acculturation, enculturation, and cultural values) on the help-seeking process. Several studies found that cultural values (e.g., Asian value; Chen & Mak, 2008, Kim & Omizo, 2003, Kim, 2007; Yakunina & Weigold, 2011) and acculturation (Yakunina & Weigold, 2011) influence help-seeking attitudes and intentions. Therefore, further research is needed to examine how cultural values or level of acculturation or enculturation can explain East Asian international student's help-seeking process based on TRA/PB model.

Even though East Asian international student's help-seeking intention is higher than those of U.S. domestic students, their actual utilization seems to be still lower than U.S. domestic students (33.3% of East Asian international students versus 45% the US domestic students of previous counseling experience). This difference is consistent with Hwang, Bennett, and Beauchemin (2014)'s finding and may suggest another important variable that strongly influence East Asian international student's actual utilization of



mental health services, such as their perceived needs of mental health services. Eisenberg, Golberstein, and Gollust (2007) found that international students reported significantly low perceived needs for mental health services, but there was no difference in service use compared to other non-international ethnic groups. That is, in contrary to the previous knowledge, East Asian international students may not be hesitant to seek mental health services when they perceive needs for mental health services. However, they may not think that they have a problem to seek help from mental health professionals, so they may not be seen in mental health agencies. This explanation can support East Asian international student's higher help-seeking intention in the current study. Although Ajzen (2012) proposed that intention is an immediate predictor of actual volitional behavior (i.e., actual help-seeking behavior), it may not be the case for East Asian international students. They were asked what extent they would seek help from the mental health professional when they have a given issue in ISCI questionnaire (e.g., depression, loneliness). The answer can be based on their assumption if they have problems, but it does not reflect if they perceive the problem as their current psychological need. In sum, even though East Asian international student's underutilization of mental health services is broadly acknowledged in mental health professionals, in fact, they may be willing to get mental health services when they think they have problems. Therefore, future research needs to consider East Asian international student's perceived needs and self-awareness of the mental health problems when examining their help-seeking process.

In terms of clinical implication, this study confirmed that East Asian international student's anticipated benefits, public stigma, and self-stigma negatively influence their help-seeking attitudes, and in turn, these help-seeking attitudes positively influence their

intention to seek help. This is almost identical with U.S. domestic student's help-seeking, except U.S. domestic student's self-stigma may be influenced by their personal stigma more than East Asian international student's is. This result indicates U.S. domestic students also have similar extents of stigmas as East Asian international students have. Therefore, similar emphasis can be made when in outreach activities targeting U.S. domestic students and East Asian international students about available mental health services on campus. In other words, informing potential benefits of counseling and addressing public stigma in outreach activities (e.g., student orientation, workshop, classes, or student fairs) will be important to change individual's attitude towards mental health services. In addition to this result, additional information from demographic questions in this study suggested that it would be important to emphasize how to utilize counseling services for East Asian international students, because even though they want to get services when they have problems (i.e., high help-seeking intention among East Asian international student in this study), 75.4% of them reported that they do not know how to utilize counseling services on their campus. Moreover, as discussed earlier, East Asian international student's underutilization of counseling services may be strongly related to their tendency to minimize their psychological issues, which should be addressed in future research. Therefore, continuous efforts for increasing self-awareness of individual's psychological needs (e.g., possible counseling topics, when they need to seek help for their issues, what is a red flag for their mental health) and addressing how to utilize counseling services on campus would be especially important for East Asian international students.

The findings of the current study are encouraging for the practitioners at the college counseling center. In this study, East Asian international students' attitude toward seeking counseling services was generally as positive as U.S. domestic students' attitudes ( $M = 2.67$ ,  $SD = .44$  for East Asian international students;  $M = 2.60$ ,  $SD = .57$  for U.S. domestic students). Furthermore, East Asian international students in this study reported significantly higher willingness to seek help for their interpersonal issues than U.S. domestic students do ( $M = 2.30$ ,  $SD = .57$  for East Asian international students;  $M = 2.09$ ,  $SD = .62$  for U.S. domestic students). This result challenges previous knowledge that Asians and international students have negative attitude towards seeking help and less willing to seek help when they encounter problems (Chen & Mak, 2008; Dadfar & Friedlander, 1982; Golberstein, Eisenberg, & Gollust, 2008; Tedeschi & Willis, 1993), but this result may reflect the efforts of the college counseling center's continuous efforts for reaching out to this population.

Lastly, East Asian international student's low perceived behavioral control and their willingness to get counseling if they can speak their native language in counseling suggested that their language barrier or cultural unfamiliarity can be a real barrier when they need to utilize counseling service. Also, East Asian international student's dropout rate in the middle of the current survey (40.1%) supports that language barrier may significantly interfere their participation in activities that are conducted in English. Therefore, college counseling centers may consider hiring competent bilingual counselors to serve this population. This is particularly important for college campuses with a significantly large East Asian international student population. Additionally, to strengthen their multicultural and bilingual counseling services, college counseling center may

consider expanding psychoeducational outreach by training peer counselors who are willing to help others and can speak other languages fluently. In fact, Lim et al. (2010) suggested that psychoeducation in self-help classes or workshops addressing anxiety, stress management, or healthy relationship will be more effective for Chinese people. Therefore, training competent bilingual peer counselors or mentors to expand bilingual outreach can be an effective way to serve East Asian international students, not only in terms of addressing language issues but also considering potential cultural values.

### **Conclusion**

This study contributed to the help-seeking literature in two different student groups (i.e., U.S. domestic students and East Asian international students). The results suggested that anticipated benefits and self-stigma both influence help-seeking attitude, and the help-seeking attitude is the strongest factor that influence help-seeking intention. Overall, the study revealed that U.S. domestic and East Asian international student's help-seeking attitudes are both influenced by anticipated benefits and self-stigma, and in turn, the help-seeking attitude is the only significant factor to predict help-seeking intention. Furthermore, East Asian international students reported significantly more help-seeking intention, less self-stigma towards counseling, and less perceived behavioral control than U.S. domestic students. Because Theory of Reasoned Action/Planned Behavior (Ajzen, 2012) began to be used in recent studies in Counseling Psychology (Hess & Tracey, 2013), integrating findings from help-seeking literature in Counseling Psychology and this theoretical framework is meaningful. This study also focused on cross-cultural comparison, particularly focusing on East Asian international students.

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## APPENDICES

## Appendix A: IRB



HUMAN RESEARCH PROTECTION PROGRAM  
INSTITUTIONAL REVIEW BOARDS

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**To:** AYSE CIFTCI  
BRNG

**From:** JEANNIE DICLEMENTI, Chair  
Social Science IRB

**Date:** 11/20/2014

**Committee Action:** Exemption Granted

**IRB Action Date:** 11/20/2014

**IRB Protocol #:** 1411015456

**Study Title:** Help-seeking intention among college students: cross-cultural study between East Asian students and domestic students in the United States

The Institutional Review Board (IRB) has reviewed the above-referenced study application and has determined that it meets the criteria for exemption under 45 CFR 46.101(b)(2).

If you wish to make changes to this study, please refer to our guidance "**Minor Changes Not Requiring Review**" located on our website at <http://www.irb.purdue.edu/policies.php>. For changes requiring IRB review, please submit an **Amendment to Approved Study** form or **Personnel Amendment to Study** form, whichever is applicable, located on the forms page of our website [www.irb.purdue.edu/forms.php](http://www.irb.purdue.edu/forms.php). Please contact our office if you have any questions.

Below is a list of best practices that we request you use when conducting your research. The list contains both general items as well as those specific to the different exemption categories.

#### General

- To recruit from Purdue University classrooms, the instructor and all others associated with conduct of the course (e.g., teaching assistants) must not be present during announcement of the research opportunity or any recruitment activity. This may be accomplished by announcing, in advance, that class will either start later than usual or end earlier than usual so this activity may occur. It should be emphasized that attendance at the announcement and recruitment are voluntary and the student's attendance and enrollment decision will not be shared with those administering the course.
- If students earn extra credit towards their course grade through participation in a research project conducted by someone other than the course instructor(s), such as in the example above, the students participation should only be shared with the course instructor(s) at the end of the semester. Additionally, instructors who allow extra credit to be earned through participation in research must also provide an opportunity for students to earn comparable extra credit through a non-research activity requiring an amount of time and effort comparable to the research option.
- When conducting human subjects research at a non-Purdue college/university, investigators are urged to contact that institution's IRB to determine requirements for conducting research at that institution.
- When human subjects research will be conducted in schools or places of business, investigators must obtain written permission from an appropriate authority within the organization. If the written permission was not

## Appendix B: Recruitment email

Dear Purdue Student,

My name is Jiyun Kang, and I am a doctoral student in Counseling Psychology at Purdue University. I am currently conducting a study (under the supervision of my advisor, Dr. Ayse Ciftci) to assess college students' attitudes about seeking counseling. If you are 18 years of age or older and meet one of the categories below, I would greatly appreciate your thoughts and perspectives.

- a) **Domestic student:** I am a U.S. citizen, born in the U.S., and speaks English as a first language (Should meet all three criteria).
- b) **East Asian international student:** I am from East Asian countries (i.e. China, South Korea, Taiwan, Japan, Mongolia, or Macau), hold valid student visa (e.g. F-1, J-1), and do not have English as my first language (Should meet all three criteria).

The purpose of this study is to understand the reason that college students, especially East Asian international students may not come to counseling. I believe the research I'm conducting may benefit society and the field of counseling. If you are interested, please complete the on-line survey by following the web link below.

[https://purdue.qualtrics.com/SE/?SID=SV\\_4UcnT1q6JMbpI1L](https://purdue.qualtrics.com/SE/?SID=SV_4UcnT1q6JMbpI1L)

The survey consists of a questionnaire, seven attitudinal measures and demographic information. It will take about 5-10 minutes to complete the study. The survey is anonymous, and your participation is completely voluntary. You may, of course, withdraw from it at any time. Additionally, you may skip any survey items that you want.

All participants for this study can get a Sharpie highlighter as an incentive if they want.

If you choose to receive a highlighter, you can simply request it by putting your email address in a separate page at the end of the survey. Your email address will not be connected to your responses, and only use for announcing the location for receiving a highlighter. You will receive the highlighter after you check your email address on the list at the location, and the email list will be deleted at the end of the data collection.

Again, there is no way to know who you are as well as which item is yours.  
Thank you very much for helping me with this research.

Jiyun Kang, kang52@purdue.edu  
Ayse Ciftci, ayse@purdue.edu

## Appendix C: Follow-up email

Dear Purdue Student,

My name is Jiyun Kang, and I am a doctoral student in Counseling Psychology at Purdue University. I am currently conducting a study (under the supervision of my advisor, Dr. Ayse Ciftci) to assess college students' attitudes about seeking counseling. If you are 18 years of age or older and meet one of the categories below, I would greatly appreciate your thoughts and perspectives.

- a) **Domestic student:** I am a U.S. citizen, born in the U.S., and speaks English as a first language (Should meet all three criteria).
- b) **East Asian international student:** I am from East Asian countries (i.e. China, South Korea, Taiwan, Japan, Mongolia, or Macau), hold valid student visa (e.g. F-1, J-1), and do not have English as my first language (Should meet all three criteria).

The purpose of this study is to understand the reason that college students, especially East Asian international students may not come to counseling. I believe the research I'm conducting may benefit society and the field of counseling.

Thank you—if you have already responded. If you have not, please consider participating in my study. If you are interested, please complete the on-line survey by following the web link below.

[https://purdue.qualtrics.com/SE/?SID=SV\\_4UcnT1q6JMbpI1L](https://purdue.qualtrics.com/SE/?SID=SV_4UcnT1q6JMbpI1L)

The survey consists of a questionnaire, seven attitudinal measures and demographic information. It will take about 5-10 minutes to complete the study. The survey is anonymous, and your participation is completely voluntary. You may, of course, withdraw from it at any time. Additionally, you may skip any survey items that you want.

All participant for this study can get a Sharpie highlighter as an incentive if they want. If you choose to receive a highlighter, you can simply request it by putting your email address in a separate page at the end of the survey. Your email address will not be connected to your responses, and only use for announcing the location for receiving a highlighter. You will receive the highlighter after you check your email address on the list at the location, and the email list will be deleted at the end of the data collection.

Again, there is no way to know who you are as well as which item is yours.

Thank you very much for helping me with this research.

Jiyun Kang, kang52@purdue.edu

Ayse Ciftci, ayse@purdue.edu

## Appendix D: Facebook Post

Hello! I am conducting research on college students' attitudes about seeking counseling. In order to participate, you must be East Asian international student whose first language is not English or domestic student who is a U.S. citizen and speaks English as a first language. This survey will take approximately 5-10 minutes. A highlighter is given to each participant who requests by the end of this survey. Thank you! [Link to survey]

kang52@purdue.edu

## Appendix E: Web-survey Consent Form

**RESEARCH PARTICIPANT CONSENT FORM**

College Students' Attitudes towards Help-Seeking

Ayse Ciftci, Ph.D.

Department of Educational Studies

Purdue University

**What is the purpose of this study?**

The purpose of this study is to better understand domestic and East Asian international students' attitudes towards counseling and help-seeking.

**What will I do if I choose to be in this study?**

If you agree to participate in this study, you will be asked to complete questionnaires including a demographic questionnaire. Instructions will ask you to rate items on a provided scale. You will submit your responses when completed.

**How long will I be in the study?**

The completion of the questionnaire will take approximately 10 minutes.

**What are the possible risks or discomforts?**

There is a risk of breach of confidentiality. Otherwise the risks are not more than you would encounter in everyday life.

**Are there any potential benefits?**

Your participation may not directly benefit you. However, the resulting research may benefit society indirectly by furthering our understanding about the attitudes domestic and East Asian international students have about counseling. It may also aid the counseling psychology profession in better serving students like you.

**Will I receive payment or other incentive?**

You can receive a Sharpie highlighter if you want. At the end of the survey, you can choose to go to the separate survey page and put your email address to receive a highlighter. The pick-up location will be emailed after data collection is complete. You will be asked to check your email address at the location and receive a highlighter. Your email address will be completely deleted after you receive your incentive.

**Will information about me and my participation be kept confidential?**

The project's research records may be reviewed by departments at Purdue University responsible for regulatory and research oversight.

**What are my rights if I take part in this study?**

Your participation in this study is voluntary. You may choose not to participate or, if you agree to participate, you can withdraw your participation at any time without penalty or loss of benefits to which you are otherwise entitled.

**Who can I contact if I have questions about the study?**

If you have questions, comments or concerns about this research project, you can talk to one of the researchers. Please contact Jiyun Kang (765-491-6376, kang52@purdue.edu) or Dr. Ayse Ciftci (765-494-9746).

If you have questions about your rights while taking part in the study or have concerns about the treatment of research participants, please call the Human Research Protection Program at (765) 494-5942, email (irb@purdue.edu) or write to:  
Human Research Protection Program - Purdue University  
Ernest C. Young Hall, Room 1032  
155 S. Grant St.,  
West Lafayette, IN 47907-2114

**Documentation of Informed Consent**

I have had the opportunity to read this consent form and have the research study explained. I have had the opportunity to ask questions about the research study, and my questions have been answered. I am prepared to participate in the research study described above.

If you agree to participate, please print a copy of this document for your records, and then click on the tab at the bottom of page to begin.



## Appendix F: Intentions of Seeking Counseling Inventory

(ISCI; Cash et al., 1975)

Below is a list of issues people commonly bring to counseling. How likely would you be to seek counseling if you were experiencing these problems? Please circle the corresponding answer.

		Very unlikely	Unlikely	Likely	Very likely
1.	Weight control	1	2	3	4
2.	Excessive alcohol use	1	2	3	4
3.	Relationship difficulties	1	2	3	4
4.	Concerns about sexuality	1	2	3	4
5.	Depression	1	2	3	4
6.	Conflict with parents	1	2	3	4
7.	Speech anxiety	1	2	3	4
8.	Difficulties dating	1	2	3	4
9.	Choosing a major	1	2	3	4
10.	Difficulty in sleeping	1	2	3	4
11.	Drug problems	1	2	3	4
12.	Inferiority feelings	1	2	3	4
13.	Test anxiety	1	2	3	4
14.	Difficulty with friends	1	2	3	4
15.	Academic work	1	2	3	4
16.	Self-understanding	1	2	3	4
17.	Loneliness	1	2	3	4

## Appendix G: Perceived Behavioral Control

Please answer each of the following questions by circling the number that best describes your opinion. Some of the questions may appear to be similar, but they do address somewhat different issues. Please read each question carefully.

1. If I wanted to I could make an appointment for mental health services (e.g. counseling) today if needed.

Definitely true : 1 : 2 : 3 : 4 : 5 : 6 : 7 : Definitely false

2. For me, to make an appointment for mental health services (e.g. counseling) today if needed is impossible

Definitely true : 1 : 2 : 3 : 4 : 5 : 6 : 7 : Definitely false

3. How much control do you believe you have over making an appointment for mental health services (e.g. counseling) today if needed is

No control : 1 : 2 : 3 : 4 : 5 : 6 : 7 : Complete control

4. It is mostly up to me whether or not I make an appointment for mental health services (e.g. counseling) today if needed

Strongly agree : 1 : 2 : 3 : 4 : 5 : 6 : 7 : Strongly disagree

## Appendix H: Self-Stigma of Seeking Help

(SSOSH; Vogel et al., 2006)

People at times find that they face problems for which they consider seeking help. This can bring up reactions about what seeking help would mean. Please use the 5-point scale to rate the degree to which each item describes how you might react in this situation.

1 = Strongly Disagree 2 = Disagree 3 = Neither agree or disagree 4 = Agree 5 = Strongly Agree

Circle the number that corresponds to how you might react to each statement

	Strongly disagree		Neither agree or disagree		Strongly agree
1. I would feel inadequate if I went to a therapist for psychological help.	1	2	3	4	5
2. My self-confidence would NOT be threatened if I sought professional help.	1	2	3	4	5
3. Seeking psychological help would make me feel less intelligent.	1	2	3	4	5
4. My self-esteem would increase if I talked to a therapist.	1	2	3	4	5
5. My view of myself would not change just because I made the choice to see a therapist.	1	2	3	4	5
6. It would make me feel inferior to ask a therapist for help.	1	2	3	4	5
7. I would feel okay about myself if I made the choice to seek professional help.	1	2	3	4	5
8. My self-confidence would remain the same if I sought help for a problem I could not solve.	1	2	3	4	5
9. I would feel worse about myself if I could not solve my own problems.	1	2	3	4	5
10. If I went to a therapist, I would be less satisfied with myself.	1	2	3	4	5

## Appendix I: Perceptions of Stigmatization by Others for Seeking Help

(PSOSH; Vogel et al., 2009)

Imagine you had an issue that you could not solve on your own. If you sought counseling services for this issue, to what degree do you believe that the people you interact with would \_\_\_\_.

	Not at all	A little	Some	A lot	A great deal
1. React negatively to you	1	2	3	4	5
2. Think bad things of you	1	2	3	4	5
3. See you as seriously disturbed	1	2	3	4	5
4. Think of you in a less favorable way	1	2	3	4	5
5. Think you posed a risk to others	1	2	3	4	5

## Appendix J: Stigma Scale for Receiving Psychological Help

(SSRPH; Komiya et al., 2000)

Please answer the following from (1) Strongly Disagree to (4) Strongly Agree

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. Seeing a psychologist for emotional or interpersonal problems carries social stigma.	1	2	3	4
2. It is a sign of personal weakness or inadequacy to see a psychologist for emotional or interpersonal problems.	1	2	3	4
3. People will see a person in a less favorable way if they come to know that he/she has seen a psychologist.	1	2	3	4
4. It is advisable for a person to hide from people that he/she has seen a psychologist	1	2	3	4
5. People tend to like less those who are receiving professional psychological help.	1	2	3	4

## Appendix K: Attitudes toward Seeking Professional Psychological Help scale

(ATSPPH-Short; Fischer &amp; Farina, 1995)

To what extent do you agree or disagree with the statements below:

	Disagree	Partly Disagree	Partly Agree	Agree
1. If I believed I was having a mental breakdown, my first inclination would be to get professional attention.	1	2	3	4
2. The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.	1	2	3	4
3. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.	1	2	3	4
4. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears <i>without</i> resorting to professional help.	1	2	3	4
5. I would want to get psychological help if I were worried or upset for a long period of time.	1	2	3	4
6. I might want to have psychological counseling in the future.	1	2	3	4
7. A person with an emotional problem is not likely to solve it alone; he or she <i>is</i> likely to solve it with professional help.	1	2	3	4
8. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.	1	2	3	4
9. A person should work out his or her own problems; getting psychological counseling would be a last resort.	1	2	3	4
10. Personal and emotional troubles, like many things, tend to work out by themselves.	1	2	3	4

## Appendix L: Disclosure Expectations Scale

(DES; Vogel & Wester, 2003)

For the following questions, you are asked to respond using the following scale:

(1) Not at all, (2) Slightly, (3) Somewhat, (4) Moderately, or (5) Very.

1. How difficult would it be for you to disclose personal information to a counselor?
2. How vulnerable would you feel if you disclosed something very personal you had never told anyone before to a counselor?
3. If you were dealing with an emotional problem, how beneficial for yourself would it be to self-disclose personal information about the problem to a counselor?
4. How risky would it feel to disclose your hidden feelings to a counselor?
5. How worried about what the other person is thinking would you be if you disclosed negative emotions to a counselor?
6. How helpful would it be to self-disclose a personal problem to a counselor?
7. Would you feel better if you disclosed feelings of sadness or anxiety to a counselor?
8. How likely would you get a useful response if you disclosed an emotional problem you were struggling with to a counselor?

## Appendix M: Demographic Information

Please answer the questions that applies best or write your answer in the space provided whenever necessary.

### **Service Utilization**

1. Have you used counseling services?
  - a. Yes, and the outcome was positive.
  - b. Yes, but the outcome was not positive.
  - c. No, I do not have any previous experience with counseling services.
2. Do you know what kinds of student services are available on campus when you need help for mental health issues (e.g. depression, anxiety, etc.)? Yes No
3. Do you know how to utilize counseling services near your campus? Yes No
4. Are you an international student with a valid student visa?  
Yes (Go to number 5-1) No (Go to number 6-1)

### **If you are an international student,**

- 5-1. Where is your home country? \_\_\_\_\_
- 5-2. At what age did you come to the U.S.? \_\_\_\_\_
- 5-3. How long have you been in the U.S.? \_\_\_\_\_ years and \_\_\_\_\_ months.
- 5-4. What is your native language/mother tongue? \_\_\_\_\_



5-5. If a counselor at a counseling center can speak your native language, will you consider go to the counseling center when you need help for mental health issues (e.g. depression, anxiety, etc.)?      Yes      No

(Go to number 7)

**If you are a domestic student of the United States,**

6-1. Are you born in the United States?    Yes                  No

6-2. Race/Ethnicity:

- a.      Asian American
- b.      Black or African American
- c.      Hispanic or Latino/a
- d.      Native American or Alaskan Native
- e.      Native Hawaiian or Pacific Islander
- f.      White or Caucasian
- g.      Biracial
- h.      Other, please specify: \_\_\_\_\_

6-3. What is your native language/mother tongue?

\_\_\_\_ English  
 \_\_\_\_ Bilingual (Please describe): \_\_\_\_\_  
 \_\_\_\_ Other (Please describe): \_\_\_\_\_

7. Age: \_\_\_\_\_

8. Sex: Man      Woman      Unspecified

9. Sexual Orientation:

- a.      Heterosexual
- b.      Gay
- c.      Lesbian
- d.      Bisexual
- e.      Transgender
- f.      Queer
- g.      Questioning
- h.      Other \_\_\_\_\_

10. What is your academic standing?

- a. Freshman
- b. Sophomore
- c. Junior
- d. Senior
- e. Graduate student

VITA

## VITA

Jiyun Kang

Purdue University  
Department of Educational studies, Counseling Psychology

- EDUCATION**
- Purdue University, Doctoral candidate** **West Lafayette, IN**  
Counseling Psychology (APA-accredited) *August 2009-present*  
Dissertation “*Help-seeking intention among college students: cross-cultural study between East Asian students and domestic students in the United States*”
- Ewha Womans University, M.A.** **Seoul, South Korea**  
Psychology (Counseling) *March 2004-August 2006*  
Thesis: “*Mediating Effects of Working Alliance and Self-Disclosure between Supervisee's Shame and Supervision Satisfaction.*”
- Ewha Womans University, B.A.** **Seoul, South Korea**  
Education, Psychology *March 1999-February 2004*
- EXPERIENCE**
- Clinical:**
- Counseling Center at University of Memphis (APA-accredited)** **Memphis, TN**  
*Psychology Intern August 2015-present*  
*Supervisor: Robert Maichrowicz, Ph.D., Lisa Winborn, Ph.D.*  
Provide individual and group counseling, ADHD/LD and personality assessments, outreach activities, and supervision to practicum students. ADHD/ LD assessments include Wechsler Adult Intelligence Scale–IV (WAIS-IV), Woodcock-Johnson Tests of Achievement–IV (WJ-IV), ADHD checklist, Adult Attention Deficit Disorder Evaluation Scales (A-ADDES) Self-Report and Home versions, Connors Continuous Performance Tests – II (CPT-II).
- Purdue Counseling & Guidance Center (PCGC)** **West Lafayette, IN**  
*Practicum Counselor June 2014-August 2014*  
*Supervisor: Eric D. Deemer, Ph.D.*  
Administered and interpreted the NEO-PI-3, Strong Interest/Competence Inventory, Career Value care sorting for high school students and their parents.
- Purdue Counseling and Psychological Services (CAPS)** **West Lafayette, IN**  
*Practicum Counselor August 2013-May 2014*  
*Supervisor: Katy Kopp-Miller, Psy.D., Mona Bapat, Ph.D., and Travis Pashak, Ph.D.*  
Conducted individual, group counseling, and outreach activities. Counseled students with diverse problems such as adjustment, ADHD, and test anxiety.

**Purdue Psychology Research and Training Clinic****West Lafayette, IN***Practicum Counselor**August 2012-May 2013**Supervisor: Elizabeth Akey, Ph.D., HSPP*

Administered and interpreted several ADHD assessment including Wechsler Intelligence Scales for Children – 4th Edition (WISC-IV), and Woodcock-Johnson Tests of Achievement – Third Edition (WJ-III Ach) as a part of ADHD diagnosis for children (age between 4 and 7). Provided 10 sessions to the parents with ADHD children for the children behavior management.

**Indiana Women's Prison****Indianapolis, IN***Practicum Counselor**August 2011-May 2012**Supervisor: Daniel Prober, Psy.D. HSPP*

Conducted individual and group counseling with female offenders (age between 20 and 54). Co-facilitated a DBT group with Dr. Daniel Prober.

**Purdue Counseling & Guidance Center (PCGC)****West Lafayette, IN***Practicum Counselor**August 2010-May 2011**Supervisor: William Hanson, Ph.D. and Mary C. Pistole, Ph.D.*

Provided individual counseling to college students and community members.

**Seoul National University Career Development Center****Seoul, South Korea***Part-time Counselor**April 2009-July 2009**Supervisor: H.S. Yoo, Ph.D.**August 2007-February 2008*

Conducted career counseling individually. Administered and interpreted Myers-Briggs Type Indicator and Strong Interest Inventory for career counseling. Provided five group counseling for career, and organized two mentoring programs.

**Ewha Student Counseling Center (ESCC)****Seoul, South Korea***Program Assistant Counselor**March 2007-February 2008**Supervisor: S.H. Kang, Ph.D.*

Managed 267 students who had been on academic probation as a part of Academic Support Program at ESCC. Made phone calls to the students individually and provided counseling services via phone calls or individual sessions at ESCC.

**Ewha Student Counseling Center (ESCC)****Seoul, South Korea***Intern Counselor**January 2007-December 2007**Supervisor: N.M. Yang, Ph.D. and S.H. Kang, Ph.D.*

Conducted individual and group counseling, and outreach activities. Administered and interpreted MMPI-II. Supervised three master's level students' counseling activities as a group each semester (total 20 supervision session).

**Ewha Student Counseling Center (ESCC)****Seoul, South Korea***Practicum Counselor**September 2005-December 2006**Supervisor: E.K. Kim, Ph.D. and S.H. Kang, Ph.D.*

Conducted individual counseling. Administered and interpreted four Korean-version assessments including personality, career interest, and skill tests.

<b>Work:</b>	<b>Purdue University</b> Department of Educational Studies/ Exploratory Studies <i>Teaching Assistant</i> Taught two “Academic and Career Planning” classes every Fall semester. Class consists of 23-25 first year students and sophomores who have not decided their majors yet and are placed in Exploratory Studies. Administered and interpreted Strong Interest Inventory, Myers-Briggs Type Indicator, NEO-FFI, and Strength Quest in the class.	<b>Fall 2011–Fall 2014</b>
	<b>Purdue University</b> Department of Educational Studies <i>Research Assistant</i> Assisted two Faculty members in data collection, data entering, conducting statistical analysis, or developing new class materials.	<b>Spring 2012, Spring 2013</b>
	<b>Purdue University</b> Department of Educational Studies <i>Teaching Assistant</i> Assisted two Faculty members in preparing statistics classes.	<b>Spring 2011</b>
	<b>Purdue University</b> Department of Educational Studies <i>Research Assistant</i> Assisted a Faculty member in literature review regarding process-outcome research.	<b>Fall 2009–Fall 2010</b>
<b>HONORS &amp; AWARDS</b>	<b>Ewha Womans University</b> Department of Psychology <i>Graduate Assistant</i> Responsible for graduate school administration, assisted in preparing undergraduate classes, and a Faculty member’s research.	<b>Spring 2004–Summer 2006</b>
	<b>Bruce Shertzer Graduate Award in Counseling</b> College of Education, Purdue University	<b>April 2012</b>
	<b>Ross Fellowship Recipient</b> College of Education, Purdue University	<b>August 2009-July 2013</b>
<b>LICENSES</b>	<b>Honor scholarship</b> Ewha Womans University, Seoul, Korea	<b>August 2003</b>
	<b>Certificated Counselor</b> Korean Counseling Psychological Association	<b>March 18, 2006</b>
	<b>School Counselor (Grade II)</b> Ministry of Education, Science and Technology, South Korea	<b>August 24, 2006</b>
	<b>Family Counselor (Grade II)</b> Korean Association of Family Counseling	<b>May 26, 2007</b>

- Publications:**
- Hwang, C.W., Park, J.A., Yoo, S.K., & Kang, J.Y. (2009) A Qualitative Study on Graduate Students' Experiences in Counseling Psychology Program in Korea. *The Korea Journal of Counseling, 10*(3), 1359-1382.
- Lee, J.Y., Kang, J.Y., & Lee, I.S. (2008). The Effect of Shame and Stigma on the Help-Seeking Attitude among Korean College Students. *Asian Journal of Education, 9*(1), 23-47.
- Kang, J.Y., & Yoo, S.K. (2006). Mediating Effect of Working-Alliance and Self-Disclosure in Supervision in the Relationship of Supervisee's Shame and Supervision Satisfaction. *The Korea Journal of Counseling, 7*(4), 1005-1021.
- Son, E.J., Yoo, S.K., Kang, J.Y., & Lim, Y.S. (2006). The Influence of the Supervisory Working Alliance and the Supervisee's Experience Level on His or Her Role Difficulties and Supervision Satisfaction. *The Korean Journal of Counseling and Psychotherapy, 18*(4), 695-711.
- Presentations:**
- Kang, J.Y., Ciftci, A. (2015). Help-seeking Intention Among College Students: Cross-cultural Study. Poster presented at the 123<sup>rd</sup> Annual American Psychological Association Convention in Toronto, Canada.
- Kang, J.Y., Ciftci, A. (2014). *Cultural Implication for Bulimia Nervosa in Korean society*. Poster presented at the 2014 Counseling Psychology Conference, Atlanta, Georgia.
- Kang, J.Y. (2012). *Relationship among Risk factors and the Features of Bulimia Nervosa: Cross-cultural Study*. Poster presented at the 25<sup>th</sup> Annual Great Lakes Counseling Psychology Conference at Purdue University, IN.
- Kang, J.Y. & Hanson, W. (2011). *Factors That Mediate Help-seeking Among College Students*. Poster presented at the 119<sup>th</sup> Annual American Psychological Association Convention in Washington, D.C.
- Kang, J.Y. & Hanson, W. (2010). *Relationship of Career Interests, Social Stigma, and Help-Seeking Attitudes*. Poster presented at Division 17 Society for Vocational Psychology, the 118<sup>th</sup> Annual American Psychological Association Convention in San Diego, CA.
- Kang, J.Y., Yoo, S.K., & Lee, D.Y. (2007). *Mediating Effect of Working-Alliance and Self-Disclosure in Supervision in the Relationship of Supervisee's Shame and Supervision Satisfaction*. Poster presented at the 115<sup>th</sup> Annual American Psychological Association Convention in San Francisco, CA.
- Kang, J.Y., Park, S.L., Lee, A.R., & Hwang, M.H. (2004). *Life Coach: Exploration of the New Field for Counseling Psychologists*. Paper presented at the 2004 Annual Korea Counseling Association Convention in Busan, South Korea.
- Professional:**
- Korean Psychology Network (KPN), U.S.**  
*Public Relations Committee* **August 2013–present**  
 Administer Facebook page and assist social events in APA annual convention for KPN, which is a network of Korean/Korean American psychologists and trainees in counseling psychology or in related fields in the United States. KPN is an organization supported by Division 17 and 52 in APA.
- Korean Counseling Psychological Association, Seoul, South Korea**  
*Secretary of Public Relations Committee* **September 2006-August 2007**  
 Assisted the committee chair to publish newsletters and to create a flyer regarding mental health awareness.
- Secretary of Professional Development Committee* **September 2005-August 2006**  
 Assisted the committee chair to organize and to prepare an annual two-day workshop in January, 2006.

- Continuing Education:** **Individual differences viewed through ten lenses including temperament, attachment, defenses, affective patterns, cognitions etc., and their relevance to psychotherapy.** **November 1, 2014**  
Participated in a full-day seminar offered at International Psychotherapy Institute by Nancy McWilliams, Ph.D.
- Understanding the DSM-5: Problems and Prospects in the Diagnostic Revisions.** **August 18, 2014**  
Participated in the full-day Continuing Education Program offered at Purdue University by Greg Neimeyer, Ph.D.
- Beginner's guide to Structural Equation Modeling: Basic Concepts and Applications** **August 15, 2008**  
Participated in a 4-hour workshop offered at 116<sup>th</sup> APA annual convention by Barbara, Byrne, Ph.D.
- LANGUAGE** **Korean, English**