THE THEORY OF PLANNED BEHAVIOR IN PREDICTING ROTC STUDENTS’ INTENTIONS TO SEEK PSYCHOLOGICAL SERVICES

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE

DOCTOR OF PHILOSOPHY

BY

MATTHEW SCOTT JACKSON

DR. THERESA KRUCZEK- ADVISOR

BALL STATE UNIVERSITY

MUNCIE, INDIANA

DECEMBER 2015
ACKNOWLEDGEMENTS

I wish to first express my immense gratitude to my immediate family: Scott, Trudy, Rachel, and Caitlin for their much needed support, guidance, and inspiration throughout my academic career. It was your never-ending encouragement to follow my dreams that allowed this to become possible. I also wish to thank my fiancée Jena Stopczynski who has served as an incredible source of motivation, and who has helped me to remember to live life to its fullest.

Thank you to my outstanding cohort for their incredible support. It was quite the journey, and I feel lucky to have gone through the process with such an amazing group of individuals. I would like to thank my research team: Nehad Sandozi, Lauren Cunningham, Lauren Floore, and Sarah Evans. Thank you for volunteering your time and for your valuable feedback throughout the coding process.

Finally, I would like to thank my incredible committee members. Thank you Dr. Theresa Kruczek for your significant guidance and support throughout my graduate career. Under your supervision, I have developed exponentially as both a researcher and clinician. Thank you Dr. Stefania Ægisdóttir for your valuable instruction on research methodology and psychological help seeking. It was in your research class five years ago that I first developed an interest in help seeking, an area of research that has grown to become both a personal and professional passion. Thank you Dr. Sharon Bowman for your instrumental support that made it possible for me to overcome a few unexpected obstacles. You are an amazing ‘mother hen’ for all of your doctoral students. Finally, thank you Dr. Michael Tagler for your guidance on TPB research and instrumentation, as well as your support throughout the evolution of my research project.
# TABLE OF CONTENTS

LIST OF TABLES ........................................................................................................... 6

LIST OF FIGURES ......................................................................................................... 8

LITERATURE REVIEW ................................................................................................. 9
  Theory of Planned Behavior ......................................................................................... 11
  Help Seeking Interventions ......................................................................................... 12
  Limitations of Previous Psychological Help-Seeking Research ................................. 14
  Previous Counseling Experience .............................................................................. 17
  Purpose of the Study ................................................................................................. 17
  Hypotheses and Research Questions ....................................................................... 19

METHODS ..................................................................................................................... 19
  Participants .............................................................................................................. 19
  Procedures .............................................................................................................. 21
  Measures ................................................................................................................ 22
    Demographic Questionnaires ................................................................................. 22
    TPB Variable Measures ......................................................................................... 22
      Attitudes ........................................................................................................... 23
      Subjective Norms .............................................................................................. 24
      Perceived Behavioral Control ........................................................................... 25
      Behavioral Intentions ......................................................................................... 25
  Supplemental Instrumentation .................................................................................. 26
    Beliefs About Psychological Services (BAPS) ....................................................... 26
      Attitudes ........................................................................................................... 27
      Behavioral Intentions ......................................................................................... 28
    Inventory of Attitudes toward Seeking Mental Health Services ............................ 29
      Perceived Behavioral Control ........................................................................... 29
  Elicitation of Modal Salient Beliefs ........................................................................ 29
    Behavioral Beliefs ............................................................................................. 30
    Normative Beliefs .............................................................................................. 30
    Control Beliefs .................................................................................................. 31
  Design and Analysis ............................................................................................... 31
    Content Analysis ................................................................................................. 31
    Regression Analysis ............................................................................................ 33

RESULTS ..................................................................................................................... 35
  Reliability Assessment ............................................................................................ 35
  TPB Scales ............................................................................................................. 35
  Validity Assessment ................................................................................................ 36
    Factor Analyses and Unidimensionality ............................................................... 36
      Behavioral Intentions ....................................................................................... 37
      Attitudes ........................................................................................................... 37
      Subjective Norms ............................................................................................ 38
Appendix J
   Chapter Two Literature Review.................................................................150
Appendix K
   Help Seeking Propensity and Intent Subscale Overlap................................170
LIST OF TABLES

Table 1: Sample Demographics ................................................................. 81

Table 2: Reliability Statistics for TPB Scales, BAPS Subscales, and Help Seeking Propensity Subscale ................................................................. 83

Table 3: Factor Loadings for Exploratory Factor Analysis of TPB- Intent Scale ........................................................................................................ 84

Table 4: Factor Loadings for Exploratory Factor Analysis with Promax Rotation of TPB-Attitudes Scale ........................................................................................................ 85

Table 5: Factor Loadings for Exploratory Factor Analysis with Promax Rotation of TPB-Subjective Norms Scale ........................................................................................................ 86

Table 6: Factor Loadings for Exploratory Factor Analysis of TPB- PBC Scale ................................................................................................................................. 87

Table 7: Descriptive Statistics for Measures ................................................................. 88

Table 8: Bivariate Correlations between Predictor and Criterion Variables For Model 1 ........................................................................................................ 89

Table 9: Summary of Hierarchical Regression Analysis for TPB Variables Predicting TPB: Intent ................................................................................................................ 90

Table 10: Summary of Formal Hypotheses Tests Comparing Regression Slopes for Model 1 ................................................................................................................ 91

Table 11: Bivariate Correlations between Predictor and Criterion Variables For Model 2 ................................................................................................................ 92

Table 12: Summary of Hierarchical Regression Analysis for Variables Predicting BAPS: Intent ................................................................................................................ 93

Table 13: Summary of Formal Hypotheses Tests Comparing Regression Slopes for Model 2 ................................................................................................................ 94

Table 14: Summary of Hierarchical Regression Analysis for TPB Variables Predicting BAPS: Intent With Parceled HSP Items ........................................................................................................ 95

Table 15: Bivariate Correlations between Predictor and Criterion Variables For Model 3 ................................................................................................................ 96

Table 16: Multiple Regression Analyses for TPB Subscales as Predictors of TPB: Intent (N = 128) ................................................................................................................ 97
Table 17: Summary of Hierarchical Regression Analysis for TPB Variables Predicting TPB: Intent With Prior Counseling Entered First .................................................................98

Table 18: Summary of Hierarchical Regression Analysis for TPB Variables Predicting BAPS: Intent With Prior Counseling Entered First .................................................................99

Table 19: Frequency Count for SBQ Question 1.................................................................100

Table 20: Frequency Count for SBQ Question 2.................................................................101

Table 21: Frequency Count for SBQ Question 3.................................................................102

Table 22: Frequency Count for SBQ Question 4.................................................................103

Table 23: Frequency Count for SBQ Question 5.................................................................104

Table 24: Frequency Count for SBQ Question 6.................................................................105

Table 25: Frequency Count for SBQ Question 7.................................................................106

Table 26: Frequency Count for SBQ Question 8.................................................................107
LIST OF FIGURES

Figure 1. EFA Scree Plot for the TPB Intentions data ........................................108
Figure 2. EFA Scree Plot for the TPB Attitudes data ........................................109
Figure 3. EFA Scree Plot for the TPB Subjective Norms data .............................110
Figure 4. EFA Scree Plot for the TPB PBC data ................................................111
Figure 5. Histogram of the TPB Behavioral Intentions data ...............................112
Figure 6. Histogram of the TPB Attitudes data ..................................................113
Figure 7. Histogram of the TPB Subjective Norms data ....................................114
Figure 8. Histogram of the TPB PBC data .........................................................115
Figure 9. Normal Probability Plot for TPB Behavioral Intentions .......................116
Figure 10. Residuals Plot for TPB Behavioral Intentions ....................................117
Figure 11. Bivariate Scatterplot Between TPB: Intent and TPB Attitude .............118
Figure 12. Bivariate Scatterplot Between TPB: Intent and TPB Subjective Norms ..119
Figure 13. Bivariate Scatterplot Between TPB: Intent and TPB PBC ..................120
Figure 14. Residuals Plot for BAPS: Intent Subscale .........................................121
Figure 15. Bivariate Scatterplot Between BAPS: Intent and BAPS: Attitude ........122
Figure 16. Bivariate Scatterplot Between BAPS: Intent and TPB Subjective Norms ..123
Figure 17. Bivariate Scatterplot Between BAPS: Intent and IASMHS: HSP ..........124
The Theory of Planned Behavior In Predicting ROTC Students’ Intentions to Seek Psychological Services

Researchers have frequently cited the low prevalence of professional PHS amongst both service members (Fikretoglu et al., 2009; Pietrzak et al., 2009) and college students (Cellucci et al., 2006). Due to the possibility of significant consequences for failing to seek mental health treatment when experiencing psychological distress (Greene-Shortridge et al., 2007; Regan, Outlaw, Hamer & Wright, 2005), a number of military and college specific interventions have been developed to increase PHS amongst these respective populations. While the development of these interventions continues to be a growing area of study, researchers have provided empirical evidence supporting the use of these instruments (Hammer & Vogel, 2010; Ægisdóttir et al., 2011). Unfortunately, little attention has been devoted to students enrolled in the Reserve Officers’ Training Corps (ROTC) program. ROTC students are unique in that they are both college students and members of the military, and preliminary evidence suggests that ROTC students possess different beliefs and intentions towards PHS when compared to general college students (Jackson, Kruczek, & Ægisdóttir, 2011). As a result, interventions developed specifically for general college students are likely to be less effective when administered to ROTC students. Since this is a population that may be more prone to experience psychological distress (Hoge et al., 2008), it is imperative that researchers develop interventions that seek to modify or reinforce the beliefs commonly held by this group.

Members of the military may be less likely to utilize psychological services during times of distress than civilians (Fikretoglu et al., 2009; Pietrzak et al., 2009; Rowan & Campise, 2006). Hourani (1999) found that only 19% of active duty service personnel with a diagnosable disorder sought treatment, which is significantly lower than the 28.5% of civilians with similar pathology.
Researchers have speculated that service members may be reluctant to seek help as a result of expected mental health related stigma (Corrigan, 2004), career ramifications (Bray et al., 1992), breaches in confidentiality (Corrigan, 2004; Galvin, 1996; Rowan & Campise, 2006), and the perceived diminished effectiveness of psychotherapy (Shaffer et al., 2006). As a result of their engagement with the military, service members may also be less likely to perceive important others as being supportive of, or engaging in, PHS (Adler et al., 2008; Britt et al., 2000; Pietrzak et al., 2009). Further, service members may be more likely to perceive logistical barriers, such as challenges associated with scheduling appointments, as limiting their ability to seek help (Hoge et al., 2004). While researchers have commonly examined the PHS beliefs of service members, few researchers have investigated the PHS beliefs and intentions of ROTC students.

In a preliminary study exploring this population, Jackson, Kruczek, and Ágísísóttir (2011) directly compared the PHS attitudes and intentions of ROTC students with students in the general college population. Results suggested students enrolled in an ROTC program had fewer intentions to seek psychological services, less favorable beliefs regarding the expertness of mental health practitioners, and less tolerance to cope with the stigma associated with mental health than students in the general college population. The Jackson et al. (2011) study suggests that students in ROTC may hold less favorable attitudes and fewer intentions to engage in PHS due to their involvement with the military. One likely explanation of the Jackson et al. (2011) results is that ROTC students may possess some of the behavioral, normative, and control beliefs that are frequently held by other members of the military. However, since ROTC students are both members of the military and college students, it is likely that ROTC students have a truly unique set of beliefs towards PHS. The current study will attempt to identify the salient beliefs
regarding PHS that are commonly held by ROTC students, through the framework provided by the TPB.

**Theory Of Planned Behavior**

Several researchers have used the TPB to help explain the underutilization of mental health services (Britt et al., 2011; Choi, 2008; Hartong, 2011; Stecker et al., 2010). The TPB suggests that behavioral intentions, or an individual’s readiness to perform a behavior, are best predicted by attitudes towards the behavior, subjective norms related to the behavior, and perceived behavioral control (PBC) over the action of performing the behavior. The TPB defines attitudes as a person’s feelings of favorableness or unfavorableness regarding performing the behavior, and are theorized to develop from an individual’s behavioral beliefs regarding the expected positive and negative outcomes of performing a behavior. Subjective norms are defined within the TPB as an individual’s beliefs that important others think a behavior should or should not be performed, and their perception of whether these important others engage or do not engage in the behavior. An individual’s subjective norms form as a result of summing their normative beliefs towards the behavior, which are similar to subjective norms but relate to several specific reference groups (e.g., romantic partners, immediate family, close friends). The TPB defines PBC as an individual’s perception that the target behavior is under their volitional control despite known barriers. Control beliefs, or those beliefs relating to the factors that may assist or impede their engaging in the behavior, lead to the formation of their PBC over the target behavior (Fishbein & Ajzen, 2010).

The TPB goes on to state that behavioral intentions are the best predictor of behavioral engagement (Cooke & French, 2008; Fishbein & Ajzen, 2010; Sutton, 1998). However, PBC is thought to act as moderator of the intention-behavior relationship (Ajzen, 1980, 1985, 1991). For
example, a person may have intentions to engage in a behavior but may not carry out the behavior due to little perceived control over the behavior of interest. As a result, intentions are thought to be a better predictor of behavior when the behavior of interest is under the volitional control of the individual and when PBC is high (Fishbein & Ajzen, 2010). Individuals are then more likely to seek help if they hold favorable attitudes, positive subjective norms, and high levels of PBC over the behavior of PHS.

However, these three determinants are expected to contribute disproportionately depending on the behavior, individual, context, time period, and population of interest. For example, for some behaviors, attitudes may make more of a significant impact on an individual’s intentions to engage in the behavior than their perceived norms or PBC. In fact, for some behaviors it is possible that one of the three determinants will not be a statistically significant predictor of intentions. While this may seem problematic for the TPB, this finding only suggests that for this behavior the determinant is irrelevant. Further, in these instances intentions to perform the behavior are then accounted for by the remaining determinants. Recognizing the weight that each determinant contributes to intentions, as well as identifying irrelevant determinates for a behavior, is essential for developing effective interventions designed to change behavioral intentions. Interventions can then be designed to target problematic determinants that are contributing largely to the group’s intentions or lack of intentions to perform the behavior (Fishbein & Ajzen, 2010).

**Help Seeking Interventions**

The development of PHS interventions has become a significant focus in research as an alarming 60-67% of individuals with a psychological disorder never seek treatment (Fellin, 1996; Gould, Greenburg, & Hetherton, 2007; Shaffer, Vogel, & Wei, 2006). This is problematic
as individuals who do not seek treatment are at a greater risk for slower recovery (Lincoln & McGorry, 1995), substance abuse (Greene-Shortridge et al., 2007), and suicide (Eagles, Carson, Begg, & Naji, 2003; Regan, Outlaw, Hamer & Wright, 2005). Fortunately, researchers have had some success in developing interventions that target barriers of mental health treatment in order to increase PHS in both the general public and college students (Hammer & Vogel, 2010; Heesacker, 1986; Ægisdóttir et al., 2011).

For example, Hartong (2011) developed a video intervention designed to influence college student’s intentions towards PHS. Relying on the TPB, Hartong designed the intervention to influence students’ attitudes, subjective norms, and PBC related to PHS. Results of the study suggested that those students who viewed the video, as compared to students in the control condition, had more positive attitudes and greater PBC related to seeking mental health treatment after watching the video. Most notably, students in the experimental group also had greater intentions to seek psychological services than students in the control group. The study additionally validated the use of the TPB as a model to predict PHS in college students.

Though studies have provided evidence for the use of interventions at positively influencing attitudes towards PHS, and to a lesser degree intentions to engage in psychological services (Hammer & Vogel, 2010; Heesacker, 1986; Ægisdóttir et al., 2011), no such interventions to date have been developed for use specifically with ROTC students. Since ROTC cadets may possess a unique constellation of beliefs due to their involvement as both college students and members of the military, interventions designed for general college students may be less effective within this population. While there is no known research directly exploring ROTC students’ beliefs, attitudes, subjective norms, or PBC regarding PHS, it is possible to speculate
the beliefs ROTC students are likely to possess by reviewing research on the military and college student populations.

Students enrolled in an ROTC program may have less favorable attitudes towards PHS than students in the general college population. ROTC students may be similar to other members of the military who perceive mental health treatment as less effective, as they could feel that mental health providers are not able to understand the unique experiences that they have acquired during their brief time with the military (Visco, 2009). ROTC students, like other service members, may also adhere more strongly to the traditional masculinity ideology and military values (Enloe, 1993), value systems which have been shown to lead to less favorable attitudes regarding PHS (Berger et al., 2005; Knox & Price, 1995; Levant, 1997; Lorber & Garcia, 2010; Rochlen & O'Brien, 2002). Further, ROTC students may also be more likely to perceive PHS as resulting in stigma and career ramifications (Fikretoglu et al., 2009; Visco, 2009; Vogel et al., 2009), largely due to military policies that limit confidentiality (Rowan & Campise, 2006). However, ROTC students may also differ from other service members due to their limited military involvement and enrollment as full time students. Due to their limited involvement with the military, it is possible that ROTC students may not develop the same beliefs related to treatment ineffectiveness, or adhere as strongly to military values.

ROTC students may also develop unique subjective norms from both other college students and service members. Similar to other service members, ROTC students are likely to develop unfavorable normative beliefs towards PHS from their military unit and military leadership (Adler et al., 2008; Porter & Johnson, 1994). However, due to their role as students, ROTC students are likely to identify other college students as a salient reference group (Leaf et al., 1985; Kimura & Mizone 2008). As a result of these differences, ROTC students are likely to
develop normative beliefs and subjective norms that are distinct from other service members or college students.

Like other members of the military, ROTC students may possess control beliefs focused on the perceived difficulty of getting off work to schedule an appointment (Hoge et al., 2004; Kim et al., 2010; Ouimette et al., 2011; Sayer et al., 2009; Wright, 2009). Due to their significant military time commitments, ROTC students may find it more difficult than other college students to find available time for treatment. However, ROTC students are also likely to possess some of the control beliefs that are commonly held by college students. For example, ROTC students may be unaware of the counseling services that are available through their university (Fouad et al., 2006; Henggeler, Harbin, & Sallis, 1982; Kahn, Wood, & Wiesen, 1999), or not know where to obtain mental health treatment on campus (Benedict, Aspler, & Morrison, 1977; Kahn et al., 1999). As a result, ROTC students are likely to possess a unique set of control beliefs over the behavior of PHS.

**Limitations of Previous Psychological Help-Seeking Research**

While no known studies have utilized the TPB to examine the PHS of ROTC students, it is important to briefly review the existing literature on past PHS studies which have incorporated the TPB. Despite the abundance of research supporting the TPB in predicting engagement in behaviors such as exercising, donating blood, compliance with a diet, use of contraception, and use of illicit substances (Conner & Sparks, 2005; Hardeman et al., 2002; Sheehan, Lecrubier, & Sheehan, 1998), research studies in which the TPB is used to predict PHS have produced mixed results (Britt et al., 2011; Hartong, 2011; Stecker et al., 2010).

Stecker et al. (2010) explored the use of the TPB to predict PHS in a group of 150 members of the Army National Guard, and found that only attitudes and PBC were significant
predictors of intentions, accounting for 41% of the variance in intentions. Britt et al. (2011) found similarly mixed evidence in a study of 760 National Guard and Reserve Component service members. Results indicated that only attitudes towards psychological services accounted for unique variance in PHS. Recall, Hartong (2011) similarly provided conflicting evidence in a doctoral dissertation utilizing the TPB to examine the effectiveness of an intervention at influencing PHS intentions in a sample of college students. Results of the study suggested that attitudes and PBC, but not subjective norms, were significant predictors of intentions to engage in treatment for both treatment conditions. While these results taken together may question whether subjective norms and PBC are relevant determinants for predicting intentions to seek help for service members and college students, the implications from these studies are confounded by methodological errors related to the measurement of TPB constructs.

Researchers have frequently failed to assess constructs as they are defined by the TPB (Smith et al., 2008). For example, Stecker et al. (2010) neglected to include items designed to assess participants’ descriptive norms in their measure of subjective norms. Britt et al. (2011) similarly failed to include descriptive norm items, and additionally did not include items designed to assess participants’ capacity over the target behavior in the measure of PBC utilized in the study. As a result of these methodological limitations, it is possible the finding that subjective norms and PBC were not significant predictors of intentions was the result of researchers only measuring one-half of the constructs as defined within the TPB (Fishbein & Ajzen, 2010). Hartong (2011) similarly neglected to measure subjective norms as they are defined by the TPB, as he utilized attitude measures to assess for subjective norms. In addition to these considerable methodological limitations, other researchers utilizing the TPB to examine PHS have utilized measures from previous studies without discussing the psychometric
properties of these new measures (Vogt, 2011), relied on brief or single-item measures of the variable that may fail to completely measure the construct (Britt et al., 2011), and included attitudes scales which incorporate items better designed to assess intentions thereby inflating the relationship between the constructs (Smith, Tran, & Thompson, 2008). The current study will attempt to improve upon these methodological limitations by relying on the TPB to provide a model to explain the critical variables in predicting PHS, and by measuring the determinants of the TPB as they are defined by Fishbein and Ajzen (2010).

**Previous Counseling Experience**

When attitudes, subjective norms, and PBC are measured appropriately, these important determinants in theory should completely mediate the relationship between past behavior and intentions (Fishbein & Ajzen, 2010). For example, an individual having previously sought mental health treatment will likely influence their intentions to seek help, but only as a result of the impact of this past counseling on the three determinants. However, researchers have found past behavior to be an important predictor in behaviors such as exercise (Abraham, 2003), condom use (Albarracin et al., 2001), diet, smoking cessation, and gambling (Rise, Sheeran, & Hukkelberg, 2010; Sandberg & Connor, 2005). Including past behavior as an additional predictor variable of intentions appears to be especially important for studies exploring PHS, as researchers have consistently found that engaging in counseling previously influences attitudes towards PHS and intentions to engage in treatment (Halgin, Weaver, Edell, & Spencer, 1987; Kim, 2007; Vogel, 2003; Ægisdóttir & Gerstein, 2009). It will therefore be important for the current study to include a measure of past PHS, as it is possible this variable can account for unique variance in intentions beyond the TPB determinants.

**Purpose of the Study**
The current study will rely upon the TPB to provide the necessary first step in developing an effective intervention to increase ROTC students’ intentions to engage in mental health treatment. Fishbein and Ajzen (2010) describe how before an effective intervention can be developed, researchers must first perform an elicitation study to investigate the relative contribution of attitudes, subjective norms, and PBC in predicting intentions to perform a target behavior. It is first hypothesized that in the current study ROTC students’ attitudes, subjective norms, and PBC as a group will significantly predict their intentions to seek help, thereby validating the model proposed by the TPB (Fishbein & Ajzen, 2010). The current study will also seek to examine the influence of past counseling experience on ROTC students’ intentions to seek help. It is hypothesized that previous PHS behavior will account for significant additional variance in intentions to seek help beyond that which is accounted for by the TPB determinants. Finally, it will be important to identify the determinant that is the strongest predictor of ROTC students’ intentions to seek help. Since the majority of PHS researchers have focused on the significant role of attitudes in the prediction of intentions to seek help, it is hypothesized that attitudes will be the determinant most strongly related to ROTC students’ intentions to seek help (Britt et al., 2011; Shaffer et al., 2006; Strecker et al., 2010; Visco, 2009; Wright et al., 2009).

Regardless of whether this last hypothesis is supported, future researchers will be able to use the results of the current study to develop a more effective PHS intervention, as the intervention can be designed to target the determinant that is found to be most strongly related to ROTC students’ intentions to obtain mental health treatment (Fishbein & Ajzen, 2010).

A future intervention targeting the determinant found to be most strongly related to ROTC students’ intentions to engage in counseling, must do so by modifying or reinforcing the salient beliefs that underlie this component (Fishbein & Ajzen, 2010). The current study will
include a qualitative component designed to capture the salient behavioral, normative, and control beliefs regarding PHS that make up ROTC students’ attitudes, subjective norms, and PBC respectively.

**Hypotheses and Research Questions**

The following research hypotheses are proposed: 1) Attitudes, subjective norms, and PBC as a group will significantly predict ROTC students’ intentions to seek help; 2) Previous PHS behavior will account for significant additional variance in intentions to seek help beyond that which is accounted for by ROTC students’ attitudes, subjective norms, and PBC; 3) Attitudes will be the determinant most strongly uniquely related to ROTC students’ intentions to seek help.

The present study will also investigate the following research questions: 1) What salient behavioral beliefs contribute to ROTC students’ attitudes regarding mental health treatment; 2) What salient normative beliefs contribute to ROTC students’ subjective norms regarding mental health treatment; 3) What salient control beliefs contribute to ROTC students’ PBC regarding mental health treatment.

**METHODS**

**Participants**

A total of 179 ROTC students opened the online questionnaire. However, 51 of these potential participants were not included in the final data analysis. Of these 51 exclusions, 46 potential participants were missing more than 25% of the data from the total protocol, a figure greater than the frequently used cut-off of 10% (Barladi & Enders, 2010; Bennett, 2001; Sinharay, Stern, & Russell, 2001). Importantly, the deleted participants who did provide demographic information varied according to attending university, grade level, academic major, and length of involvement with the ROTC program.
An additional five participants were excluded as they indicated either all “1” or “7” for their item responses. Since some items were reverse scored, it is unlikely that a respondent selecting “7” to all items accurately reflects their beliefs towards PHS. Instead, this response pattern may be better attributed to the respondent not reading the questions prior to providing an item response or respondent fatigue (Tabachnick & Fidell, 2013). After deleting these fifty-one participants, 128 participants were retained for inclusion in final data analysis.

A review of the 128 participants revealed four participants omitted responses to less than 10% of the total protocol. These omissions were randomly dispersed across items and scales, suggesting that these omissions were likely random (Tabachnick & Fidell, 2013). Of these four participants, three omitted one item, and one omitted two items. Since the number of missing values was limited, the decision was made to utilize mean substitution for the missing values (Schumaker & Lomax, 2004). The sample size of 128 participants utilized in the current study was determined to be adequate to test both the multiple correlations and individual predictors of the four independent variables (Green, 1991; Tabachnick & Fidell, 2013).

Of the 128 participants that were retained for inclusion in the final analysis, the majority of participants were male (n=102, 79.7%). Participants ranged from 18-25 years of age, with the majority of participants between the ages of 18-20 (n=91, 71.1%). Despite attempts to recruit a racially diverse sample, the majority of the final sample consisted of participants who identified as Caucasian (n=115, 89.8%). However, the sample also included Asian/Pacific Islander (n=10, 7.8%), Black (n=6, 4.7%), and Hispanic (n=2, 1.6%) participants. The sample came from a diverse group of students in regards to attending university, academic class standing, academic major, and length of ROTC involvement. The majority of participants reported that they had not previously engaged in either mental/behavioral health counseling or career counseling (n= 99,
77.3%). Only 9 participants indicated having previously sought mental/behavioral health counseling, while 20 stated that they had sought career counseling. See Table 1 for a more thorough breakdown of participants’ demographic information.

**Procedures**

In order to recruit participants, the primary researcher sent recruitment emails (Appendix A) to directors of Air Force, Army, and Navy ROTC programs at universities across the United States. Directors were asked to consider electronically forwarding the email with the link to the anonymous online survey to cadets within their ROTC program. In order to increase the probability of director engagement and ROTC cadet participation in the study, an incentive was offered to ROTC cadets who completed the survey. Specifically, ROTC students who completed the survey were given the option to choose between either a $10 dollar Amazon gift card or a $10 dollar donation to the Wounded Warrior Project. The decision to offer a financial incentive was based on previous research suggesting the offer of financial incentives results in higher response rates (Robertson & Bellenger, 1978).

ROTC students who received the recruitment email from their director, and made the decision to click on the link to the online survey, were then shown a recruitment letter that described the purpose of the study and outlined information related to benefits and compensation (Appendix B). After reading the recruitment letter, participants were then given the option to continue with the study or to exit their browser and decline participation. If the student decided to participate in the study, he or she was then asked to answer several demographic questions. When finished, participants were administered the quantitative questionnaires in a random order, followed by the Salient Beliefs Questionnaire (SBQ), and finally the debriefing statement which thanked them for their participation and explained the incentive procedure (Appendix H).
Measures

Demographic questionnaire. A brief demographic questionnaire was developed for use in the current study (Appendix C). Items assessed age, gender, ethnicity, current grade level, attending university, previous mental health counseling experience, previous career counseling experience, academic major, number of years involved in an ROTC program, number of years involved in a JROTC program, prior military service, and family military service.

TPB Variable Measures. Fishbein and Ajzen (2010) recommend that in order to best assess the important components involved in attitudes, subjective norms, PBC, and intentions as they are defined in the TPB, researchers should create three to eight items per construct for the target behavior. Each item is rated on a seven-point bipolar adjective scale, and participants are asked to select the number that best relates to their personal opinion. This approach to measuring the TPB variables has been frequently employed by researchers familiar with TPB studies (Ajzen, 1982; Connor & Sparks, 1995; Francis et al., 2004; Godin & Kok, 1996), and used in studies incorporating the TPB (Britt et al., 2011; Hyo, 2011; Kor & Mullan, 2011; Stanko, 2013; Stanko, Tagler & Forbey, 2013; Stecker et al., 2010; White et al., 2012).

Utilizing this method, participants were asked to respond to a series of questions regarding willingness to seek counseling if they had a psychological problem (see Appendix D). The decision was made to use the term “counseling” in lieu of other possible terms, as a review of existing services at U.S. Army, Navy, and Air Force bases revealed that “counseling” is the commonly utilized terminology in this context. A decision was also made to define the behavior as “seeking counseling if they have a psychological problem,” as this terminology had been used in a previous study that utilized the TPB to examine PHS in a National Guard sample (Britt et al., 2011). It is important to note the subjective norms, PBC, and behavioral intentions scales
included in the current study were adapted from Stanko, Tagler, and Forbey (2013), after carefully reviewing recommendations for item development discussed in Ajzen (1982), Fishbein and Ajzen (2010), and Francis et al. (2004). Prior to administration, an expert on the TPB evaluated the face validity of the items included on these newly developed TPB scales.

**Attitudes.** Fishbein and Ajzen (2010) recommend measuring attitudes with semantic differential items, utilizing adjective pairs that reflect both instrumental and experiential components of attitude. This method of measurement includes evaluating a behavior on a set of 7-point evaluative bipolar scales. Valois and Godin (1991) recommended researchers select adjective pairs relevant in describing an individual’s attitude towards the target behavior, as well as those in which participants are likely to give similar meanings to each of the adjective pairs as they relate to the behavior. The adjective pairs selected for the current study were chosen as a result of their use in previous health-related studies (Ajzen & Tomko, 1986; Beck & Davis, 1984; Fishbein & Coombs, 1974; Frederick & Dossett, 1983; Grube, Morgan, & McGree, 1986; Marsiglio, 1988; McCaul, O’Neill, & Glasgow, 1988; Olson & Cal, 1984; Riddle, 1980; Schifter & Ajzen, 1985; Shimp & Kavas, 1984; Timko, 1987; Valois, Desharnais, Godin, 1988), relevance to PHS, and semantic stability regarding seeking counseling.

Before beginning the attitudes questionnaire (Appendix D), participants read a statement that provided instructions regarding how to complete the 7-point semantic differential scale. They were then asked to respond to each of the 13 bipolar adjective pairs for the item “For me to seek counseling if I have a psychological problem is.” Several adjective pairs were selected to measure the participants’ instrumental component of their attitudes, which generally relates to the cognitive dimensions of attitudes. Selected adjective pairs included: *useful-useless, wise-foolish, beneficial-harmful, worthless-valuable, important-unimportant, bad-good, productive-*
unproductive, and detrimental-constructive. Additional adjective pairs were selected to measure the participants’ experiential component of their attitudes, which generally relates to the affective dimensions of attitudes. Selected adjective pairs that were included were pleasant-unpleasant, safe-unsafe, nice-awful, embarrassing-not embarrassing, and desirable-undesirable. Scores range from 13 to 91 (7 items were reverse scored); higher scores on this scale reflected more favorable attitudes towards PHS. Correlation coefficients between this new attitudes scale and the Expertness subscale \(r = .510, p = .000\) and Stigma Tolerance subscale \(r = .565, p = .000\) from the BAPS were both statistically significant at the \(p \leq 0.001\) level, providing evidence for the construct validity for this new attitudes scale (Campbell & Fiske, 1959; Raykov & Marcoulides, 2011).

**Subjective Norms.** Fishbein and Ajzen (2010) recommend measuring subjective norms with 7-point Likert-type items designed by the researcher to assess both injunctive and descriptive norms towards the target behavior. In the current measure of subjective norms (Appendix D), four injunctive norms items were designed to assess an individual’s belief that important others think the individual should or should not seek counseling if they had a psychological problem. An example item from the scale included “The people in my life whose opinions I value would (1 = approve, 7= disapprove) of me seeking counseling if I have a psychological problem.” An additional four descriptive norms items were designed to assess an individual’s perception of whether they believe important others engage or do not engage in counseling. An example item from this scale included “Most people I respect and admire seek counseling if they have a psychological problem” (1 = unlikely, 7= likely). Scores range from 7 to 56 (5 items were reverse scored); higher scores on this study specific scale indicated greater perceived subjective normative pressure to engage in PHS. The decision was made to utilize this
approach to measure subjective norms in the current study as no known scales have been developed that accurately assess subjective norms towards PHS as they are defined by the TPB.

**Perceived behavioral control.** Fishbein and Ajzen (2010) recommend measuring PBC with 7-point Likert items that directly assess both participants’ capacity and autonomy regarding the target behavior. Four capacity items were designed to target the participant’s perceived confidence in their ability to seek counseling, and an example item from the scale includes “I am confident that I can seek counseling if I have a psychological problem” (1 = definitely false, 7 = definitely true). Another four autonomy items were developed to capture the participant’s perceived level of personal control over seeking counseling, with an example item from the scale including “How much control do you believe you have over seeking counseling if you have a psychological problem?” (1 = no control, 7 = complete control). Scores range from 7 to 56 (4 items were reverse scored); higher scores on this scale reflected greater levels of perceived control over PHS. The correlation coefficients between this new PBC scale and the Help Seeking Propensity subscale from the IASMHS ($r = .458$, $p = .000$) was statistically significant at the $p \leq 0.001$ level, providing evidence for the construct validity for this new PBC measure (Campbell & Fiske, 1959; Raykov & Marcoulides, 2011).

**Behavioral Intentions.** Fishbein and Ajzen (2010) recommend measuring behavioral intentions with five to seven 7-point Likert items that directly assess an individual’s intentions to engage in the target behavior. Items developed for inclusion in this scale were designed to assess the varying degrees of intent that are important to capture with a behavioral intention measure according to previous TPB researchers. For example, items were developed to measure participants’ level of expectation to perform the behavior, their self-prediction regarding the likelihood that they would perform the behavior, and their intention to perform the target
behavior (Armitage & Connor, 2001; Fishbein & Ajzen, 2010; Francis et al., 2004). A total of seven 7-point Likert type items that were designed to measure participants’ behavioral intentions regarding seeking counseling were included in the scale (Appendix D). Scores range from 7 to 49 (4 items were reverse scored); higher scores on this scale indicated greater intentions to seek counseling. The correlation coefficient between this new intent scale and the Intent subscale from the BAPS ($r = .650$, $p = .000$) was statistically significant, providing evidence of construct validity for this new measure of behavioral intentions (Campbell & Fiske, 1959; Raykov & Marcoulides, 2011).

Supplemental Instrumentation

**Beliefs About Psychological Services (BAPS).** Ægisdóttir and Gerstein (2009) designed the BAPS to improve upon some perceived flaws in the Attitudes Toward Seeking Professional Psychological Services (ATSPPH) scale (Appendix E; Fischer & Turner, 1970). The BAPS is an 18-item questionnaire with each item rated by the participant on a 1 to 6-Likert scale. Generally, higher numbers reflect more favorable beliefs towards psychological services, however seven questions (items 5, 8, 10, 11, 13, 15 and 17) are reverse scored and for these questions, a participant selecting higher numbers reflects less favorable beliefs towards mental health treatment. The BAPS contains three subscales labeled Intent, Stigma Tolerance, and Expertness (Ægisdóttir & Gerstein, 2009). To score the BAPS subscales, the researcher finds the average Likert score for each subscale. If desired, a total BAPS score can be obtained by finding an average of the ratings of all 18 items.

Research has supported both the validity and reliability of BAPS. In their original study analyzing PHS beliefs and intentions in a sample of college students, Ægisdóttir and Gerstein (2009) found a Cronbach’s alpha coefficient of .88 for the total BAPS score. This finding was
supported by Choi (2008), who found a Cronbach’s alpha coefficient of .89 in a sample of college students. Known-groups validity was demonstrated when the BAPS total score discriminated between individuals with and without prior counseling experience. Convergent validity was supported by finding a high correlation between the total scores of BAPS and the ATSPPH (Ægisdóttir & Gerstein, 2009). Divergent validity was demonstrated by a non-significant correlation between the BAPS and the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). A modified version of the BAPS was used for the current study, with the items changed to refer to counselors rather than psychologists. This change was made to be more congruent with the terminology used in the TPB scales, and previous research suggests that this change does not impact the psychometric properties of the BAPS (Ægisdóttir et al., 2011).

**Attitudes.** Ægisdóttir and Gerstein (2009) suggested that items on the both the Expertness and Stigma Tolerance subscales of the BAPS relate to the attitudes component of the TPB. The Expertness subscale (Items 7, 9, 14, 16) assesses the beliefs regarding the perceived effectiveness of psychological services, while the Stigma Tolerance subscale (Items 5, 8, 10, 11, 13, 15, 17 and 18) measures how well an individual can cope with the perceived stigma that comes with obtaining mental health treatment. Ægisdóttir and Gerstein (2009) provided evidence of known-groups validity for both subscales by discriminating between individuals with and without prior counseling experience. They further offered empirical support of divergent validity for both subscales by finding a non-significant correlation with the Marlowe-Crowne Social Desirability Scale, as well as convergent validity through the finding of moderate correlations between the two subscales and both the original and short version of the ATSPPH (Ægisdóttir & Gerstein, 2009). The Expertness subscale also appears to be a reliable measure of the perceived merit of
psychological services when studying college students, as the Cronbach’s alpha coefficient for this subscale has been reported as .72 (Ægisdóttir & Gerstein, 2009; Choi, 2008). Similarly, the Stigma Tolerance subscale appears to be a reliable measure of stigma and negative beliefs related to mental health treatment amongst college students, as Ægisdóttir and Gerstein (2009) found a Cronbach’s alpha coefficient of .78 and Choi (2008) reported one of .83. In the current study, items from the Expertness and Stigma Tolerance subscales will be combined to form an attitudes composite score that will be used to assess participant’s attitudes towards PHS. Researchers have previously provided evidence for the validity and reliability of this attitudes composite score (Ægisdóttir et al., 2011).

**Behavioral Intentions.** The Intent subscale of the BAPS measures participants’ intentions to seek mental health treatment. Ægisdóttir and Gerstein (2009) reported that this subscale could be used to represent the behavioral intentions component of the TPB. The Intent subscale was designed to measure formal sources of PHS. Items 1, 2, 3, 4, 6 and 12 are in this subscale. Ægisdóttir and Gerstein (2009) demonstrated known-groups validity with the Intent subscale by discriminating between individuals with and without prior counseling experience. They further demonstrated divergent validity by obtaining a non-significant correlation between the Intent subscale and the Marlowe-Crowne Social Desirability Scale. Ægisdóttir and Gerstein found moderate correlations between the Intent subscale and the original ATSPPH and its subscales as well as the short version of the ATSPPH, which provides evidence of convergent validity. The Intent subscale also appears to be a reliable measure of PHS intentions in college students, as Ægisdóttir and Gerstein (2009) reported a Cronbach’s alpha reliability of .82, and Choi (2008) reported a Cronbach’s alpha of .84. The Intent subscale from BAPS was used in the current study to assess ROTC students’ behavioral intentions to seek counseling services.
Inventory of Attitudes Toward Seeking Mental Health Services (IASMHS). The IASMHS is a 24-item scale designed to measure an individuals’ attitudes towards obtaining psychological services (Mackenzie, Knox, Gekoski, & Macaulay, 2004). The scale was developed by modifying items from the ATSPPH in order to address some perceived flaws inherent in the measure. Mackenzie et al. (2004) reported Cronbach’s alpha coefficients for the total IASMHS score of .87, and a Cronbach’s alpha coefficient of .85 ($p < .01$) for test-retest reliability over a 3-week period. After conducting an exploratory factor analysis, Mackenzie et al. (2004) reported a three-factor structure. While each subscale was developed to represent one of the three variables of the TPB, the current study will only utilize the Help Seeking Propensity subscale, as subsequent research has not supported the validity of the Psychological Openness and Indifference to Stigma subscales (Mackenzie et al., 2004).

Perceived behavioral control. Mackenzie et al. (2004) developed the Help Seeking Propensity Subscale of the IASMHS (Appendix F) to represent the PBC component of the TPB. This subscale has a total of 8 items, 5 from the ATSPPH and 3 that were uniquely created by the developers of the IASMHS. Participants rate items on a five point Likert-type scale, ranging from disagree to agree, with higher scores suggesting that the participants perceive greater control over the behavior of PHS. Previous research has found a Cronbach’s Alpha Coefficient of .76, and test-retest reliability assessed over 3 weeks of .64 ($p < .01$) (Mackenzie et al., 2004).

Elicitation of Modal Salient Beliefs

Fishbein and Ajzen (2010) strongly encourage researchers to incorporate into TPB studies a way to access participants’ underlying behavioral, normative, and control beliefs that form their attitudes, subjective norms, and PBC towards the target behavior. To do this, they recommend participants be asked a series of open-ended questions designed to elicit their
relevant salient beliefs. The primary researcher then performs a content analysis of these responses to identify the core beliefs listed, as well as the frequency with which each belief is reported. Results then provide an indication of which beliefs are salient for the population sampled regarding the target behavior. Specifically, those beliefs listed more frequently are thought to be more salient. The Salient Beliefs Questionnaire (Appendix G) utilized in the current study was directly adapted from Fishbein and Ajzen (2010) and through reviewing the recommendations of Armitage and Connor (2001) and Francis et al. (2004).

**Behavioral Beliefs.** An individual’s behavioral beliefs regarding performing a behavior are a result of their expected positive and negative outcomes of engaging in the target behavior (Fishbein & Ajzen, 2010). Two open-ended questions were developed to elicit ROTC cadets’ behavioral beliefs related to PHS. The two items included on the scale to elicit behavioral beliefs were “What do you see as the advantages of seeking counseling if you have a psychological problem?” and “What do you see as the disadvantages of seeking counseling if you have a psychological problem?”

**Normative Beliefs.** The TPB suggests the normative pressure of any number of reference groups can be considered for a behavior, and not every reference group will be deemed relevant for every behavior (Fishbein & Ajzen, 2010). Thus, it is important to determine which reference groups ROTC students’ consider salient for the behavior of seeking counseling services. Two questions were designed to assess ROTC students’ injunctive normative beliefs (Appendix G). The two items included on the scale were “Please list all people or groups who would approve of your seeking, or would encourage you to seek, counseling if you have a psychological problem” and “Please list all people or groups who would disapprove of your seeking, or would discourage you from seeking, counseling if you have a psychological problem.” Two additional questions
were developed to assess ROTC students’ descriptive normative beliefs (Azjen, 1985; 2012). The items included on the SBQ were “Please list the individuals or groups who, when having a psychological problem, are more likely to seek counseling” and “Please list the individuals or groups who, when having a psychological problem, are least likely to seek counseling.”

**Control Beliefs.** An individual’s control beliefs relate to the factors they perceive that may assist or impede their performing a behavior (Ajzen, 1988; 2012). Two items were developed to elicit ROTC students’ control beliefs related to PHS (Appendix G): “Please list any factors or circumstances that would make it easy or enable you to seek counseling if you have a psychological problem” and “Please list any factors or circumstances that would make it difficult or prevent you from seeking counseling if you have a psychological problem.”

**Design and Analysis**

**Content Analysis.** Fishbein and Ajzen (2010) recommend researchers perform a content analysis of participants’ responses to open-ended questions eliciting salient beliefs to determine which beliefs are most relevant in shaping an individual’s attitudes, subjective norms, and PBC related to the target behavior. In keeping with this recommendation, a content analysis of the SBQ was conducted in the current study. In the first step of the content analysis, the primary researcher read through the data several times (Burnard, 1991), and recorded preliminary notes on a coding sheet. These notes were designed to describe the various aspects of the data (Dey, 1993) and were then used to generate a number of categories based on common themes (Burnard, 1991). Categories were subsequently grouped into broader higher order categories to make the coding process more manageable (Burnard, 1991; Dey, 1993; Fishbein & Ajzen, 2010). These higher order categories were then given names using content-characteristic words (Elo &
Kyngas, 2007). In the final step of this stage, a coding manual was developed that consisted of category names, definitions of the category, and examples (Weber, 1990).

The next step in the content analysis consisted of a test of the coding scheme on a sample of data. The test of the coding scheme was done to ensure that the category definitions were clear and able to be applied consistently to the text (Zhang & Wildermuth, 2009). A research team consisting of four female volunteer graduate students from the Ball State University Counseling Psychology department completed the test of the coding scheme, as well as subsequent coding. Two of the coders were doctoral level students, while the other two coders were masters’ level students. All coders had either a bachelors or master’s degree in psychology, and all had previously completed the CITI training program for researchers.

In the initial test of the coding scheme, all four coders were asked to code the same random selection of 10 participants’ responses. A major emphasis during this test of the coding scheme was placed on soliciting feedback from the research team to limit any researcher bias that may have influenced the development of the coding scheme (Zhang & Wildermuth, 2009), as well as assess inter-rater agreement. This initial test of the coding scheme provided partial support for the existing coding scheme, as there were six participant responses where the research team failed to reach sufficient coding consistency as defined by inter-rater agreement of greater than 70% (Weber, 1990). It was therefore necessary to work with the research team to make changes in the coding scheme to increase inter-rater agreement (Schilling, 2006). The only significant alteration made during this stage was to change the category name “Problem Resolution” to “Problem Management/Resolution” in an attempt to better clarify the code should also be used for responses that indicate therapeutic work on a presenting problem that has not yet been resolved. After the primary researcher made the above revision and discussed the revised
coding scheme with the research team, the coders were asked to code a second set of 10 random responses. Results from this second test of the coding scheme provided evidence of sufficient coding consistency as the research team successfully obtained inter-rater agreement of greater than 70% for all ten of the randomly selected responses (Weber, 1990).

The revised coding manual (Appendix I) was then used to code the remaining participants’ responses (Zhang & Wildermuth, 2009). In this stage, the four members of the research team were divided into groups of two, with each group consisting of both a doctoral and master’s level graduate student. Each group was then asked to code one-half of the remaining responses. The decision was made to divide the four researchers into two groups in order to prevent coder fatigue and reduce the time involved in coding data. The researchers were asked to code the remaining data in sets of 15 responses, as this allowed the primary researcher to make sure that inter-rater agreement remained high throughout the coding process (Miles & Huberman, 1994; Weber, 1990). When disagreements did occur in coding, they were handled on a case-by-case basis. Specifically, the primary researcher met with the coders involved, and as a group they determined which code most appropriately applied using the coding manual (Self, Driver, Stevens & Warren, 2013). A total of 12 disagreements occurred throughout the coding process, and a review of these instances suggested there was no consistent pattern in rating disagreements.

**Regression Analysis.** In the primary analysis of the current study, a hierarchical multiple regression model was evaluated utilizing the TPB scales developed for use in the current study. To test the first hypothesis that attitudes, subjective norms, and PBC would significantly predict ROTC students’ intentions to seek help, all three determinants were entered into the regression equation as a block of independent variables during step one. Intentions to seek help was added
as the dependent variable during this first step. To test the second hypothesis of the current study, that past counseling experience would account for unique variance in ROTC students’ intentions to seek help, past counseling experience was entered into the regression equation in step two of the analysis. Finally, to test the third hypothesis that attitudes would be the strongest predictor of behavioral intentions, formal hypothesis testing to compare regression slopes was performed to determine whether the difference between beta coefficients found in the regression analysis were statistically significant.

In supplemental analysis, a second hierarchical multiple regression model was performed using the previously established scales from the BAPS and the IASMHS. This supplemental analysis was conducted similarly to the primary analysis, with the TPB determinants being entered as independent variables in the first step of the regression analysis and past PHS behavior being entered in the second step. The purpose of this supplemental analysis was to allow for comparison between the results obtained through the use of the newly developed TPB scales in the primary analysis, and results produced through the use of these previously existing measures.

In a second and unrelated set of supplemental analyses, a standard multiple regression (enter method) was conducted that utilized the six TPB subscales from the TPB measures developed for the current study. This supplemental analysis was conducted as a result of encouragement from the TPB expert reviewer in order to determine if this unorthodox model would account for more variance in behavioral intentions. In step one of this regression analysis, all six subscales from the TPB measures developed for use in the current study were entered as a block of independent variables with intentions added as the dependent variable. Please see the results section below for the findings from the primary and supplemental analyses.
RESULTS

Mean scores for the TPB variable measures, BAPS, and IASMHS are reported in Table 7. As the tables indicate, ROTC participants overall expressed relatively positive attitudes towards PHS, with the mean score of 5.19 on the TPB attitudes scale. Additionally, ROTC participants indicated relatively high-perceived control over the behavior of PHS (mean score of 5.42 on the TPB PBC scale). Results suggested that ROTC participants perceived norms were slightly above neutral (mean score of 4.68), and their overall intentions to seek help were also slightly above neutral (mean score of 4.78 on the TPB Intent scale).

Reliability Assessment

TPB Scales. Prior to performing the primary data analysis, it was important to examine the reliability of the newly developed scales that were created following the recommendations of Fishbein and Ajzen (2010). In order to determine the reliability of these new scales, a Cronbach’s alpha coefficient was calculated for each measure (Table 2). The attitudes (\(\alpha = .934\)), subjective norms (\(\alpha = .828\)), PBC (\(\alpha = .807\)), and intentions scales (\(\alpha = .930\)) all had reliability estimates of adequate magnitude providing evidence of internal consistency for these new scales (Raykov & Marcoulides, 2011). Similar results were found when exploring the reliability estimates of the subscales of these newly developed scales, as the instrumental (\(\alpha = .942\)), experiential (\(\alpha = .803\)), injunctive norms (\(\alpha = .711\)), descriptive norms (\(\alpha = .801\)), and controllability (\(\alpha = .740\)) subscales all had Cronbach’s alpha coefficients above .7. It is important to note that the Capability subscale (\(\alpha = .684\)) produced a reliability estimate below .7. However, when these individual items were considered in the full PBC scale, a sufficient Cronbach’s alpha (\(\alpha = .807\)) was calculated.
The Cronbach’s alphas if individual items were deleted were also examined for each scale. Results suggested that deleting all but four of the items developed for these new scales would provide a reduction in the Cronbach’s alpha coefficient, and the increase in Cronbach’s alpha for deleting one of these four items ranged from a mere .005 to .017. Additionally, all items had a coefficient of variation of less than .05, suggesting none of the items had a level of variation considered problematic (Tabachnick & Fidell, 2013). After reviewing each item’s coefficient of variation, the Cronbach’s alpha coefficients of each scale, and the increase in Cronbach’s alpha if individual items were deleted, the decision was made to retain all of the developed items in the final analysis (Raykov & Marcoulides, 2011).

A review of the reliability coefficients for the previously existing scales utilized in the current study can be found in Table 2. It is important to note the coefficients for these scales were of adequate magnitude (Raykov & Marcoulides, 2011), and were consistent with those found in previous studies utilizing these measures (Choi, 2008; Mackenzie et al., 2004; Ægisdóttir & Gerstein, 2009; Ægisdóttir et al., 2011).

**Validity Assessment**

**Factor Analyses and Dimensionality.** In order to ensure that the scales developed for the current study were internally consistent and had a factor structure that fit the data as theoretically intended, a series of exploratory factor analyses (EFA) were run to examine the dimensionality and factorial validity of the scales. The decision was made to run a separate EFA on each scale in order to determine if a two-factor solution would emerge for the TPB determinant scales as suggested by the TPB. Items were retained provided that they had a factor loading of at least .30 (Thompson, 2004) and loaded as theoretically intended by the TPB model.
**Behavioral Intentions.** Results of the KMO (.906) and Bartlett’s test of sphericity ($p = .00$) indicated the correlation matrix was factorable. A review of eigenvalues indicated only one factor with an eigenvalue greater than 1.00 was extracted with Principal Axis Factoring, indicating that a one-factor approach was the best solution. Similar results were suggested by an examination of the scree plot (Figure 1). It is important to note a one-factor approach (Table 3) accounted for 65.91% of the variance in the data. These results support the unidimensionality of the behavioral intentions scale (Gerbing & Anderson, 1988; Raykov & Marcoulides, 2011).

**Attitudes.** Results of the KMO (.926) and Bartlett’s test of sphericity ($p = .00$) indicated the correlation matrix was factorable. Using Principal Axis Factoring with a promax rotation, evidence of a two-factor solution appeared. Specifically, the two-factor solution was supported by two factors having eigenvalues greater than 1.00, as well as examination of the scree plot (Figure 2). Results further indicated that the correlation between the two-factors was moderate ($r = .64$). Reviewing the items that loaded on each factor suggested one factor consisted of the items designed to assess the instrumental components of attitudes, while the other factor was made up of items developed to assess the experiential components (Table 4). As expected, all 8 instrumental items loaded exclusively to the Instrumental subscale, and three out of the five experiential items loaded exclusively to the Experiential subscale. One item ("Desireable-Undesireable") that was designed to assess the experiential component, loaded to both subscales ($r = .39; r = .41$). However, the item did load more highly on the expected subscale. Another item ("Safe-Unsafe") that was designed to assess the experiential component, loaded only on the instrumental subscale ($r = .59$). Overall, these results support the two dimensions of the attitudes scale (Gerbing & Anderson, 1988; Raykov & Marcoulides, 2011).
Subjective Norms. Results of the KMO (.851) and Bartlett’s test of sphericity \((p = .00)\) indicated the correlation matrix was factorable. A review of eigenvalues and the scree plot (Figure 3) indicated a two-factor solution would provide the best solution, accounting for 46.6% of the variance in the data. A two-factor solution is supported by the TPB (Fishbein & Ajzen, 2010), as items were designed to assess both injunctive and descriptive norms. As expected, four items each loaded on both the injunctive and descriptive norms subscales (Table 5). These results provide evidence for the two dimensions of the subjective norms scale developed for the current study (Gerbing & Anderson, 1988; Raykov & Marcoulides, 2011).

Perceived Behavioral Control. Results of the KMO (.827) and Bartlett’s test of sphericity \((p = .00)\) indicated the correlation matrix was factorable. A review of eigenvalues suggested a one-factor solution, as only one factor with an eigenvalue greater than 1.00 was extracted with Principal Axis Factoring. The one-factor solution was supported by a review of the scree plot (Figure 4), and the solution accounted for 44.73% of the variance in the data. All eight items loaded to the factor (Table 6), providing evidence of the unidimensionality of the PBC scale (Gerbing & Anderson, 1988; Raykov & Marcoulides, 2011). A second factor had an eigenvalue of .96, just missing the generally used cutoff score of 1.00. It is important to note that the finding of the PBC scale as unidimensional as opposed to consisting of two dimensions, autonomy and capability, does follow from past research which suggests that the there is often difficulty in discriminating between the internal and external components of PBC. Moreover, researchers have proposed a number of ways to break down PBC, providing further evidence that the subcomponents of this construct are less understood than those of attitudes and subjective norms (Zolait, 2014).

Assumptions for Hierarchical Multiple Regression
Prior to performing a hierarchical multiple regression, the predictor and outcome variables were examined to ensure necessary assumptions were met. Specifically, the assumptions of normality, homogeneity of variance, linearity, and multicollinearity were evaluated. The assumption of normality was met as the skewness and kurtosis statistics for each subscale were all within +/- 1 (Table 7; Kline, 2011; Weston & Gore, 2006), the subscales’ histograms revealed a normal bell curve (Figures 5-8), and the subscales’ P-P plots (see Figure 9) illustrated that data points were distributed around the regression line. Data points on the regression standardized predicted values by regression standardized residuals scatter plot (Figure 10) were symmetrical and without a pattern, indicating that the assumption of homogeneity of variance was met. A review of bivariate scatterplots revealed the predictor and outcome variables relate in a linear fashion, thereby providing evidence the assumption of linearity was met (Figures 11-13). Additional evidence of linearity was demonstrated by significant correlations between the predictor and criterion variables (Table 8). Finally, the assumption of multicollinearity was met as each condition index value was less than 30, variance inflation factor (VIF) was less than 3, and tolerance index was at least .64. Since the assumption of multicollinearity was met, the coefficient estimates for individual predictor variables was determined to be valid (Pedhazur, 1997; Tabachnick & Fidell, 2013).

Hierarchical Multiple Regression

A hierarchical multiple regression analysis was conducted to examine the hypothesis that attitudes, subjective norms, and PBC would significantly predict ROTC students’ intentions to seek help. Further, the hypothesis that previous counseling experience would account for unique variance in ROTC students’ intentions was evaluated. In step one of this analysis, attitudes, subjective norms, and PBC were entered into the regression equation as a block of independent
variables, with intentions to seek help added as the dependent variable. The decision to enter all three determinants into the equation at the same time is supported in theory by the structure of the TPB (Fishbein & Ajzen, 2010). In step two of the regression analysis, past help seeking behavior was added as an independent variable into the regression equation. This second step was done to test the second hypothesis of the current study that past counseling experience would account for a significant percentage of the variance in intentions to seek help beyond that which is accounted for by the determinants of the TPB (Pedhazur, 1997; Tabachnick & Fidell, 2013).

Results from step one of the hierarchical multiple regression provided evidence that attitudes, subjective norms, and PBC accounted for a significant proportion of the variance in ROTC students’ intention to seek help, supporting the first hypothesis of the current study (Table 9). Specifically, the results from step one suggested the variance accounted ($R^2$) for by the TPB determinants was .62 (adjusted $R^2 = .61$), which was significantly different from zero ($F(3, 124) = 67.10, p < .001$). These results indicate that attitudes, subjective norms, and PBC account for 62% of the variance in ROTC students’ intentions to seek help.

In step two, past counseling experience was entered into the regression equation. Past counseling experience was coded as either 0 = “No Previous Counseling Experience” or 1 = “Previous Counseling Experience,” and the decision was made to include both mental health counseling and career counseling in order to compensate for the lack of participants who endorsed any type of previous counseling experience. The change in variance accounted for was not significantly different from zero ($\Delta R^2 = .00, F(4, 123) = 49.94, p = .87$). Therefore, these results do not support the second hypothesis, which was past counseling experience would account for a significant degree of variance in behavioral intentions, above and beyond that
which is explained by ROTC students’ attitudes, subjective norms, and PBC (Pedhazur, 1997; Tabachnick & Fidell, 2013).

Finally to test the third hypothesis, that attitudes would be the strongest predictor of ROTC students’ intentions to seek help, it was necessary to first review the beta coefficients resulting from the regression analysis. Results from the hierarchical multiple regression analysis suggested all three determinants were statistically significant predictors of intentions to seek help. However, subjective norms was the strongest predictor of behavioral intentions ($\beta = .44$, $p < .05$), followed by attitudes ($\beta = .38$, $p < .05$), and then PBC ($\beta = .16$, $p < .05$). This result suggests an increase of one standard deviation in subjective norms, attitudes, and PBC will result in an increase of .44, .38, and .16 in behavioral intentions respectively, assuming the other two independent variables are held constant.

While a comparison of beta coefficients provides evidence that the strongest predictor of behavioral intentions was subjective norms, followed by attitudes and PBC, formal hypothesis testing to compare regression slopes was performed in order to determine whether the difference between beta coefficients was statistically significant. This analysis allowed for the testing of the third primary hypothesis of the current study, which was that attitudes would be the strongest predictor of ROTC students’ intentions to seek help. In order to compare regression slopes, Statistical Analysis System (SAS) version 12.1 was utilized to test three independent null hypotheses (Table 10). Each null hypothesis stated the regression slope of one determinant was equal to the regression slope of another determinant. Accepting the null hypothesis would suggest the difference between the regression slopes of the two determinants was not significant, thereby providing evidence that the difference between beta coefficients for the two determinants was not statistically different. However, rejecting the null hypothesis would indicate the
difference between the regression slopes of the two determinants was statistically significant, thereby providing evidence the difference between the beta coefficients was significantly different. Therefore, this data analysis could be used to allow for conclusions to be drawn regarding the determinants that are the best predictors of behavioral intentions. In order to account for inflation in type 1 error, a bonferroni correction was performed and each hypothesis was tested at $\alpha=.05/3=.017$ (Tabachnick & Fidell, 2013).

The results from this analysis suggested the difference between the subjective norms regression slope and PBC regression slope was statistically significant ($F(1, 124) = 9.50, p < .01$). In contrast, the difference between the subjective norms and attitudes regression slopes ($F(1, 124) = .31, p = .577$), as well as the attitudes and PBC regression slopes ($F(1, 124) = 3.92, p = .050$), were not statistically significant. These findings suggest subjective norms is a stronger predictor of ROTC students’ intentions to seek help than their perceived control over the behavior. However, since the regression slopes between subjective norms and attitudes were not significantly different, it is not possible to definitively conclude that subjective norms is the strongest predictor of behavioral intentions. Regardless, these results do not support the hypothesis that attitudes would be the strongest predictor of behavioral intentions (Tabachnick & Fidell, 2013).

**Supplemental Analyses**

**Hierarchical Multiple Regression With Existing Scales.** In addition to performing a hierarchical multiple regression analysis with the scales developed for use in the current study, a supplemental hierarchical multiple regression analysis was conducted utilizing the existing scales. Specifically, the 4 items from the Expertness subscale on the BAPS, and the 8 items on the Stigma Tolerance subscale from the BAPS were combined to form a BAPS attitude
composite score. This composite score was then used to represent attitudes in the regression equation. The Help Seeking Propensity subscale was utilized to represent PBC, and the Intent subscale from the BAPS was used to represent behavioral intentions. Given the limitations regarding the validity of existing scales in measuring subjective norms, the scale developed to measure subjective norms for the current study was utilized in this supplemental regression analysis.

Prior to performing a hierarchical multiple regression with the existing scales, the necessary assumptions were assessed. The assumption of normality was met as the skewness and kurtosis statistics for each scale were all within +/- 1 (Table 7). The assumption of homogeneity of variance was met, as data points on the scatter plot of the regression standardized predicted values and regression standardized residuals (Figures 14) was symmetrical and without a pattern. The assumption of linearity was met, as a review of bivariate scatterplots illustrated that the predictor and outcome variables relate in a linear fashion (Figures 15-17). Additional evidence of linearity was found by significant correlations between the predictor and criterion variables (Table 11). Finally, the assumption of multicollinearity was met as each condition index value was less than 30, variance inflation factor (VIF) was less than 3, and tolerance index was at least .64 (Pedhazur, 1997; Tabachnick & Fidell, 2013).

In step one of this supplemental analysis, attitudes, subjective norms, and PBC were entered into the regression equation as a block of independent variables, with behavioral intentions added as the dependent variable. Similar to the regression model utilizing the newly developed scales, the results from this hierarchical multiple regression analysis provided additional evidence for the first hypothesis that all three determinants taken together accounted for a significant proportion of the variance in ROTC students’ intentions to seek counseling
Specifically, 52% of the variance in ROTC students’ intentions to seek help could be explained by the linear composite of their attitudes, subjective norms, and PBC ($R^2 = .52$, adjusted $R^2 = .50$, $F(3, 124) = 43.89, p < .001$).

In step two, past counseling experience was entered into the regression equation. The change in variance accounted for was not significantly different from zero ($\Delta R^2 = .00$, $F(4, 123) = 32.87, p = .52$). Again, these results suggest past counseling experience did not significantly account for behavioral intentions, above and beyond that which was explained by attitudes, subjective norms, and PBC (Pedhazur, 1997; Tabachnick & Fidell, 2013). As a result, this finding did not provide support for the second hypothesis of the current study.

Finally to test the third hypothesis of the current study, that attitudes would be the strongest predictor of ROTC students’ intentions to seek help, it was once again necessary to review the beta coefficients produced from the regression analysis. Interestingly, when utilizing the existing scales, only PBC ($\beta = .47, p < .001$), and subjective norms ($\beta = .22, p < .01$), were statistically significant predictor variables. Attitudes was not found to be a significant predictor of ROTC students’ intentions to seek counseling services ($\beta = .16, p = .053$). Formal hypothesis tests to compare regression slopes were once again performed in order to determine whether the difference between beta coefficients was statistically significant (Table 13). In order to account for inflation in type 1 error, a bonferroni correction was performed and each hypothesis was tested at $\alpha = .05/3 = .017$. The results from this analysis suggested the difference between the PBC regression slope and attitudes regression slope ($F(1, 124) = 4.87, p = .03$), the PBC and subjective norms regression slopes ($F(1, 124) = 3.91, p = .050$), and the subjective norms and attitudes regression slopes ($F(1, 124) = .26, p = .609$), were all not statistically significant. These findings suggest PBC and subjective norms, the two independent variables that were significant
predictors of behavioral intentions, are comparable in terms of their relative influence on ROTC students’ intentions to seek help (Tabachnick & Fidell, 2013).

The finding that PBC was the strongest predictor of ROTC students’ intentions to seek help could likely have been attributed to overlapping items on the Help Seeking Propensity subscale of the IASMHS and the Intent subscale from BAPS (Appendix K). In order to more accurately assess the impact of PBC on behavioral intentions, a second hierarchical multiple regression analysis was performed after removing the overlapping items from the HSP scale (Items 1, 2, 7, and 8). Results from this analysis (Table 14) once again validated the TPB model, as the TPB determinants accounted for 46% of the variance in ROTC students’ intentions to seek help which was statistically significant ($R^2 = .46$, adjusted $R^2 = .45$, $F(3, 124) = 17.68$, $p < .001$). Additionally, the change in variance accounted for by past PHS was again not significantly different from zero ($\Delta R^2 = .00$, $p = .52$). However, of particular note the relative contribution of the TPB determinants did change significantly in this new regression model. Removing overlapping items from the HSP scale provided evidence that attitudes ($\beta = .37$, $p < .001$), subjective norms ($\beta = .28$, $p < .001$), and PBC ($\beta = .21$, $p < .01$) were all statistically significant predictor variables. Moreover, PBC went from the strongest to the weakest predictor of ROTC students’ intentions to seek help, a finding that can be explained by removing items that were clearly overlapping on the predictor and criterion variable. With this analysis, attitudes was found to be the strongest predictor of intentions to engage in PHS, providing some evidence for the third hypothesis of the current study (Tabachnick & Fidell, 2013).

**Standard Multiple Regression With TPB Subscales.** In a second set of supplemental analyses, a standard multiple regression (enter method) was conducted utilizing the six TPB subscales from the TPB measures that were developed for the current study. Recall that attitudes,
subjective norms, and PBC are all thought to be composed of two individual components or subscales. As discussed previously, Fishbein and Ajzen (2010) recommend researchers include items measuring each of the six TPB subscales in order to most accurately capture the TPB constructs, a significant limitation of several previous TPB studies (Britt et al., 2011; Stecker et al., 2010). However, Fishbein and Ajzen (2010) suggest including only the three TPB determinant scales as independent variables in the final regression analysis. While the primary data analysis utilized in the current study followed this recommendation, this supplemental analysis was performed as a result of encouragement from the TPB expert reviewer in order to determine if this unorthodox model would account for more variance in ROTC students’ intentions to seek help. To perform this standard multiple regression analysis, all six subscales from the TPB scales developed for the current study were entered as a block of independent variables with intentions to seek help added as the dependent variable.

Results of this analysis revealed the variance accounted ($R^2$) for by the six TPB subscales was .67 (adjusted $R^2 = .65$), which was significantly different from zero ($F(6, 121) = 40.02, p < .001$). These results indicate the six TPB subscales account for 67% of the variance in ROTC students’ intentions to seek help, which is comparable to the 62% of the variance in behavioral intentions accounted for by the three TPB scales (Tabachnick & Fidell, 2013). Thus, it does not appear the six-subscale analysis provides additional information beyond the recommended and more commonly utilized approach (Fishbein & Ajzen, 2010). As a result, the decision was made to utilize the primary data analysis for subsequent interpretations and conclusions. For a review of the bivariate correlations from this third regression model refer to Table 15, and the results of this standard multiple regression analysis can be found in Table 16.
**Past Counseling Experience.** As stated above, the decision to enter the TPB determinants as a block of independent variables first into the regression equation was based off the prior use of this method of analysis in previous TPB research studies. However, the decision was made to rerun the primary and secondary hierarchical multiple regression models and enter previous mental health counseling experience first into the regression equation to see if this simpler model would produce different results than those reported above. Additionally, the decision was made to exclusively examine the impact of previous psychological or mental health counseling experience on intentions to engage in PHS, as previous literature has suggested that the impact of this type of counseling on the TPB determinants and intentions may differ from career counseling (Cepeda-Benito & Short, 1998; Di Fabio & Bernaud, 2008; Hess & Tracey, 2013). In the first hierarchical multiple regression model, which utilized the TPB determinant scales developed for the current study, past counseling experience was entered first into the regression equation with the TPB determinants entered as a block of independent variables in step two. Results of this analysis (Table 17) suggested that only 1.6% of the variance in ROTC students’ intentions to seek help could be explained by their prior mental health counseling experience in step one ($R^2 = .02$, adjusted $R^2 = .01$, $F(1, 126) = 4.05, p = .15$), but adding the TPB determinants as a block of independent variables in step two did produce a statistically significant change in the variance accounted for in intentions to engage in PHS ($\Delta R^2 = .61$, $F(4, 123) = 38.56, p = .00$). Similar results were found when rerunning the secondary hierarchical multiple regression analysis that relied on the existing scales, but making the revision to add previous mental health counseling experience first into the regression equation with the TPB determinants entered second as a block of independent variables (Table 18). Results from this hierarchical multiple regression suggested that only 0.3% of the variance in ROTC students’
intentions to seek help could be explained by their prior mental health counseling experience in step one ($R^2 = .003$, adjusted $R^2 = .00$, $F(1, 126) = 3.58, p = .53$), but adding the TPB determinants into the regression equation as a block of independent variables in step two did once again produce a change in the variance accounted for that was significantly different from zero ($\Delta R^2 = .46$, $F(4, 123) = 13.27$, $p = .00$). These results suggest that regardless of whether previous counseling experience is entered first or second into the regression equation it does not account for a significant portion of the variance in ROTC students’ intentions to seek help (Pedhazur, 1997; Tabachnick & Fidell, 2013). Additionally, both regression models produce similar results regardless of when the past PHS variable is entered into the equation.

Content Analysis

A content analysis of participants’ responses to a series of open-ended questions designed to elicit their salient beliefs towards seeking mental health treatment was performed to determine the relative frequency with which each belief was reported. Those beliefs articulated most frequently by ROTC students in the current study were thought to be those that were most influential in their intentions to seek help (Fishbein & Ajzen, 2010; Francis et al., 2004). After reviewing the data, the decision was made to classify a belief as occurring more frequently if it was endorsed by at least 15% of the total participants responding to the question. This decision was data driven, as the value could be used to differentiate beliefs according to the existing significant drop-off in endorsement that naturally emerged from the data. The current section will focus only on those beliefs that occurred most frequently, though a review of all participants’ responses can be found in Tables 19-26.

Behavioral Beliefs. In order to identify ROTC students’ behavioral beliefs towards PHS, participants were asked two open-ended questions that sought to identify the perceived
advantages and disadvantages of engaging in mental health treatment. A total of 117 participants provided at least one response to the question identifying advantages to PHS, while 114 participants responded with at least one disadvantage to engaging in counseling. Percentages listed below were derived from the total number of participants who provided at least one response to the indicated question. Participants were most likely to identify problem management/resolution (n=55, 47.0%), professional help and guidance (n=54, 46.2%), expression of thoughts and emotions (n=49, 41.9%), and confidentiality (n=24, 20.5%) as advantages of obtaining mental health treatment. In contrast, participants listed stigma (n=84, 73.7%), the financial expense (n=27, 23.7%), discomfort with the counseling process (n=25, 21.9%), time constraints (n=23, 20.2%), and possible career ramifications (n=21, 18.4%) as the most salient disadvantages of engaging in PHS.

Normative Beliefs. Participants were asked two open-ended questions that sought to identify their injunctive normative beliefs, or the salient reference groups that support or do not support PHS. A total of 114 participants provided at least one response to the question asking for identification of reference groups who would support them seeking counseling, while only 65 participants listed at least one reference group who would not support their obtaining psychological services. Participants were most likely to identify friends/peers (n=72, 63.2%), family (n=48, 42.1%), ROTC instructors (n=44, 38.6%), parents (n=28, 24.6%), other ROTC cadets (n=27, 23.7%), and mothers (n=23, 20.2%) as important others who would support them if they decided to seek help. Interestingly, participants were also most likely to identify friends/peers (n=25, 38.5%) and other ROTC cadets (n=18, 27.7%) as salient reference groups who would not support their engagement in mental health treatment. Notably, fifteen (23.1%)
ROTC participants expressed there were no important reference groups who would not support them seeking help.

Participants were also asked to respond to two additional open-ended questions designed to identify their descriptive normative beliefs, or the salient reference groups who would engage or would not engage in PHS. A total of 85 participants identified at least one individual or group who would be most likely to seek counseling, and 81 participants provided at least one response to the question asking for identification of an individual or group who would be least likely to seek counseling. Participants were mostly likely to identify friends/peers (n=50, 58.8%), siblings (n=25, 29.4%), family (n=16, 18.8%), mothers (n=16, 18.8%), and other ROTC cadets (n=13, 15.3%) as important individuals or groups who would be most likely to seek help. Intriguingly, participants listed friends/peers (n=36, 44.4%), other ROTC cadets (n=30, 37.0%), siblings (n=19, 23.5%), and fathers (n=15, 18.5%) as important reference groups who would be least likely to seek counseling when experiencing psychological distress.

**Control Beliefs.** Participants were asked two open-ended questions developed to elicit the salient factors that may assist or impede their engaging in counseling services. A total of 94 participants provided at least one response to the question identifying factors that would make it easy for them to seek help, while 115 participants responded with at least one factor that would make it difficult or prevent them from engaging in PHS. Participants were most likely to identify accessibility of counseling services (n=44, 46.8%), supportive important others (n=32, 34.0%), minimal financial expense (n=24, 25.5%), and experiencing significant distress (n=23, 24.5%) as factors that would make it easy or enable them to seek counseling services. In contrast, participants listed time constraints (n=40, 34.8%), significant financial expense (n=35, 30.4%),
and stigma (n=33, 28.7%) as the most frequent factors that would make it difficult or prevent them from engaging in PHS.

**DISCUSSION**

The purpose of the current study was to identify the relative contribution of attitudes, subjective norms, and PBC in predicting ROTC students’ intentions. The study also sought to elicit ROTC students’ salient behavioral, normative, and control beliefs. The information acquired from the current study could then be used to inform future interventions designed to increase ROTC students’ intentions to seek help by providing evidence for the determinant that is found to most strongly contribute to behavioral intentions, as well as the salient beliefs that underlie this construct (Fishbein & Ajzen, 2010).

**Hypothesis #1**

The present study sought to validate a model suggested by the TPB as a way of predicting ROTC students’ intentions to seek help. Results of the current study provided support for this first hypothesis. Specifically, attitudes, subjective norms, and PBC accounted for 62% of the variance in ROTC students’ intentions to seek help. Further, all three determinants were found to be statistically significant predictors of behavioral intentions when the TPB scales that were developed for the current study were utilized.

The findings from this study were in direct alignment with previous research that found the TPB could be used to explain and predict a number of health related behaviors (Conner & Sparks, 2005) and PHS (Britt et al., 2011; Hartong, 2011; Stecker et al., 2010). Of significance, the 62% of variance explained in ROTC students’ intentions to seek help in the current study was greater than the 39% of variance in behavioral intentions explained in the most extensive meta-
analysis to date on the TPB by Armitage and Connor (2001), as well as the 41% of variance in Army National Guard participants’ intentions to seek help in Stecker et al. (2010).

While there are a number of potential explanations for why the percentage of variance explained in behavioral intentions was greater in this study than in previous studies, perhaps the most likely explanation derives from the way the TPB constructs were measured in the current study. As discussed previously, past TPB research in the area of PHS is marked with methodological limitations (Britt et al., 2011; Hartong, 2011; Smith, Tran, & Thompson, 2008; Stecker et al., 2010). These limitations may have resulted in a lower percentage of variance accounted for in intentions, and help explain why one or more TPB determinants were not significant predictors of intentions to seek help in these past studies.

Additional support for the importance of utilizing measures that were developed as outlined by Fishbein and Ajzen (1975, 2010) was found in the supplemental analysis of the current study that relied on existing measures with established psychometric properties, as the results indicated the TPB determinants only accounted for 52% of the variance in intentions to seek help. While the practical significance of a reduction in $R^2$ of .10 can be debated (Tabachnick & Fidell, 2013), this result in conjunction with the comparison of the current study’s $R^2$ to that of other previous studies, does begin to provide evidence for the importance of developing measures that follow the specific recommendations outlined by Fishbein and Ajzen (1975, 2010).

**Hypothesis #2**

The second hypothesis investigated whether previous PHS behavior would account for significant variance in intentions to seek help beyond that which was accounted for by attitudes, subjective norms, and PBC. The results of the current study did not support the second hypothesis, as the change in variance was not significant in either of the two regression models.
This finding was in contrast with previous TPB research that has suggested past behavior accounts for an additional 10% of the variance in intentions (Fisbbein & Ajzen, 2010; Sandberg & Connor, 2005), as well as previous research on PHS (Kim, 2007; Vogel, 2003; Ægisdóttir & Gerstein, 2009). While in theory this finding may have occurred as a result of the TPB determinants fully mediating the impact of past PHS on intentions, it is much more likely that the low number of participants with prior mental health or career counseling experience who were in the current study’s sample (n = 29, 22.7%) precluded enough variability in the sample to find group differences (Tabachnick & Fidell, 2013). This low prevalence rate is less than the 39-44% of general college students who endorsed prior PHS in previous studies (Ægisdóttir & Gerstein, 2009, Ægisdóttir et al., 2011), providing additional evidence that ROTC students may have fewer intentions to seek help than general college students (Jackson et al., 2011). In order to more accurately explore this relationship, future researchers will need to solicit information from a greater number of ROTC students with past counseling experience.

**Hypothesis #3**

The third hypothesis of the current study speculated that attitudes would be the strongest predictor of intentions to engage in PHS, a finding that was not supported in the current study. The TPB scales designed specifically for the current study suggested subjective norms were the strongest predictor of intentions, though attitudes was found to be a significant predictor of intentions and the difference between the beta coefficients for the two TPB determinants was not statistically significant (Tabachnick & Fidell, 2013). Less compelling evidence for the importance of attitudes was found in the supplemental hierarchical multiple regression analysis that utilized the previously established scales, as attitude was not a significant predictor of ROTC students’ intentions to seek counseling services. However, after removing the overlapping items
from the HSP scale attitudes was a significant predictor variable. Taken together, these results suggested that while attitudes may predict intentions, depending on how they are assessed, they were not as strong a predictor as subjective norms.

Several researchers have provided evidence of a positive relationship between subjective norms and intentions to seek mental health treatment for both college students and service members (Adler et al., 2008; Christian & Abrams, 2003, Kleinman et al., 2002), and those with contradictory findings are marked with methodological limitations related to their measurement of subjective norms (Britt et al., 2011; Hartong, 2011; Stecker et al., 2010). The significance of injunctive norms in PHS for college students and members of the military has been fairly well substantiated in that having supportive important others increases intentions to seek help (Adler et al., 2008; Kimura & Mizone, 2008), and the majority of those who obtain treatment do so after being encouraged by family and friends (Vogel et al., 2007). In spite of the fact that the majority of commanding officers support service members seeking treatment (Adler et al., 2008; Porter & Johnson, 1994), military members often form less favorable injunctive norms due to an apparent misperception that military leadership and their unit are not supportive of the decision to seek help (Britt et al., 2006; Pietrzak et al., 2009). Participants in the current study appear to hold these misperceptions as many indicated concern about the level of support they would receive from ROTC leadership and their ROTC peers if they sought counseling services.

Descriptive norms have also been shown to affect intentions to seek help, as research has found the vast majority of those who have obtained treatment knew someone who had previously engaged in psychological services (Rickwood & Braithwaite, 1994; Vogel et al., 2007). Since ROTC students as a group express lower intentions to seek help than other college students (Jackson et al., 2011), there may be few students within the ROTC cohort who either have or are
PHS in ROTC Students

receiving psychological services. As a result, this limited exposure to others seeking treatment may serve as a barrier and limit ROTC students’ intentions to seek counseling services.

Finally the current study’s finding that subjective norms were the strongest predictor of intentions to seek help may also be explained by the unique experience of ROTC students in that they are both college students and members of the military. As a result, ROTC students likely have at least two sets of different referent groups. That is, ROTC students have referent groups traditionally associated with the military (e.g., ROTC leadership, ROTC cadets), as well as reference groups more typically associated with college students (e.g., family, friends, other college students, instructors). It is possible subjective norms was the strongest determinant for ROTC students as a result their wider network of reference groups.

Research Question #1

The present study used open ended responses to elicit ROTC students’ behavioral, normative, and control beliefs regarding PHS. The first research question of the current study was designed to identify the salient behavioral beliefs that contributed to ROTC students’ attitudes regarding mental health treatment. As described above, ROTC cadets are both college students and service members therefore the beliefs most salient to ROTC students should be a unique constellation of the beliefs found in these two other populations.

Results of the content analysis suggested that ROTC participants, like other college students and members of the military, most frequently identified stigma as the most salient negative result of PHS (Cellucci et al., 2006; Dingfelder, 2009). Like their military counterparts, ROTC participants may believe they will be stigmatized due to military policies that limit confidentiality about their participation in counseling services (Rowan & Campise, 2006). Moreover, these same military policies may be the basis for their fear of adverse career
ramifications. The perception of these adverse career ramifications as an expected negative outcome from PHS is somewhat unique to the military work culture and is less likely to be a salient belief amongst civilians (Fikretoglu et al., 2009; Visco, 2009; Vogel et al., 2009). Thus, this finding suggested one important difference between the ROTC participants and other students on campus.

Similar to other service members, several ROTC participants identified discomfort with discussing emotionally laden topics as a salient negative outcome expectation (Lorber & Garcia, 2010). However, a greater proportion of ROTC participants endorsed the ability to discuss their thoughts and emotions with a counselor as an advantage of seeking help. This result suggested ROTC students might be more comfortable than other members of the military in talking about the presenting problem and disclosing their emotions, as past research with active duty service members and veterans provides evidence of a common fear of emotional vulnerability (Levant, 1997). One potential explanation for this difference is ROTC participants may be less indoctrinated into military values and culture than active duty service members or veterans. Specifically, they have yet to go through the military socialization process encouraging toughness, evading vulnerability, and restriction of emotionality (Burns & Mahalik, 2001; Knox & Price, 1995).

Interestingly, the ability to resolve the presenting problem and obtain professional help and guidance emerged as the two most frequently identified advantages of PHS for ROTC participants. Contrary to previous research findings that have suggested both college students (Cellucci et al., 2006) and service members (Shaffer et al., 2006) may be inclined to perceive mental health treatment as ineffective, perceived ineffectiveness did not emerge as a salient behavioral belief. These findings taken together suggested that ROTC participants may have
been more likely than other college students or service members to perceive mental health treatment as an effective and viable option to resolve their problem.

**Research Question #2**

The second research question sought to identify the salient normative beliefs that contributed to ROTC students’ subjective norms regarding mental health treatment. It was expected that ROTC students would have a unique constellation of referents due to their dual roles as college students and members of the military. Results from the current study paralleled those found in past research examining college students and service members. Like both college students and members of the military, ROTC participants frequently identified family members and friends as salient reference groups who were important in their formation of injunctive norms. ROTC participants also identified ROTC leadership and other ROTC cadets as important referents, similar to other service members’ identification of their military unit and officer leadership (Adler et al., 2008; Porter & Johnson, 1994). Importantly, other ROTC cadets were frequently identified as not being supportive of PHS. As with the general population of college students, ROTC participants indicated other college students were a salient reference group (Leaf et al., 1985; Kimura & Mizone 2008). Taken together these findings suggest ROTC students utilize both the referent groups typically found in the military and the college populations. ROTC participants’ intentions to seek help were affected by the level of perceived support they would obtain from family, friends, ROTC leadership, and other ROTC cadets to seek such help. This finding reflects the unique set of referents for ROTC students when forming injunctive norms.

Similarly, these same salient reference groups were used in the formation of their descriptive beliefs. Like with the general college population, ROTC students were likely to identify family and friends as important referents (Vogel et al., 2007). However, unlike other
college students, ROTC participants endorsed other ROTC cadets as a salient reference group when forming descriptive norms. It is noteworthy that other ROTC cadets were largely viewed as not seeking PHS. While identifying other ROTC cadets may be in some ways similar to the identification of classmates or friends, specifying that the individual is a fellow ROTC cadet does provide insight into the participant’s perceptions regarding their military unit. Interestingly, ROTC participants did not identify ROTC leadership as an important referent in the formation of descriptive norms, despite ROTC leadership serving as a salient reference group in the formation of injunctive norms. This discrepancy may be due to the fact that like other service members, ROTC participants, have a heightened concern for military leaderships’ support or lack of support of PHS behaviors (Fikretoglu et al., 2009; Visco, 2009). In contrast, ROTC participants were likely less aware of ROTC leadership's personal engagement with PHS due to military guidelines that suggest limited self-disclosure on behalf of military leaders (Adler et al., 2008).

Research Question #3

The third research question sought to identify the salient control beliefs contributing to ROTC students’ PBC over seeking help. Results of the content analysis largely coincided with those from previous research on both college students and service members. Similar to other service members, ROTC participants identified the accessibility of counseling services and minimal financial expense as salient control beliefs that would enable them to seek help. Further, like other service members, ROTC participants indicated constraints related to the financial expense of treatment as a salient control belief that would prevent them from engaging in PHS (Britt et al., 2008, 2011; Stecker et al., 2010). Previous research with college students has not commonly reflected financial concerns as a salient control belief, likely due to the fact that counseling is often a service provided for free on most college campuses (Blanco et al., 2008).
Many of the ROTC students in the current investigation appear to be unaware of the fact that the counseling services available to them on campus are typically free, an important finding as concerns regarding the financial expense of treatment may otherwise serve as a key barrier to PHS. Interestingly, very few ROTC participants indicated uncertainty regarding the types of available services or a lack of knowledge regarding where to obtain treatment. In fact, a higher proportion of participants indicated that their awareness of available services would make it easier for them to seek counseling. These findings suggested that ROTC participants might have an increased awareness of both the types and locations of mental health services as compared to other college students or military members, but may not realize they can access these services for free.

**Limitations**

There are several noteworthy limitations of the current study that warrant further discussion. While every effort was made to recruit a diverse sample, the majority of participants were male (n=102, 79.7%), Caucasian (n=115, 89.8%), and without previous counseling experience (n= 99, 77.3%). Previous research has suggested that attitudes, subjective norms, PBC, and intentions to engage in treatment may differ according to gender (Ang et al., 2004; Elhai & Simons, 2007) and race (Gonzalez et al., 2011; Jimenez et al., 2013). The results of the current study may therefore not generalize to female or minority ROTC students. However, it is important to note that this gender distribution appears to be representative of the ROTC population (DOD, 2010). The lack of previous counseling experience in the majority of study participants likely explains why past PHS was not found to be a significant predictor of intentions to seek help. Future research with ROTC members who have engaged in counseling may help clarify how previous counseling experience affects this population's PHS intentions.
Another important limitation relates to the measures employed in the current study. The TPB measures utilized were designed following the recommendations of the researchers who developed the TPB (Ajzen, 1982; Fishbein & Ajzen, 2010), and this measurement approach has been used in a number of previous studies incorporating the TPB (Kor & Mullan, 2011; Stanko, 2013; White et al., 2012). However, the scales developed for use in the primary data analysis in the current study have no prior research supporting their validity and reliability. Fortunately, results from the current study suggest that the TPB scales utilized had strong internal consistency reliability, construct validity, and factorial validity (Raykov & Marcoulides, 2011; Tabachnick & Fidell, 2013). Future researchers looking to incorporate these or similar measures should nevertheless seek to continue to provide additional evidence for the reliability and validity of these new measures.

Probably the most significant limitation of the current study was the use of behavioral intentions as a proxy for actual behavioral engagement in counseling services due to the challenges associated with measuring engagement directly. Though intentions are thought to be the strongest predictor of behavior (Cooke & French, 2008; Fishbein & Ajzen, 2010), previous research suggests only 19-38% of engagement in health-related behaviors is accounted for by behavioral intentions (Sutton, McVey, & Glanz, 1999). These findings suggest an ROTC cadet may possess strong intentions to seek help when experiencing a psychological problem, but may not obtain treatment when the distress arises. This failure to seek mental health treatment may occur, amongst other reasons, if the ROTC student perceives a lack of control over the behavior of PHS (Fishbein & Ajzen, 2010). Results from the current study indicate that ROTC students may be likely to believe they lack the time or financial capability to seek help, beliefs that may lead an individual to not seek help despite favorable intentions. Since it is the behavior of
obtaining treatment in times of psychological distress that is of the utmost importance, future researchers must improve upon this limitation through examining the relationships between the TPB determinants, intentions, and behavioral engagement in PHS.

**Research Implications**

The results of the current study provide evidence the TPB determinant best predicting ROTC students’ intentions to seek help is subjective norms. These results differ from those of past TPB studies examining PHS amongst service members, as those studies found attitudes most significantly contributed to intentions (Britt et al., 2011; Stecker et al., 2010). Further, an overwhelming majority of PHS research has been devoted to a number of behavioral beliefs that underlie an individual’s attitudes towards PHS (Choi, 2008; Vogel et al., 2005; Ægisdóttir & Gerstein, 2009). As a result of these contradictory findings, replication of the current study’s results is imperative. Replicating the current findings will be important, as this study was the first to utilize the TPB to directly examine the PHS beliefs and intentions of ROTC students. Future researchers should strive to replicate these findings, while improving upon the limitations of the current study.

Research is also needed to further develop and validate measures that can be utilized in future TPB studies examining PHS. The TPB measures utilized in the current study were developed following the recommendations outlined by Fishbein and Ajzen (1975, 2010), and have some preliminary support for their validity and reliability when used with an ROTC sample. It will be important for future researchers to continue to explore the psychometric properties of these measures, and to make improvements upon these newly developed scales. The impact of incorporating measures into TPB studies that were not designed following the recommendations of Fishbein and Ajzen (1975, 2010) can also be observed in the supplemental
analysis of the current study. Results of this analysis indicated PBC was the strongest predictor of behavioral intentions. However, closer examination provides compelling evidence this finding was the result of overlapping items on the Help Seeking Propensity subscale of the IASMHS and the Intent subscale from BAPS (Appendix K). The decision was made to include the HSP subscale as a measure of PBC due to its use in previous TPB studies (Hartong, 2011; Walker, 2014). However, inclusion of this scale in TPB studies likely overestimates the importance of PBC on intentions to engage in PHS, as found in the secondary analysis of the current study that parceled out the overlapping items. The TPB has been shown to be a model that can be used to explain and predict PHS, but future researchers must seek to develop and utilize improved measures of the TPB constructs in order to produce more valid results.

When developing new measures, researchers should also explore ways to improve on the open-ended questions designed by Fishbein and Ajzen (2010) that are used in elicitation studies to identify salient beliefs. Though the questions included on the SBQ of the current study were directly adapted from Fishbein and Ajzen (2010), there were several beliefs participants identified as contributing to more than one determinant. For example, “stigma,” “financial expense,” and “time constraints” were common responses to both questions identifying behavioral and control beliefs. Future research should aim to develop open-ended questions that are more likely to elicit only those beliefs underlying the given determinant. It is important to note that this finding may also be the result of the TPB model being an overly complex conceptualization, and indicate that the separation between the three TPB determinants may in reality simply be more theoretical than practical in nature.

**Implications For Counseling Psychologists**
Results from the current study suggest future interventions will likely be most effective if they target ROTC students’ subjective norms and attitudes related to PHS. As a result, researchers should develop interventions that seek to modify the strength of some of the behavioral and normative beliefs that were found to be salient in the current study. Behavioral beliefs can be modified through changing the evaluation of an outcome, and normative beliefs can be altered through targeting motivation to comply or identification with a specific referent (Fishbein & Ajzen, 2010). Particular emphasis should be devoted to beliefs that are found to discriminate between those who seek help from those who do not, beliefs that have sufficient variation in participant level of agreement, and those that are more likely to be based on secondhand information rather than personal experiences (Hornik & Wolf, 1999). Researchers should also explore the possibility of using the intervention to provide ROTC students with information that may lead to the formation of new behavioral or normative beliefs in support of PHS (Fishbein & Ajzen, 2010). Though the TPB was utilized in the current study to identify the important targets of a future intervention, the theory does not offer specific techniques to bring about the preferred change in the TPB determinants (Fishbein & Ajzen, 2005; Hobbis & Sutton, 2005). Fortunately, a number of approaches to creating a persuasive message have been previously offered in the literature.

Petty and Cacioppo’s (1986) Elaboration Likelihood Model (ELM) suggests that lasting change occurs when the message targets the central mode through persuasive arguments, as opposed to the peripheral mode by way of simple cues or heuristics. In order to ensure that participants are utilizing the central mode of processing, the message should be easy to understand, repeated, and made personally relevant (Petty & Wegener, 1999). The message should seek to reinforce or modify the salient beliefs found in the current study. For example,
focus should be given to a discussion of the true limits of confidentiality especially as it relates to stigma and career ramifications. Other researchers have indicated a message is more likely to be persuasive if it comes from a credible communicator (Sherif & Hovland, 1961) such as a higher ranking military officer, contains metaphors (Ottati, Rhoads, & Graesser, 1999), and provides empirical evidence (Pornpitakpan, 2004). Future interventions should include empirical evidence related to the actual probability of career ramifications, the supportive nature of ROTC leaders, and the true prevalence rates of ROTC cadets’ engagement in PHS. Future researchers hoping to develop an ROTC specific intervention should incorporate these and other strategies in the development of arguments targeting belief modification. It is further recommended that researchers pilot test the strength of potential arguments prior to the development of the final intervention (Updegraff et al., 2007). It is important to note that even if researchers are successful in modifying the targeted beliefs, this may produce unintended changes in other beliefs, thereby leaving the TPB determinants or intentions unaffected. As a result, it is imperative that researchers carefully review the effectiveness of any future interventions (Fishbein & Ajzen, 2010).

ROTC students may be reluctant to seek treatment (Jackson et al., 2011), and may be inclined to terminate counseling prematurely when they do seek help (Corrigan, 2004). The results of the current study provide a number of important implications for mental health practitioners that may increase the probability that ROTC cadets seek and remain in therapy. First, psychologists should make an attempt to explicitly discuss with ROTC clients some of the salient beliefs from the current study. For example, it will likely be important to have an open discussion about any reservations the cadet may have regarding the potential for stigma, career ramifications, or breaches in confidentiality. Openly discussing these beliefs with ROTC clients
may reduce their perceived outcome expectancy, and help the ROTC student feel more prepared to cope with the negative outcomes if they were to occur. Psychologists should similarly process with ROTC clients the perceived level of support from family, friends, ROTC peers, and ROTC leadership, as these are likely to be salient reference groups. When perceived support from ROTC leadership is low, practitioners should review the literature citing leadership support of PHS with their client (Adler et al., 2008; Porter & Johnson, 1994). It may also be important to normalize the act of PHS by discussing with ROTC clients how other ROTC cadets and ROTC leaders seek help in times of distress in order to produce more favorable descriptive norms. Finally, control beliefs related to the time commitment or cost of treatment should be discussed, and every effort should be made to work through any barriers that may inhibit continued involvement in therapy. Psychologists openly engaging in conversations with their ROTC clients about these salient beliefs will likely reduce the probability for premature termination, as well as produce more favorable outcomes for treatment.

In addition to explicitly discussing salient beliefs with ROTC clients, there are a number of steps that psychologists can take to reduce the perceived stigma and level of discomfort associated with seeking help that were reported by ROTC participants in the current study. Research suggests that psychologists may be able to reduce the level of stigma associated with PHS for ROTC cadets by presenting treatment in a way that is congruent with military culture and values. In order to allow ROTC students to feel more comfortable seeking help, practitioners should begin to establish rapport early by taking an active role in the ROTC unit. Once the ROTC student has decided to seek treatment, psychologists should make an effort to use positive and culture appropriate language that is designed to increase the strength and resiliency of the ROTC cadet. Use of this language is consistent with military training, and may therefore lead to
more effective treatment. Similarly, mental health techniques should be presented as “job skills” that will increase soldier effectiveness. For example, deep breathing should be presented as incorporating the pre-existing concept of controlled breathing used in marksmanship to assist with a variety of health related behaviors. Finally, an effort should be made to provide treatment in settings that are more congruent with the ROTC culture. This unconventional approach to offering mental health treatment may include providing services in closer proximity to the ROTC unit, or in unconventional settings such as firing ranges (Bryan & Morrow, 2011). Tailoring treatment to meet the specific needs of ROTC students will likely reinforce and modify the salient beliefs that were elicited in the current study, ultimately resulting in more favorable intentions to seek help.

Importantly, counseling psychologists must also recognize the criticalness of reaching out to ROTC students early on in their involvement with the military. Through the process of organizational socialization, ROTC students are likely to receive increasing pressure to adhere to traditional military values as they get closer to and begin their active duty commitment (Burns & Mahalik, 2001; Gruman, Saks, & Zweig, 2006; Louis, 1980). Young male ROTC students may be especially vulnerable to this socialization process as they are often in a critical period of adolescent development and are beginning to form adult gender roles (Burns & Mahalik, 2001). Since these military values are often antithetical to PHS (Berger et al., 2005; Levant, 1997), increased adherence to these values likely results in the formation of less favorable attitudes and fewer intentions to seek help (Knox & Price, 1995). It is therefore imperative that counseling psychologists seek to modify ROTC students’ attitudes and intentions towards PHS early on in the cadets’ involvement with the ROTC program, and before they start their career as military officers. Early successful intervention may allow ROTC students to be less susceptible to this
socialization process, thereby resulting in them being more likely to seek mental health treatment during their military careers. Moreover, ROTC cadets will go on to make up approximately thirty percent of all active duty officers (Department of Defense, 2010). Early intervention with ROTC students may therefore help create a shift in military philosophy resulting in enlisted service members feeling more supported by their superior officers and thus more likely to engage in PHS themselves (Gould et al., 2007; Rowan & Campise, 2006; Visco, 2009).

Conclusions

The current study provides the necessary first step in developing a ROTC specific intervention designed to increase PHS, and a number of noteworthy conclusions can be drawn from the results. First, future interventions will likely be more effective at changing intentions to seek help if they target ROTC students’ subjective norms and attitudes. In order to modify these determinants, the intervention should include persuasive arguments designed to reinforce or alter the salient behavioral and normative beliefs elicited in the current study. Specifically, the intervention should seek to reinforce behavioral beliefs focused on the positive outcomes of problem resolution, confidentiality, and the expression of distressing thoughts and emotions. Further, it should seek to address and modify behavioral beliefs related to the negative outcomes of stigma, discomfort with the counseling process, and career ramifications. The intervention should also target motivation to comply or identification with friends, parents, siblings, other ROTC cadets, or ROTC leadership as these are likely to be salient referents for ROTC students. Future research is needed to replicate the current findings, more accurately examine the impact of past counseling experience on intentions, and further develop and validate TPB measures. Most importantly, it is imperative that researchers continue the current line of research and develop an intervention that addresses the unique characteristics of the ROTC population.
References


Fishbein, M., & Jaccard, J. (1973). Theoretical and methodological considerations in the


Table 1

**Sample Demographics**

<table>
<thead>
<tr>
<th>Race</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>115</td>
<td>89.8</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>10</td>
<td>7.8</td>
</tr>
<tr>
<td>Black</td>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Other- “American”</td>
<td>1</td>
<td>.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>20</td>
<td>15.6</td>
</tr>
<tr>
<td>19</td>
<td>43</td>
<td>33.6</td>
</tr>
<tr>
<td>20</td>
<td>28</td>
<td>21.9</td>
</tr>
<tr>
<td>21</td>
<td>18</td>
<td>14.1</td>
</tr>
<tr>
<td>22</td>
<td>12</td>
<td>9.4</td>
</tr>
<tr>
<td>23</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>24</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>1.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>40</td>
<td>31.3</td>
</tr>
<tr>
<td>Sophomore</td>
<td>43</td>
<td>33.6</td>
</tr>
<tr>
<td>Junior</td>
<td>21</td>
<td>16.4</td>
</tr>
<tr>
<td>Senior</td>
<td>22</td>
<td>17.2</td>
</tr>
<tr>
<td>Graduate Student</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowling Green State University</td>
<td>11</td>
<td>8.6</td>
</tr>
<tr>
<td>DePauw University</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Indiana University-Bloomington</td>
<td>15</td>
<td>11.7</td>
</tr>
<tr>
<td>Indiana State University</td>
<td>21</td>
<td>16.4</td>
</tr>
<tr>
<td>John Brown University</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Mississippi State University</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>12</td>
<td>9.4</td>
</tr>
<tr>
<td>Oral Roberts University</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Purdue University</td>
<td>29</td>
<td>22.7</td>
</tr>
<tr>
<td>Rose-Hulman Institute of Technology</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Tiffin University</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>University of Arkansas- Fayetteville</td>
<td>14</td>
<td>10.9</td>
</tr>
<tr>
<td>University of Arkansas- Fort Smith</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>University of Nevada- Las Vegas</td>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td>University of Utah</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>University of Wyoming</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Westminster College</td>
<td>2</td>
<td>1.6</td>
</tr>
</tbody>
</table>

**Academic Major**

<table>
<thead>
<tr>
<th>Academic Major</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>12</td>
<td>9.4</td>
</tr>
<tr>
<td>Computer Science</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>12</td>
<td>9.4</td>
</tr>
<tr>
<td>Engineering</td>
<td>22</td>
<td>17.2</td>
</tr>
<tr>
<td>Humanities</td>
<td>16</td>
<td>12.5</td>
</tr>
<tr>
<td>Military Science</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>13</td>
<td>10.2</td>
</tr>
<tr>
<td>Nursing</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Psychology</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>Social Work</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Undecided</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>&quot;Other&quot;</td>
<td>31</td>
<td>24.2</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>.8</td>
</tr>
</tbody>
</table>

**Previous Counseling Experience**

<table>
<thead>
<tr>
<th>Previous Counseling Experience</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental/Behavioral Health Counseling</td>
<td>9</td>
<td>7.0</td>
</tr>
<tr>
<td>Career Counseling</td>
<td>20</td>
<td>15.6</td>
</tr>
<tr>
<td>No Previous Counseling</td>
<td>99</td>
<td>77.3</td>
</tr>
</tbody>
</table>
Table 2

*Reliability Statistics for TPB Scales, BAPS Subscales, and Help Seeking Propensity Subscale*

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Cronbach’s Alpha</th>
<th>N of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPB Intent</td>
<td>.93</td>
<td>7</td>
</tr>
<tr>
<td>TPB Attitudes</td>
<td>.93</td>
<td>13</td>
</tr>
<tr>
<td>Instrumental</td>
<td>.94</td>
<td>8</td>
</tr>
<tr>
<td>Experiential</td>
<td>.80</td>
<td>5</td>
</tr>
<tr>
<td>TPB Subjective Norms</td>
<td>.83</td>
<td>8</td>
</tr>
<tr>
<td>Injunctive</td>
<td>.71</td>
<td>4</td>
</tr>
<tr>
<td>Descriptive</td>
<td>.80</td>
<td>4</td>
</tr>
<tr>
<td>TPB PBC</td>
<td>.81</td>
<td>8</td>
</tr>
<tr>
<td>Capability</td>
<td>.68</td>
<td>4</td>
</tr>
<tr>
<td>Controllability</td>
<td>.74</td>
<td>4</td>
</tr>
<tr>
<td>BAPS Intent</td>
<td>.83</td>
<td>6</td>
</tr>
<tr>
<td>BAPS Expertness</td>
<td>.70</td>
<td>4</td>
</tr>
<tr>
<td>BAPS Stigma Tolerance</td>
<td>.74</td>
<td>8</td>
</tr>
<tr>
<td>BAPS Attitude</td>
<td>.77</td>
<td>12</td>
</tr>
<tr>
<td>IASMHS: HSP</td>
<td>.77</td>
<td>8</td>
</tr>
</tbody>
</table>

*Note.* TPB Intent = Behavioral Intentions Scale; TPB PBC = Perceived Behavioral Control Scale; BAPS: Attitude = Beliefs About Psychological Services, Attitudes Component Score, IASMHS: HSP = Inventory of Attitudes Toward Seeking Mental Health Services, Help Seeking Propensity Subscale
Table 3

*Factor Loadings for Exploratory Factor Analysis of TPB- Intent Scale*

<table>
<thead>
<tr>
<th>Items</th>
<th>F1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.80</td>
</tr>
<tr>
<td>2</td>
<td>.77</td>
</tr>
<tr>
<td>3</td>
<td>.84</td>
</tr>
<tr>
<td>4</td>
<td>.78</td>
</tr>
<tr>
<td>5</td>
<td>.88</td>
</tr>
<tr>
<td>6</td>
<td>.72</td>
</tr>
<tr>
<td>7</td>
<td>.88</td>
</tr>
</tbody>
</table>
Table 4

Factor Loadings for Exploratory Factor Analysis with Promax Rotation of TPB-Attitudes Scale

<table>
<thead>
<tr>
<th>Items</th>
<th>F1</th>
<th>F2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instrumental</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wise-Foolish</td>
<td>.91</td>
<td>-.21</td>
</tr>
<tr>
<td>Useful-Useless</td>
<td>.86</td>
<td>.04</td>
</tr>
<tr>
<td>Constructive-Detrimental</td>
<td>.69</td>
<td>.13</td>
</tr>
<tr>
<td>Productive-Unproductive</td>
<td>.85</td>
<td>-.03</td>
</tr>
<tr>
<td>Beneficial-Harmful</td>
<td>.80</td>
<td>.02</td>
</tr>
<tr>
<td>Valuable-Worthless</td>
<td>.94</td>
<td>-.04</td>
</tr>
<tr>
<td>Important-Unimportant</td>
<td>.75</td>
<td>.04</td>
</tr>
<tr>
<td>Good-Bad</td>
<td>.72</td>
<td>.17</td>
</tr>
<tr>
<td><strong>Experiential</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe-Unsafe</td>
<td>.59</td>
<td>.05</td>
</tr>
<tr>
<td>Desirable-Undesirable</td>
<td>.39</td>
<td>.41</td>
</tr>
<tr>
<td>Nice-Awful</td>
<td>.25</td>
<td>.57</td>
</tr>
<tr>
<td>Embarrassing-Not Embarrassing</td>
<td>-.12</td>
<td>.78</td>
</tr>
<tr>
<td>Pleasant-Unpleasant</td>
<td>-.08</td>
<td>.90</td>
</tr>
</tbody>
</table>

| Eigenvalue                  | 7.59   | 1.35   |
| Percent of variance explained| 55.73  | 7.50   |
| Cumulative percent of variance explained | 55.73 | 63.22 |

*Note.* The highest factor loadings for each scale are in boldface.
Table 5

*Factor Loadings for Exploratory Factor Analysis with Promax Rotation of TPB- Subjective Norms Scale*

<table>
<thead>
<tr>
<th>Items</th>
<th>F1</th>
<th>F2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Injunctive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important People Think I Should Seek Counseling</td>
<td>-.06</td>
<td>.74</td>
</tr>
<tr>
<td>Approve of Me Seeking Counseling</td>
<td>-.09</td>
<td>.63</td>
</tr>
<tr>
<td>Respected People Think I Should Seek Counseling</td>
<td>.07</td>
<td>.58</td>
</tr>
<tr>
<td>Expected to Seek Counseling if I Have a Problem</td>
<td>.31</td>
<td>.38</td>
</tr>
<tr>
<td><strong>Descriptive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respected People Seek Counseling</td>
<td>.80</td>
<td>.00</td>
</tr>
<tr>
<td>Important People Seek Counseling</td>
<td>.76</td>
<td>.00</td>
</tr>
<tr>
<td>People Like Me Seek Counseling</td>
<td>.63</td>
<td>-.13</td>
</tr>
<tr>
<td>People Whose Opinions I Value Seek Counseling</td>
<td>.67</td>
<td>.14</td>
</tr>
</tbody>
</table>

| Eigenvalue       | 3.72 | 1.09 |
| Percent of variance explained                              | 40.19| 6.42 |
| Cumulative percent of variance explained                   | 40.19| 46.61 |

*Note.* The highest factor loadings for each scale are in boldface.
Table 6

*Factor Loadings for Exploratory Factor Analysis of TPB- PBC Scale*

<table>
<thead>
<tr>
<th>Items</th>
<th>F1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.75</td>
</tr>
<tr>
<td>2</td>
<td>.47</td>
</tr>
<tr>
<td>3</td>
<td>.53</td>
</tr>
<tr>
<td>4</td>
<td>.79</td>
</tr>
<tr>
<td>5</td>
<td>.81</td>
</tr>
<tr>
<td>6</td>
<td>.62</td>
</tr>
<tr>
<td>7</td>
<td>.74</td>
</tr>
<tr>
<td>8</td>
<td>.57</td>
</tr>
</tbody>
</table>
### Table 7

**Descriptive Statistics for Measures**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Range Of Scale</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPB Intent</td>
<td>4.78</td>
<td>1.40</td>
<td>1-7</td>
<td>-.45</td>
<td>-.54</td>
</tr>
<tr>
<td>TPB Attitudes</td>
<td>5.19</td>
<td>1.04</td>
<td>1-7</td>
<td>-.34</td>
<td>-.59</td>
</tr>
<tr>
<td>TPB SN</td>
<td>4.68</td>
<td>.98</td>
<td>1-7</td>
<td>.05</td>
<td>.03</td>
</tr>
<tr>
<td>TPB PBC</td>
<td>5.42</td>
<td>.94</td>
<td>1-7</td>
<td>-.62</td>
<td>-.02</td>
</tr>
<tr>
<td>Instrumental</td>
<td>5.50</td>
<td>1.12</td>
<td>1-7</td>
<td>-.61</td>
<td>-.05</td>
</tr>
<tr>
<td>Experiential</td>
<td>4.70</td>
<td>1.13</td>
<td>1-7</td>
<td>.05</td>
<td>-.58</td>
</tr>
<tr>
<td>Injunctive</td>
<td>5.14</td>
<td>1.10</td>
<td>1-7</td>
<td>-.29</td>
<td>-.51</td>
</tr>
<tr>
<td>Descriptive</td>
<td>4.23</td>
<td>1.12</td>
<td>1-7</td>
<td>.17</td>
<td>-.09</td>
</tr>
<tr>
<td>Capability</td>
<td>5.39</td>
<td>1.06</td>
<td>1-7</td>
<td>-.41</td>
<td>-.59</td>
</tr>
<tr>
<td>Controllability</td>
<td>5.44</td>
<td>1.04</td>
<td>1-7</td>
<td>-.77</td>
<td>.56</td>
</tr>
<tr>
<td>BAPS: Intent</td>
<td>3.75</td>
<td>.95</td>
<td>1-6</td>
<td>-.30</td>
<td>.14</td>
</tr>
<tr>
<td>BAPS: Expert</td>
<td>4.52</td>
<td>.77</td>
<td>1-6</td>
<td>-.43</td>
<td>.08</td>
</tr>
<tr>
<td>BAPS: ST</td>
<td>3.49</td>
<td>.79</td>
<td>1-6</td>
<td>-.14</td>
<td>-.45</td>
</tr>
<tr>
<td>BAPS: Attitude</td>
<td>3.83</td>
<td>.66</td>
<td>1-6</td>
<td>.03</td>
<td>-.55</td>
</tr>
<tr>
<td>IASMHS: HSP</td>
<td>3.47</td>
<td>.72</td>
<td>0-4</td>
<td>.15</td>
<td>-.61</td>
</tr>
</tbody>
</table>

*Note. TPB Intent = Behavioral Intentions Scale; TPB SN = Subjective Norms Scale; TPB PBC = Perceived Behavioral Control Scale; BAPS Expert = Beliefs About Psychological Service, Expertness Subscale; BAPS: ST = Beliefs About Psychological Service, Stigma Tolerance Subscale; BAPS: Attitude = Beliefs About Psychological Services, Attitudes Component Score, IASMHS: HSP = Inventory of Attitudes Toward Seeking Mental Health Services, Help Seeking Propensity Subscale*
Table 8

**Bivariate Correlations between Predictor and Criterion Variables For Model 1**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>TPB: Intent</th>
<th>TPB: Attitudes</th>
<th>TPB: SN</th>
<th>TPB: PBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPB: Attitudes</td>
<td>.66**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TPB: SN</td>
<td>.66**</td>
<td>.46**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TPB: PBC</td>
<td>.46**</td>
<td>.48**</td>
<td>.27**</td>
<td></td>
</tr>
<tr>
<td>Past Coun</td>
<td>.07</td>
<td>.02</td>
<td>.08</td>
<td>.10</td>
</tr>
</tbody>
</table>

*Note. TPB Intent = Behavioral Intentions Scale; TPB SN = Subjective Norms Scale; TPB PBC = Perceived Behavioral Control Scale; Past Coun = Past Counseling. Past Counseling is coded as 0 = No Previous Counseling Experience, 1 = Previous Counseling Experience. ** Correlation is significant at the .01 level (2-tailed).
### Table 9

**Summary of Hierarchical Regression Analysis for TPB Variables Predicting TPB: Intent (N = 128)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
</tr>
<tr>
<td>TPB: Attitudes</td>
<td>.51</td>
<td>.09</td>
<td>.38</td>
<td>.51</td>
</tr>
<tr>
<td>TPB: SN</td>
<td>.63</td>
<td>.09</td>
<td>.44</td>
<td>.63</td>
</tr>
<tr>
<td>TPB: PBC</td>
<td>.24</td>
<td>.10</td>
<td>.16</td>
<td>.24</td>
</tr>
<tr>
<td>Past Coun</td>
<td>.03</td>
<td>.19</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.62</td>
<td></td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>F for change in R²</td>
<td>67.10**</td>
<td></td>
<td>.03</td>
<td></td>
</tr>
</tbody>
</table>

*Note. TPB Intent = Behavioral Intentions Scale; TPB SN = Subjective Norms Scale; TPB PBC = Perceived Behavioral Control Scale; Past Coun = Past Counseling. Past Counseling is coded as 0 = No Previous Counseling Experience, 1 = Previous Counseling Experience. **p < .01*
Table 10

*Summary of Formal Hypotheses Tests Comparing Regression Slopes for Model 1*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPB: Attitudes = TPB SN</td>
<td>.31</td>
<td>.58</td>
</tr>
<tr>
<td>TPB: Attitudes = TPB PBC</td>
<td>3.92</td>
<td>.05</td>
</tr>
<tr>
<td>TPB: SN = TPB: PBC</td>
<td>9.50</td>
<td>.00**</td>
</tr>
</tbody>
</table>

*Note.* TPB SN = Subjective Norms Scale; TPB PBC = Perceived Behavioral Control Scale

**p < .017**
Table 11

*Bivariate Correlations between Predictor and Criterion Variables For Model 2*

<table>
<thead>
<tr>
<th></th>
<th>Intent</th>
<th>Attitudes</th>
<th>SN</th>
<th>HSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>.54**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>.52**</td>
<td>.43**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>.68**</td>
<td>.61**</td>
<td>.50**</td>
<td></td>
</tr>
<tr>
<td>Past Coun</td>
<td>.12</td>
<td>.06</td>
<td>.08</td>
<td>.10</td>
</tr>
</tbody>
</table>

*Note.* Intent = BAPS, Intent Subscale; Attitudes, BAPS Attitude Component Score; SN = TPB Subjective Norms; PBC = IASMHS, Help Seeking Propensity Subscale; Past Coun = Past Counseling. Past Counseling is coded as 0 = No Previous Counseling Experience, 1 = Previous Counseling Experience.

**. Correlation is significant at the .01 level (2-tailed).
### Table 12

**Summary of Hierarchical Regression Analysis for Variables Predicting BAPS: Intent (N = 128)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Attitudes</td>
<td>.23</td>
<td>.12</td>
<td>.16</td>
<td>.23</td>
<td>.12</td>
<td>.16</td>
</tr>
<tr>
<td>SN</td>
<td>.21</td>
<td>.07</td>
<td>.22</td>
<td>.21</td>
<td>.07</td>
<td>.22</td>
</tr>
<tr>
<td>HSP</td>
<td>.63</td>
<td>.11</td>
<td>.47</td>
<td>.62</td>
<td>.11</td>
<td>.47</td>
</tr>
<tr>
<td>Past Coun</td>
<td>.09</td>
<td>.14</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.52</td>
<td>.52</td>
<td>.52</td>
<td>.52</td>
<td>.52</td>
<td>.42</td>
</tr>
<tr>
<td>F for change in R²</td>
<td>43.89**</td>
<td>.42</td>
<td>.42</td>
<td>.42</td>
<td>.42</td>
<td>.42</td>
</tr>
</tbody>
</table>

*Note. Intent = BAPS, Intent Subscale; Attitudes = BAPS Attitude Component Score; SN = TPB Subjective Norms; HSP= IASMHS, Help Seeking Propensity Subscale; Past Coun = Past Counseling. Past Counseling is coded as 0 = No Previous Counseling Experience, 1 = Previous Counseling Experience. **p < .01
Table 13

*Summary of Formal Hypotheses Tests Comparing Regression Slopes for Model 2*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes = SN</td>
<td>.26</td>
<td>.61</td>
</tr>
<tr>
<td>Attitudes = HSP</td>
<td>4.87</td>
<td>.03</td>
</tr>
<tr>
<td>SN = HSP</td>
<td>3.91</td>
<td>.05</td>
</tr>
</tbody>
</table>

Note. Attitudes = BAPS Attitude Component Score; SN = TPB Subjective Norms; HSP = IASMHS, Help Seeking Propensity Subscale

**$p < .017$**
### Summary of Hierarchical Regression Analysis for Variables Predicting BAPS: Intent With Parceled HSP Items (N = 128)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Attitudes</td>
<td>.54</td>
<td>.12</td>
<td>.37</td>
<td>.54</td>
<td>.12</td>
<td>.37</td>
</tr>
<tr>
<td>SN</td>
<td>.27</td>
<td>.07</td>
<td>.28</td>
<td>.27</td>
<td>.07</td>
<td>.28</td>
</tr>
<tr>
<td>PBC</td>
<td>.24</td>
<td>.09</td>
<td>.21</td>
<td>.23</td>
<td>.09</td>
<td>.21</td>
</tr>
<tr>
<td>Past Coun</td>
<td>.12</td>
<td>.15</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.46</td>
<td></td>
<td></td>
<td>.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F for change in R²</td>
<td>35.13**</td>
<td></td>
<td></td>
<td>.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Intent = BAPS, Intent Subscale; Attitudes = BAPS Attitude Component Score; SN = TPB Subjective Norms; PBC= IASMHS, Help Seeking Propensity Subscale with Intention Items Removed From Analysis; Past Coun = Past Counseling. Past Counseling is coded as 0 = No Previous Counseling Experience, 1 = Previous Counseling Experience.

**p < .01
Table 15

**Bivariate Correlations between Predictor and Criterion Variables For Model 3**

<table>
<thead>
<tr>
<th></th>
<th>Intent</th>
<th>Experiential</th>
<th>Instrumental</th>
<th>Descriptive</th>
<th>Injunctive</th>
<th>Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential</td>
<td>.58**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td>.64**</td>
<td>.72**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Descriptive</td>
<td>.58**</td>
<td>.25**</td>
<td>.37**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injunctive</td>
<td>.60**</td>
<td>.27**</td>
<td>.55**</td>
<td>.57**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capability</td>
<td>.56**</td>
<td>.44**</td>
<td>.47**</td>
<td>.24**</td>
<td>.37**</td>
<td></td>
</tr>
<tr>
<td>Controllability</td>
<td>.26**</td>
<td>.37**</td>
<td>.33**</td>
<td>.06</td>
<td>.18</td>
<td>.59**</td>
</tr>
</tbody>
</table>

*Note. Intent = TPB Behavioral Intentions Scale
**. Correlation is significant at the .01 level (2-tailed).
Table 16

*Multiple Regression Analyses for TPB Subscales as Predictors of TPB: Intent (N = 128)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential</td>
<td>.34</td>
<td>.10</td>
<td>.27</td>
<td>3.40</td>
<td>.00</td>
<td>.43</td>
<td>2.31</td>
</tr>
<tr>
<td>Instrumental</td>
<td>.16</td>
<td>.11</td>
<td>.13</td>
<td>1.42</td>
<td>.16</td>
<td>.35</td>
<td>2.88</td>
</tr>
<tr>
<td>Descriptive</td>
<td>.35</td>
<td>.08</td>
<td>.28</td>
<td>4.31</td>
<td>.00</td>
<td>.66</td>
<td>1.52</td>
</tr>
<tr>
<td>Injunctive</td>
<td>.25</td>
<td>.09</td>
<td>.20</td>
<td>2.65</td>
<td>.00</td>
<td>.50</td>
<td>2.00</td>
</tr>
<tr>
<td>Capability</td>
<td>.42</td>
<td>.09</td>
<td>.32</td>
<td>4.47</td>
<td>.00</td>
<td>.54</td>
<td>1.84</td>
</tr>
<tr>
<td>Controllability</td>
<td>-.17</td>
<td>.09</td>
<td>-.12</td>
<td>-1.87</td>
<td>.07</td>
<td>.63</td>
<td>1.60</td>
</tr>
</tbody>
</table>

**R²** | .67

| F    | 40.02** |

**p < .01**
Table 17

Summary of Hierarchical Regression Analysis for TPB Variables Predicting TPB: Intent With Prior Counseling Entered First (N = 128)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
</tr>
<tr>
<td>Past MH Coun</td>
<td>.64</td>
<td>.44</td>
<td>.13</td>
<td>.19</td>
</tr>
<tr>
<td>TPB: Attitudes</td>
<td></td>
<td></td>
<td></td>
<td>.51</td>
</tr>
<tr>
<td>TPB: SN</td>
<td></td>
<td></td>
<td></td>
<td>.63</td>
</tr>
<tr>
<td>TPB: PBC</td>
<td></td>
<td></td>
<td></td>
<td>.23</td>
</tr>
<tr>
<td>R²</td>
<td>.02</td>
<td></td>
<td></td>
<td>.62</td>
</tr>
<tr>
<td>F for change in R²</td>
<td>2.09</td>
<td></td>
<td></td>
<td>50.22**</td>
</tr>
</tbody>
</table>

Note. TPB Intent = Behavioral Intentions Scale; TPB SN = Subjective Norms Scale; TPB PBC = Perceived Behavioral Control Scale; Past MH Coun = Past Mental Health Counseling. Past Counseling is coded as 0 = No Previous Counseling Experience, 1 = Previous Counseling Experience.

**p < .01
Table 18

Summary of Hierarchical Regression Analysis for TPB Variables Predicting BAPS: Intent With Prior Counseling Entered First (N = 128)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Past MH Coun</td>
<td>.19</td>
<td>.30</td>
<td>.06</td>
<td>-.07</td>
<td>.23</td>
<td>-.02</td>
</tr>
<tr>
<td>Attitudes</td>
<td>.54</td>
<td>.12</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>.27</td>
<td>.07</td>
<td>.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td></td>
<td></td>
<td></td>
<td>.25</td>
<td>.09</td>
<td>.21</td>
</tr>
<tr>
<td>R²</td>
<td>.003</td>
<td></td>
<td></td>
<td></td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td>F for change in R²</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
<td>26.18**</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Intent = BAPS, Intent Subscale; Attitudes = BAPS Attitude Component Score; SN = TPB Subjective Norms; HSP = IASMHS, Help Seeking Propensity Subscale with Intention Items Removed From Analysis; Past MH Coun = Past Mental Health Counseling. Past Counseling is coded as 0 = No Previous Counseling Experience, 1 = Previous Counseling Experience.

**p < .01
Table 19

*Frequency Count for SBQ Question 1: What do you see as the advantages of seeking counseling if you have a psychological problem? (N = 117)*

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Management/Resolution</td>
<td>55</td>
<td>47.0</td>
</tr>
<tr>
<td>Professional Help and Guidance</td>
<td>54</td>
<td>46.2</td>
</tr>
<tr>
<td>Expression of Thoughts and Emotions</td>
<td>49</td>
<td>41.9</td>
</tr>
<tr>
<td>Confidentiality</td>
<td>24</td>
<td>20.5</td>
</tr>
<tr>
<td>Improved Quality of Life</td>
<td>16</td>
<td>13.7</td>
</tr>
<tr>
<td>New Perspective</td>
<td>16</td>
<td>13.7</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>13.7</td>
</tr>
<tr>
<td>Safe Environment</td>
<td>14</td>
<td>12.0</td>
</tr>
<tr>
<td>Social Support</td>
<td>11</td>
<td>9.4</td>
</tr>
<tr>
<td>Adaptive Coping</td>
<td>4</td>
<td>3.4</td>
</tr>
<tr>
<td>Help Others</td>
<td>4</td>
<td>3.4</td>
</tr>
<tr>
<td>Medication</td>
<td>4</td>
<td>3.4</td>
</tr>
<tr>
<td>No Perceived Benefits</td>
<td>1</td>
<td>.9</td>
</tr>
</tbody>
</table>
Table 20

*Frequency Count for SBQ Question 2: What do you see as the disadvantages of seeking counseling if you have a psychological problem? (N = 114)*

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stigma</td>
<td>84</td>
<td>73.7</td>
</tr>
<tr>
<td>Financial Expense</td>
<td>27</td>
<td>23.7</td>
</tr>
<tr>
<td>Discomfort With Counseling Process</td>
<td>25</td>
<td>21.9</td>
</tr>
<tr>
<td>Time Constraints</td>
<td>23</td>
<td>20.2</td>
</tr>
<tr>
<td>Career Ramifications</td>
<td>21</td>
<td>18.4</td>
</tr>
<tr>
<td>Make Things Worse</td>
<td>14</td>
<td>12.3</td>
</tr>
<tr>
<td>Perceived Ineffectiveness</td>
<td>10</td>
<td>8.8</td>
</tr>
<tr>
<td>Breaches In Confidentiality</td>
<td>9</td>
<td>7.9</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>7.9</td>
</tr>
<tr>
<td>Rapport With Counselor</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>Problems Accessing Counseling Services</td>
<td>2</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Table 21

*Frequency Count for SBQ Question 3: Please list all people or groups who would approve of your seeking, or would encourage you to seek, counseling if you have a psychological problem. Please describe your relationship with the individual or group (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor). (N = 114)*

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend/Peer</td>
<td>72</td>
<td>63.2</td>
</tr>
<tr>
<td>Family</td>
<td>48</td>
<td>42.1</td>
</tr>
<tr>
<td>ROTC Instructor</td>
<td>44</td>
<td>38.6</td>
</tr>
<tr>
<td>Parents</td>
<td>28</td>
<td>24.6</td>
</tr>
<tr>
<td>ROTC Cadet</td>
<td>27</td>
<td>23.7</td>
</tr>
<tr>
<td>Mother</td>
<td>23</td>
<td>20.2</td>
</tr>
<tr>
<td>Romantic Partner</td>
<td>15</td>
<td>13.2</td>
</tr>
<tr>
<td>General University Instructor</td>
<td>12</td>
<td>10.5</td>
</tr>
<tr>
<td>Sibling</td>
<td>12</td>
<td>10.5</td>
</tr>
<tr>
<td>Father</td>
<td>11</td>
<td>9.6</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>ROTC Program</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>Medical Professional</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>Religious Leaders/Friends</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>U.S. Military</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>No One</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Table 22

Frequency Count for SBQ Question 4: Please list all people or groups who would disapprove of your seeking, or would discourage you to seek, counseling if you have a psychological problem. Please describe your relationship with the individual or group (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor). (N = 65)

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend/Peer</td>
<td>25</td>
<td>38.5</td>
</tr>
<tr>
<td>ROTC Cadet</td>
<td>18</td>
<td>27.7</td>
</tr>
<tr>
<td>No One</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td>ROTC Instructor</td>
<td>8</td>
<td>12.3</td>
</tr>
<tr>
<td>Father</td>
<td>7</td>
<td>10.8</td>
</tr>
<tr>
<td>U.S. Military</td>
<td>5</td>
<td>7.7</td>
</tr>
<tr>
<td>Family</td>
<td>5</td>
<td>7.7</td>
</tr>
<tr>
<td>General University Instructor</td>
<td>4</td>
<td>6.2</td>
</tr>
<tr>
<td>ROTC Program</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>Sibling</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>Religious Leaders/Friends</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Medical Professional</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Mother</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Parents</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Romantic Partner</td>
<td>1</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Table 23

*Frequency Count for SBQ Question 5: Sometimes, when we are not sure what to do, we look to see what others are doing. Please list the individuals or groups who, when having a psychological problem, are more likely to seek counseling. Please describe your relationship with the individual or group (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor). (N = 85)*

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend/Peer</td>
<td>50</td>
<td>58.8</td>
</tr>
<tr>
<td>Sibling</td>
<td>25</td>
<td>29.4</td>
</tr>
<tr>
<td>Family</td>
<td>16</td>
<td>18.8</td>
</tr>
<tr>
<td>Mother</td>
<td>16</td>
<td>18.8</td>
</tr>
<tr>
<td>ROTC Cadet</td>
<td>13</td>
<td>15.3</td>
</tr>
<tr>
<td>Parents</td>
<td>7</td>
<td>8.2</td>
</tr>
<tr>
<td>Religious Leaders/Friends</td>
<td>7</td>
<td>8.2</td>
</tr>
<tr>
<td>Father</td>
<td>6</td>
<td>7.1</td>
</tr>
<tr>
<td>Romantic Partner</td>
<td>6</td>
<td>7.1</td>
</tr>
<tr>
<td>ROTC Instructor</td>
<td>6</td>
<td>7.1</td>
</tr>
<tr>
<td>U.S. Military</td>
<td>5</td>
<td>5.9</td>
</tr>
<tr>
<td>General University Instructor</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>ROTC Program</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>Medical Professional</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>No One</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Table 24

*Frequency Count for SBQ Question 6: Please list the individuals or groups who, when having a psychological problem, are least likely to seek counseling (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor). (N = 81)*

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend/Peer</td>
<td>36</td>
<td>44.4</td>
</tr>
<tr>
<td>ROTC Cadet</td>
<td>30</td>
<td>37.0</td>
</tr>
<tr>
<td>Sibling</td>
<td>19</td>
<td>23.5</td>
</tr>
<tr>
<td>Father</td>
<td>15</td>
<td>18.5</td>
</tr>
<tr>
<td>Family</td>
<td>11</td>
<td>13.6</td>
</tr>
<tr>
<td>ROTC Instructor</td>
<td>10</td>
<td>12.3</td>
</tr>
<tr>
<td>Mother</td>
<td>9</td>
<td>11.1</td>
</tr>
<tr>
<td>U.S. Military</td>
<td>7</td>
<td>8.6</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Parents</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Romantic Partner</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>ROTC Program</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>General University Instructor</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Medical Professional</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>No One</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Religious Leaders/Friends</td>
<td>1</td>
<td>1.2</td>
</tr>
</tbody>
</table>
Table 25

*Frequency Count for SBQ Question 7: Please list any factors or circumstances that would make it easy or enable you to seek counseling if you have a psychological problem. (N = 94)*

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility of Counseling Services</td>
<td>44</td>
<td>46.8</td>
</tr>
<tr>
<td>Supportive Important Others</td>
<td>32</td>
<td>34.0</td>
</tr>
<tr>
<td>Financial Expense</td>
<td>24</td>
<td>25.5</td>
</tr>
<tr>
<td>Significant Distress</td>
<td>23</td>
<td>24.5</td>
</tr>
<tr>
<td>Sufficient Time</td>
<td>12</td>
<td>12.8</td>
</tr>
<tr>
<td>Confidentiality</td>
<td>9</td>
<td>9.6</td>
</tr>
<tr>
<td>Awareness of Available Services</td>
<td>8</td>
<td>8.5</td>
</tr>
<tr>
<td>Comfortable Atmosphere</td>
<td>7</td>
<td>7.4</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>7.4</td>
</tr>
<tr>
<td>Counselor Familiarity</td>
<td>6</td>
<td>6.4</td>
</tr>
<tr>
<td>Perceived Effectiveness</td>
<td>5</td>
<td>5.3</td>
</tr>
<tr>
<td>Religious Emphasis</td>
<td>5</td>
<td>5.3</td>
</tr>
<tr>
<td>Career Ramifications</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>2.1</td>
</tr>
</tbody>
</table>
Table 26

*Frequency Count for SBQ Question 8: Please list any factors or circumstances that would make it difficult or prevent you from seeking counseling if you have a psychological problem. (N = 115)*

<table>
<thead>
<tr>
<th>Code</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Constraints</td>
<td>40</td>
<td>34.8</td>
</tr>
<tr>
<td>Financial Expense</td>
<td>35</td>
<td>30.4</td>
</tr>
<tr>
<td>Stigma</td>
<td>33</td>
<td>28.7</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>13.0</td>
</tr>
<tr>
<td>Career Ramifications</td>
<td>14</td>
<td>12.2</td>
</tr>
<tr>
<td>Problems Accessing Counseling Services</td>
<td>14</td>
<td>12.2</td>
</tr>
<tr>
<td>Breach In Confidentiality</td>
<td>10</td>
<td>8.7</td>
</tr>
<tr>
<td>Discomfort With Counseling Process</td>
<td>8</td>
<td>7.0</td>
</tr>
<tr>
<td>Perceived Ineffectiveness</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>Uncertainty Regarding The Types of Available Services</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>Lack of Knowledge Regarding Where to Go For Help</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>Preference for Alternative Coping Mechanisms</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>.9</td>
</tr>
</tbody>
</table>
Figure 1. EFA Scree Plot for the TPB Behavioral Intentions data
Figure 2. EFA Scree Plot for the TPB Attitudes data
Figure 3. EFA Scree Plot for the TPB Subjective Norms data
Figure 4. EFA Scree Plot for the TPB PBC data
Figure 5. Histogram of the TPB Behavioral Intentions data
Figure 6. Histogram of the TPB Attitudes data
Figure 7. Histogram of the TPB Subjective Norms data
Figure 8. Histogram of the TPB PBC data
Figure 9. Normal Probability Plot for TPB Behavioral Intentions
Figure 10. Residuals Plot for TPB Behavioral Intentions
Figure 11. Bivariate Scatterplot Between TPB Behavioral Intentions and TPB Attitude
Figure 12. Bivariate Scatterplot Between TPB Behavioral Intentions and TPB Subjective Norms
Figure 13. Bivariate Scatterplot Between TPB Behavioral Intentions and TPB PBC
Figure 14. Residuals Plot for BAPS: Intent Subscale
Figure 15. Bivariate Scatterplot Between BAPS: Intent and BAPS: Attitude
Figure 16. Bivariate Scatterplot Between BAPS: Intent and TPB Subjective Norms
Figure 17. Bivariate Scatterplot Between BAPS: Intent and IASMHS: Help Seeking Propensity
Appendix A

Letter of Introduction- ROTC Directors

Subject: Dissertation Research

Greetings:

My name is Matthew Jackson and I am a Doctoral Candidate in the Counseling Psychology program at Ball State University, as well as a Second Lieutenant in the United States Air Force. I am currently in the process of collecting data for my doctoral dissertation, which examines the beliefs about psychological services held by members of the ROTC population. I am writing to ask you to assist me in my research by forwarding this email to ROTC students in your program, so that they can choose to participate by taking a short questionnaire. The study consists of four short scales, which can be completed online, with no perceived risks associated with participation. All students who participate will have the option to either obtain a 10-dollar online Amazon gift card, or have the 10-dollars anonymously donated to the Wounded Warrior Project on their behalf. Participation is open to ROTC students between the ages of 18-25 years old, and takes approximately 15 minutes to complete. If you have any additional questions regarding the study, please feel free to ask at any point in time. In addition, if you are interested I can inform you of the results at the conclusion of the study.

Here is the link for the questionnaire.

http://edu.surveygizmo.com/s3/1529766/The-Theory-of-Planned-Behavior-in-Predicting-ROTC-Students-Intentions-to-Seek-Psychological-Services

This research has been reviewed and approved by the Ball State Institutional Review Board (#553600-1).

Thank you in advance for your help!

Matthew S. Jackson, M.A.
Principal Investigator
Ball State University- Doctoral Candidate
United States Air Force- Second Lieutenant
msjackson@bsu.edu

Dr. Theresa Kruczek
Faculty Supervisor
Ball State University
tkruczek@bsu.edu
Appendix B

Informed Consent

**Study Title**  The Theory of Planned Behavior in Predicting ROTC Students’ Intentions to Seek Psychological Services

**Study Purpose and Rationale**
The purpose of this research project is to examine the beliefs about psychological services held by members of the ROTC population. Findings from this study may help mental health practitioners to more effectively recruit ROTC students to come to counseling and more efficiently treat those students who do seek mental health treatment.

**Inclusion/Exclusion Criteria**
To be eligible to participate in this study, you must be between the ages of 18 and 25, be currently enrolled as a university student, and be a member of an ROTC program.

**Participation Procedures and Duration**
For this project, you will be asked to complete a questionnaire about your current beliefs about psychological services. It will take approximately 15 minutes to complete the questionnaire.

**Data Confidentiality or Anonymity**
All data will be anonymous, and no identifying information such as names will appear in any publication or presentation of the data.

**Storage of Data**
The data will be entered into a software program and stored on the researcher’s password-protected computer for a maximum of two years and then deleted. Only members of the research team will have access to the data.

**Risks or Discomforts**
The only anticipated risk from participating in this study is that you may not feel comfortable answering some of the questions. You may choose not to answer any question that makes you uncomfortable and you may quit the study at any time.

**Who to Contact Should You Experience Any Negative Effects from Participating in this Study**
Should you experience any feelings of anxiety, there are counseling services available to you through the University Counseling Center of the school that you currently attend. For Ball State University students, the Ball State Counseling Center can be reached at 765-285-1736. For students at other universities, please contact the university counseling center at your respective university if you are interested in obtaining counseling services.

**Benefits**
Through your participation in this study, you may gain a better understanding of your current beliefs about psychological services.
**Compensation**
You may choose to obtain a 10-dollar online Amazon gift card by emailing the primary researcher after completing the questionnaire. For participants who would prefer to have the 10-dollar incentive donated to the Wounded Warrior Project, you do not need to email the primary researcher, and this donation will automatically be anonymously made on your behalf.

**Voluntary Participation**
Your participation in this study is voluntary and you are free to withdraw your permission at any time for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator at any time during the study.

**IRB Contact Information**
For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

**Researcher Contact Information**

Principal Investigator:

Matthew S. Jackson M.A., Doctoral Candidate
Counseling Psychology
Ball State University
Muncie, IN 47304
Telephone: (574) 274-6919
Email: msjackson@bsu.edu
United States Air Force: Second Lieutenant

Faculty Supervisor:

Dr. Theresa Kruczek
Counseling Psychology
Ball State University
Muncie, IN 47306
Telephone: (765) 285-8040
Email: tkruczek@bsu.edu
Appendix C

Demographics Questionnaire

Please select the sex to which you identify:

___ Male
___ Female

What is your current age?

___ 18
___ 19
___ 20
___ 21
___ 22
___ 23
___ 24
___ 25

Please select the ethnic group(s) that you most identify with (you may select more than one):

___ American Indian/Alaskan Native
___ Asian/Pacific Islander
___ Black
___ Caucasian
___ Hispanic
___ Other

What is your current grade level?

___ Freshman
___ Sophomore
___ Junior
___ Senior
___ Graduate Student

What University do you currently attend?

___ Ball State University
___ Indiana State University
___ Indiana University-Bloomington
___ Purdue University-West Lafayette
___ Other (Please specify)

Have you received mental/behavioral health counseling previously for a psychological problem?
Yes, on more than one occasion (Please specify the estimated number of occasions)
Yes, on one occasion
No, I have never received counseling

Have you received career counseling previously for career or work related concerns?
Yes, on more than one occasion (Please specify the estimated number of occasions)
Yes, on one occasion
No, I have never received counseling

What is your college major?
Business (i.e. Accounting, Economics, Management)
Humanities (i.e. English, Foreign Language, History)
Military Science
Music
Natural Sciences (i.e. Biology, Chemistry, Physics)
Psychology
Social Work
Other (Please specify)
Undecided

If you are currently enrolled in the ROTC program, how many years have you been a member of ROTC? (Do not include JROTC in your total)
1
2
3
4
More than 4

If you have previously been a member of JROTC, how many years were you a member?
1
2
3
4
More than 4

Have you ever served in the military?
Yes
No

If you have served in the military, what branch of the armed forces did you serve?
Do you have members of your immediate family (i.e. parent, sibling, child, spouse) serving in the military?

___ Yes
___ No

If you have had a family member serve in the military, what is your relationship with that family member?

___ Brother
___ Daughter
___ Father
___ Mother
___ Sister
___ Son
___ Spouse/Romantic Partner
___ Other

If you have had a family member serve in the military, what branch of the armed forces did they serve?

___ Air Force
___ Air National Guard
___ Army National Guard
___ Army
___ Coast Guard
___ Marines
___ Navy
Appendix D

TPB Variable Scales

[Behavioral Intention Items]
I intend to seek counseling if I have a psychological problem
  definitely true :____:____:____:____:____:____:____:____: definitely false
I will try to seek counseling if I have a psychological problem
  definitely true :____:____:____:____:____:____:____:____: definitely false
I plan to seek counseling if I have a psychological problem
  strongly disagree :____:____:____:____:____:____:____:____: strongly agree
I will make an effort to seek counseling if I have a psychological problem
  strongly agree :____:____:____:____:____:____:____:____: strongly disagree
I will seek counseling if I have a psychological problem
  extremely unlikely :____:____:____:____:____:____:____:____: extremely likely
I am willing to seek counseling if I have a psychological problem
  definitely false :____:____:____:____:____:____:____:____: definitely true
I expect to seek counseling if I have a psychological problem
  strongly agree :____:____:____:____:____:____:____:____: strongly disagree

[Attitude Toward the Behavior Items]

  For me to seek counseling if I have a psychological problem is:
  wise :____:____:____:____:____:____:____:____: foolish
  safe :____:____:____:____:____:____:____:____: unsafe
  useless :____:____:____:____:____:____:____:____: useful
  detrimental :____:____:____:____:____:____:____:____: constructive
  unproductive :____:____:____:____:____:____:____:____: productive
desirable: __________: __________: __________: __________: __________: __________: __________: __________: undesirable

beneficial: __________: __________: __________: __________: __________: __________: __________: __________: harmful

worthless: __________: __________: __________: __________: __________: __________: __________: __________: valuable

important: __________: __________: __________: __________: __________: __________: __________: __________: unimportant

nice: __________: __________: __________: __________: __________: __________: __________: __________: awful

embarrassing: __________: __________: __________: __________: __________: __________: __________: __________: not embarrassing

pleasant: __________: __________: __________: __________: __________: __________: __________: __________: Unpleasant

bad: __________: __________: __________: __________: __________: __________: __________: __________: good

[Subjective Norm Items]

[injunctive]

Most people who are important to me think that I should seek counseling if I have a psychological problem
definitely true: __________: __________: __________: __________: __________: __________: __________: definitely false

The people in my life whose opinions I value would approve: __________: __________: __________: __________: disapprove of me seeking counseling if I have a psychological problem

Most people I respect and admire think that I should not: __________: __________: __________: __________: should seek counseling if I have a psychological problem

It is expected of me that I seek counseling if I have a psychological problem
definitely false: __________: __________: __________: __________: definitely true
Most people I respect and admire seek counseling if they have a psychological problem

unlikely :____:____:____:____:____:____:____:____: likely

Most people who are important to me seek counseling if they have a psychological problem
definitely true :____:____:____:____:____:____:____:____: definitely false

Most people like me seek counseling if they have a psychological problem
strongly agree :____:____:____:____:____:____:____:____: strongly disagree

The people in my life whose opinions I value
do :____:____:____:____:____:____:____:____: do not
seek counseling if they have a psychological problem

For me to seek counseling if I have a psychological problem would be:
impossible :____:____:____:____:____:____:____:____: Possible

If I wanted to, I could seek counseling if I have a psychological problem.
definitely true :____:____:____:____:____:____:____:____: definitely false

It would be
very easy :____:____:____:____:____:____:____:____: very difficult
for me to seek counseling if I have a psychological problem.

I am confident that I can seek counseling if I have a psychological problem.
definitely false :____:____:____:____:____:____:____:____: definitely true

How much control do you believe you have over seeking counseling if you have a psychological problem?
no control :____:____:____:____:____:____:____:____: complete control

It is mostly up to me whether or not I seek counseling if I have a psychological problem.
strongly agree :____:____:____:____:____:____:____:____: strongly disagree

For me to seek counseling if I have a psychological problem is
not at all :____:____:____:____:____:____:____:____: Completely
under my control.

The number of events outside my control which could prevent me from seeking counseling if I have a psychological problem are:
very few :_____:_____:_____:_____:_____:_____:_____: Numerous
Appendix E

Beliefs About Psychological Services

Please read the following statements and rate them using the scale provided. For each item, select the number that most accurately reflects your attitude toward seeking counseling.

Strongly Disagree (1)   (2)   (3)   (4)   (5)   (6)  Strongly Agree

1. If a good friend asked my advice about a serious problem, I would recommend that he/she see a counselor.
2. I would be willing to confide my intimate concerns to a counselor.
3. Seeing a counselor is helpful when you are going through a difficult time in your life.
4. At some future time, I might want to see a counselor.
5. I would feel uneasy going to a counselor because of what some people might think.
6. If I believed I were having a serious problem, my first inclination would be to see a counselor.
7. Because of their training, counselors can help you find solutions to your problems.
8. Going to a counselor means that I am a weak person.
9. Counselors are good to talk to because they do not blame you for the mistakes you have made.
10. Having received help from a counselor stigmatizes a person’s life.
11. There are certain problems that should not be discussed with a stranger such as a counselor.
12. I would see a counselor if I were worried or upset for a long period of time.
13. Counselors make people feel that they cannot deal with their problems.
14. It is good to talk to someone like a counselor because everything you say is confidential.
15. Talking about problems with a counselor strikes me as a poor way to get rid of emotional conflicts.
16. Counselors provide valuable advice because of their knowledge about human behavior.
17. It is difficult to talk about personal issues with highly educated people such as counselors.
18. If I thought I needed counseling, I would get this help no matter who knew I was receiving assistance.

Subscales are computed as follows:
Intent: Items 1, 2, 3, 4, 6, 12
Stigma Tolerance: Items 5, 8, 10, 11, 13, 15, 17, 18
Expertness: Items 7, 9, 14, 16

Items 5, 8, 10, 11, 13, 15, 17 are reverse scored.
Appendix F

Inventory of Attitudes Towards Seeking Mental Health Services (IASMHS)

The term professional refers to individuals who have been trained to deal with mental health problems (e.g., psychologists, psychiatrists, social workers, and family physicians). The term psychological problems refers to reasons one might visit a professional. Similar terms include mental health concerns, emotional problems, mental troubles, and personal difficulties.

For each item, indicate whether you:

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Undecided</th>
<th>Somewhat Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1. If I believed I were having a mental breakdown, my first inclination would be to get professional attention.

2. I would want to get professional help if I were worried or upset for a long period of time.

3. If I were experiencing a serious psychological problem at this point in my life, I would be confident that I could find relief in psychotherapy.

4. It would be relatively easy for me to find the time to see a professional for psychological problems.

5. I would have a very good idea of what to do and who to talk to if I decided to seek professional help for psychological problems.

6. If I were to experience psychological problems, I could get professional help if I wanted to.

7. If good friends asked my advice about a psychological problem, I might recommend that they see a professional.

8. I would willingly confide intimate matters to an appropriate person if I thought it might help me or a member of my family.
This version of the IASMHS only includes the Help-Seeking Propensity subscale. Scores are achieved by summing the total for each item.
Appendix G

Salient Beliefs Questionnaire

Please take a few minutes to tell us what you think about the possibility of seeking counseling if you have a psychological problem. There are no right or wrong responses; we are merely interested in your personal opinions. In response to the questions that follow, please list the thoughts that come immediately to mind. Write each thought on a separate line. (Two or three lines are provided for each question).

1. What do you see as the advantages of seeking counseling if you have a psychological problem?
2. What do you see as the disadvantages of seeking counseling if you have a psychological problem?
3. Please list all people or groups who would approve of your seeking, or would encourage you to seek, counseling if you have a psychological problem. Please describe your relationship with the individual or group (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor).
4. Please list all people or groups who would disapprove of your seeking, or would discourage you from seeking, counseling if you have a psychological problem. Please describe your relationship with the individual or group (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor).
5. Sometimes, when we are not sure what to do, we look to see what others are doing. Please list the individuals or groups who, when having a psychological problem, are more likely to seek counseling. Please describe your relationship with the individual or group (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor).
6. Please list the individuals or groups who, when having a psychological problem, are least likely to seek counseling (e.g. brother, fellow student, fellow ROTC student, course instructor, ROTC instructor).
7. Please list any factors or circumstances that would make it easy or enable you to seek counseling if you have a psychological problem.
8. Please list any factors or circumstances that would make it difficult or prevent you from seeking counseling if you have a psychological problem.
Appendix H

Debriefing Form

Thank you for your participation in this study. The purpose of this research project is to examine the beliefs about psychological services held by members of the ROTC population. Findings from this study may help mental health practitioners to more effectively recruit ROTC students to come to counseling and more efficiently treat those students who do seek mental health treatment. If you should have any questions about the study, or would like to obtain the results at the conclusion of the study, please contact the primary researcher. The primary researcher is Matthew Jackson, and his email address is msjackson@bsu.edu.

For those students who would like a 10-dollar online Amazon gift card, please send an email to msjackson@bsu.edu with a statement that you would like a gift card for your participation in the study.

For those students who would like the 10-dollars to be donated to the Wounded Warrior Project, you do not need to email Matthew Jackson, and the incentive will automatically be anonymously donated on your behalf.

Thank you again for your time and contribution to this study. If you enjoyed participating in this study, please feel free to inform your friends who are enrolled in an ROTC program, so that they too can make the decision whether they would like to participate. If you have a friend who is interested in participating, please provide them with the following link to the questionnaire. Thank you in advance for your help.

Here is the link for the questionnaire. (Insert link)

Thank you again for your contribution.

Researcher Contact Information

Principal Investigator: Matthew S. Jackson M.A., Doctoral Candidate
Counseling Psychology
Ball State University
Muncie, IN 47304
Telephone: (574) 274-6919
Email: msjackson@bsu.edu
United States Air Force: Second Lieutenant

Faculty Supervisor: Dr. Theresa Kruczek
Counseling Psychology
Ball State University
Muncie, IN 47306
Telephone: (765) 285-8040
Email: tkruczek@bsu.edu
## Appendix I

### Content Analysis: Coding Manual

#### Question 1

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Professional Help and Guidance</td>
</tr>
</tbody>
</table>

**Definition:** This code is used for responses that indicate that an advantage to seeking counseling is that counselors are able to provide professional help, guidance, feedback, or advice. This code should also be used for responses that allude to the expertise or advanced education possessed by counselors (e.g. educated, knowledgeable, expertise).

**Examples:** Professional Advice, Advice, Professionals Have Expertise, Professional Opinion, They Know About The Problem

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Medication</td>
</tr>
</tbody>
</table>

**Definition:** This code is used for responses that indicate that an advantage to seeking counseling is the ability to be prescribed medication.

**Examples:** Medicine, Medication, Medication If Needed

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Confidentiality</td>
</tr>
</tbody>
</table>

**Definition:** This code is used for responses that indicate that an advantage to seeking counseling is that information discussed in counseling remains confidential.

**Examples:** Confidential, Someone Confidential To Talk To, No One Has To Know What You Talked About, Can Talk In Total Confidence

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Safe Environment</td>
</tr>
</tbody>
</table>

**Definition:** This code is used for responses that indicate that an advantage to seeking counseling is that the client is able to feel safe, secure, or free of judgment.

**Examples:** Safety, Safe Environment, Security, Lack Of Judgment, No Fear Of Embarrassment

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>New Perspective</td>
</tr>
</tbody>
</table>

**Definition:** This code is used for responses that indicate that an advantage to seeking counseling is the ability to obtain impartial insight or a new perspective regarding the problem.

**Examples:** Second Opinion, Unbiased Opinion, Insight From A Third Party, Outside Perspective, Different View On Life

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Problem Management/Resolution</td>
</tr>
</tbody>
</table>

**Definition:** This code is used for responses that indicate that an advantage of seeking counseling is the ability to work towards resolving the problem, alleviating symptoms, or developing solutions to address the problem.

**Examples:** Solve Problem, Treat Symptoms, Fix The Issue, Problem Relief, Feel Better, Help, Faster Recovery

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Improved Quality Of Life</td>
</tr>
</tbody>
</table>

**Definition:** This code is used for responses that indicate that an advantage to seeking counseling is the ability to improve either specific (e.g. better social skills, improved confidence, increased trust) or general (improved personal well being, better oneself) aspects regarding quality of life.
Examples: Better Social Life, Improved Work Performance, Happier, More Complete, Healthier Lifestyle, Increased Openness, Maintain Positive Attitude

8   Expression of Thoughts and Emotions

Definition: This code is used for responses that indicate that an advantage of seeking counseling is the ability to talk to someone about the problem, express feelings, or sort through emotions. This code should also be used for responses that are similar in nature to catharsis (e.g. get it out, vent, get off chest).
Example: Talk About Issues, Confide, Open Up, Emotional Release, Let Out Emotions, Outlet

9   Adaptive Coping

Definition: This code is used for responses that indicate that an advantage to seeking counseling is the ability to develop more adaptive ways to cope with future problems.
Example: Increased Ability to Deal With Future Problems, Learn New Ways To Cope With Future Frustrations

10  Help Others

Definition: This code is used for responses that indicate that an advantage to seeking counseling is that it may help family, friends, or other individuals with whom the client may interact.
Examples: Help Family, Help Friends, Help Colleagues, Make People Around Me Happy

11  Social Support

Definition: This code is used for responses that indicate that an advantage to seeking counseling is that the client feels supported, cared for, or no longer alone. This code should not be used when the response emphasizes talking or expressing emotions to the counselor (see code 8), or when the response focuses on obtaining a new perspective or second opinion (see code 5).
Examples: Relating to Someone, Don’t Feel Alone, Having Someone There, Support, Someone Care About Your Problems

12  No Perceived Benefits

Definition: This code is used for responses that indicate that there are no advantages to seeking counseling.
Examples: No Benefit, Will Not Help

13  Other

Definition: This code is used for responses that are either too vague or do not clearly fit in the established categories.
Examples: Structured Setting, Therapy, Save Your Life, People Are Aware, Reinforce Positive Actions, Understand The Problem

### Question 2

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stigma</td>
</tr>
</tbody>
</table>

Definition: This code is used for responses that indicate that seeking treatment may lead to the individual being treated differently, judged negatively, viewed as weak, shamed, ridiculed, or made to feel lesser as a person. This code should be used both for when the stigma is coming from others (e.g. judged by others), and self-stigma or the negative view of self that comes from
accepting the presence of a mental illness and seeking treatment (e.g. feel weak, loss of self-pride, feel abnormal).

Examples: Judgment, Shame, Embarrassment, Social Stigma, Looked Down Upon, Feel Abnormal

2 Career Ramifications

Definition: This code is used for responses that indicate that seeking counseling would result in career ramifications, discharge, loss of security clearance, medical disqualification, or placement in a medical record. This code should be used for ramifications in military as well as civilian careers.

Examples: Hurt Career, Discharge, Put In Medical File, Flagged for Mental Health, Get Me Fired, Lose Security Clearance

3 Financial Expense

Definition: This code is used for responses that indicate that seeking counseling is expensive, costly, or otherwise difficult to obtain for financial reasons.

Examples: Cost, Money, Expensive, Price

4 Time Constraints

Definition: This code is used for responses that indicate a perceived lack of time to seek counseling, concerns related to scheduling counseling sessions, or perceptions regarding counseling being time extensive.

Examples: Time, Scheduling Problems, Time Consuming

5 Perceived Ineffectiveness

Definition: This code is used for responses that indicate that counseling may be ineffective, not lead to a positive outcome, not help the particular respondent, or that question the effectiveness of counseling in general.

Examples: May Not Be Effective, Counseling Wouldn’t Help Me, Not Guaranteed to Help, May Not Reach a Solution

6 Rapport With Counselor

Definition: This code is used for responses that indicate problems relating to the counselor, or difficulty in finding a counselor that the respondent likes.

Examples: Counselor May Not Understand My Way of Thinking, Problem Finding a Counselor I Like, Counselor Fails to Relate

7 Make Things Worse

Definition: This code is used for responses that indicate that seeking counseling may result in things becoming worse, an over-reliance on the counselor, the individual not being able to cope with future problems themselves, poor advice, or diagnosis/misdiagnosis.

Examples: Feel Worse, Make Problems Worse, Develop an Over-Reliance on the Counselor, Feel Unable to Cope With Problems Yourself, Take Advice the Wrong Way, Wrong Advice, Diagnosis, Misdiagnosis

8 Discomfort With Counseling Process

Definition: This code is used for responses that indicate that the respondent may be reluctant to seek counseling due to anxiety or discomfort associated with opening up, talking about personal information, talking with a stranger, divulging personal feelings, or someone knowing their
personal matters. This code should also be used when the respondent describes a distressing emotion that they perceive would result from the counseling process (e.g. vulnerability, uncomfortable, loss of control, intimidating).
Example: Talking To A Stranger, Having To Talk About The Problem, Prodding, Vulnerability, Uncomfortable

9 Breaches In Confidentiality
Definition: This code is used for responses that indicate that the respondent may be reluctant to seek counseling due to a fear of a break in confidentiality, or the belief that the respondent’s private information would become public.
Example: Does Not Remain Anonymous, Counselor May Tell Someone, Leak Of Information, Keeping the Issue Private

10 Problems Accessing Counseling Services
Definition: This code is used for responses that indicate that the respondent may be reluctant to seek counseling due to problems accessing counseling services.
Examples: Problems Accessing Counseling, Difficulty Actually Going To See A Counselor

11 Other
Definition: This code is used for responses that are either too vague or do not clearly fit in the established categories.
Examples: Paperwork, Boring, Counselors Don’t Discuss Spiritual Issues

Questions 3-6

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ROTC Program</td>
</tr>
<tr>
<td></td>
<td>Definition: This code is used for responses that indicate the ROTC program, but are general in nature. The response does not specifically state instructor (see code 3) or cadet (see code 4). Examples: ROTC, AFROTC</td>
</tr>
<tr>
<td>2</td>
<td>U.S. Military</td>
</tr>
<tr>
<td></td>
<td>Definition: This code is used for responses that indicate the military in general, a specific branch of the military, or active duty/reserve personnel. Examples: Military, Air Force, Soldiers, Military Unit</td>
</tr>
<tr>
<td>3</td>
<td>ROTC Instructor</td>
</tr>
<tr>
<td></td>
<td>Definition: This code is used for responses that indicate an ROTC instructor, ROTC professor, or the ROTC cadre in general. These responses can be general (e.g. ROTC instructor) or specific (Lt. Col. John Smith). Examples: ROTC instructor, ROTC cadre (the group of officers that lead the ROTC program), ROTC PMS (Professor of Military Science), Lt. Col. John Smith- ROTC Detachment Commander, Commander</td>
</tr>
<tr>
<td>4</td>
<td>ROTC Cadet</td>
</tr>
<tr>
<td></td>
<td>Definition: This code is used for responses that indicate another ROTC cadet, a friend from the ROTC program, or a peer mentor within the ROTC program. These responses can be general (e.g. ROTC friend) or specific (e.g. John Smith-ROTC friend).</td>
</tr>
</tbody>
</table>
Examples: ROTC cadet, ROTC friend, ROTC mentor, John Smith-ROTC friend, ROTC Wingmen/Midshipmen

5 General University Instructor

Definition: This code is used for responses that indicate an instructor or professor, but do not specify that this individual is involved with the ROTC program.
Examples: Instructor, University Instructor, School Instructor, Professor

6 Friend/Peer

Definition: This code is used for responses that indicate a friend, peer, roommate, or general university student. The responses can be general (e.g. friend) or specific (e.g. John Smith-friend). This code is used when the response does not specifically state that the individual is in the ROTC program (see code 4) or a friend from church (see code 13).
Examples: Friend, Roommate, John Smith-Best Friend, Fellow Students

7 Mother

Definition: This code is used for responses that indicate a mother or step-mother.
Examples: Mother, Step-mother, Mom

8 Father

Definition: This code is used for responses that indicate a father or step-father.
Examples: Father, Step-father, Dad

9 Parents

Definition: This code is used for responses that indicate the parental unit. This code is used when the response does not specifically state mother (see code 7) or father (see code 8), but instead suggests the parental unit (e.g. parent, parents). This code should also be used when a participant lists both mother and father as responses for the same question. If mother and father are both listed, but as responses for different questions, please code them separately (see codes 7 and 8).
Example: Parents, Mother and Father, Parent

10 Sibling

Definition: This code is used for responses that indicate a brother, sister, step-siblings, half-siblings, or siblings in general.
Example: Brother, Sister, Siblings, Step Siblings, Half Siblings

11 Family

Definition: This code is used for responses that indicate the family in general, or a specific family member that does not have an existing code. This code should not be used for mothers (see code 7), fathers (see code 8), siblings (see code 10), or wives/husbands (see code 12).
Examples: Family, Relatives, Immediate Family, Extended Family, Grandfather, Uncle, Cousin

12 Romantic Partner

Definition: This code is used for responses that indicate a romantic partner.
Examples: Husband, Wife, Fiancée, Boyfriend, Girlfriend

13 Religious Leaders/Friends

Definition: This code is used for responses that indicate a religious leader, religious friend(s)/peer(s), or the worship congregation in general.
Examples: Religious leader, Minister, Chaplain, Christian Friend, Church
14 Medical Professional
Definition: This code is used for responses that indicate a medical professional, including mental health professionals.
Examples: Family Doctor, Counselor, School Counselor

15 No One
Definition: This code is used for responses that indicate that there are no individuals that can serve as the response to the question.
Examples: No One

16 Other
Definition: This code is used for responses that indicate an individual or group that either does not fit, or are too vague to place, in the established categories. This code should be used for university officials that are not ROTC instructors (see code 3) or general university instructors (see code 5).
Examples: Academic Advisor, University Officials, Leaders, Vet2Vet Program, Coach, Work Supervisor

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Supportive Important Others</td>
</tr>
<tr>
<td>2</td>
<td>Career Ramifications</td>
</tr>
<tr>
<td>3</td>
<td>Financial Expense</td>
</tr>
<tr>
<td>4</td>
<td>Sufficient Time</td>
</tr>
</tbody>
</table>

Question 7

1 Code Number 2 Category Name Supportive Important Others
Definition: This code is used for responses that indicate that support or encouragement from important others to seek help would make it easier or enable the respondent to seek help.
Examples: Immense Support From Friends, Encouraging ROTC Instructors, Multiple People Refer Me To Go

2 Career Ramifications
Definition: This code is used for responses that indicate that the absence of career ramifications or discharge would make it easier or enable the respondent to seek counseling. This code should also be used for responses that indicate that seeking counseling may prevent the respondent from facing career ramifications (e.g. seeking counseling to prevent being discharged from the military for psychological concerns).
Examples: Does Not Affect Employment, Will Not Be Removed From Career, If It Meant Not Getting Kicked Out Of The Army

3 Financial Expense
Definition: This code is used for responses that indicate counseling being inexpensive, affordable, or covered under insurance would make it easy or enable the respondent to seeking counseling.
Examples: Inexpensive, Free Counseling Services, Cheap, Covered Under Insurance, VA Pays For Services

4 Sufficient Time
Definition: This code is used for responses that indicate sufficient time to seek counseling, flexibility in scheduling appointments, or a less significant time commitment involved in seeking treatment would make it easy or enable the respondent to seek counseling.
Examples: More Free Time, Fewer Classes, Flexible Scheduling, Shorter Sessions, Less Time Consuming
5 Perceived Effectiveness

Definition: This code is used for responses that indicate that the perceived effectiveness of counseling, for the particular respondent or others, would make it easy or enable the respondent to seek counseling.
Examples: Assurance That It Would Help, Should Help Me, Others’ Experiences Are Good And Helped

6 Religious Emphasis

Definition: This code is used for responses that indicate that the counselor being religious, shared religious values between the counselor and client, or the counseling services being offered through the church would make it easy or enable the respondent to seek counseling.
Examples: They Are Christian, Religiously Affiliated Counselors, Shared Christian Values, Counseling Through My Church

7 None

Definition: This code is used for responses that indicate that there are no factors or circumstances that would make it easy or enable the respondent to seek counseling.
Examples: None

8 Counselor Familiarity

Definition: This code is used for responses that indicate that personally knowing the counselor, prior to seeking services, would make it easy or enable the participant to seek counseling.
Example: Personally Know The Counselor, Know The Counselor Well, Counselor Was Not A Stranger

9 Confidentiality

Definition: This code is used for responses that indicate that confidentiality, the ability to obtain services without other’s awareness, or the absence of documentation would make it easy or enable the respondent to seek counseling.
Example: Complete Confidentiality, Ensured No One Will Find Out, No Documentation

10 Accessibility of Counseling Services

Definition: This code is used for responses that indicate that the accessibility of counseling services, availability of services through the university or ROTC program, offering of counseling in close geographical proximity, or ability to obtain adequate transportation would make it easy or enable the respondent to seek counseling.
Examples: Easily Accessible, Availability, College Counseling, PUSH (Purdue University Student Health Center), Available Through ROTC, Available Counselors In Area, Easy Ride To The Clinic

11 Awareness of Available Services

Definition: This code is used for responses that indicate that familiarity with the types of counseling services that are available, knowledge regarding where to obtain counseling services, or awareness of how to obtain the contact information for the counseling center would make it easy or enable the participant to seek counseling. This code should also be used for responses that suggest the importance of advertisement or outreach projects designed to increase awareness of available counseling services.
Examples: Know Where To Go, Know Contact Information, Presentations To Raise Awareness, More Training And Awareness

12 Comfortable Atmosphere

Definition: This code is used for responses that indicate that a comfortable, informal, or welcoming therapeutic process or counseling environment would make it easy or enable the participant to seek counseling.
Examples: Less Serious Atmosphere, Counseling Takes Place Informally, Not An Office Setting, Quiet Room

13 Significant Distress

Definition: This code is used for responses that indicate that the occurrence or possibility of significant distress for the participant or others would make it easy or enable the participant to seek counseling. This code should be used both when the response refers to a general problem (e.g. If I had a severe problem), or a specific problem (e.g. family death, depression, traumatic event).
Examples: Longevity and Seriousness Of Problem, Relationship Problem, Effect On Loved Ones If Not Corrected

14 Other

Definition: This code is used for responses that are either too vague or do not clearly fit in the established categories.
Examples: Internet, Not Prescribed Anything, ROTC, ROTC Students, Certified Psychotherapist

Question 8

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stigma</td>
</tr>
</tbody>
</table>

Definition: This code is used for responses that indicate that the fear of being treated differently, judged negatively, scrutinized, harassed, shamed, ridiculed, or made to feel lesser as a person would make it difficult or prevent the respondent from seeking help. This code should be used both for when the stigma is coming from others (e.g. judged negatively by others), as well as when it is self-stigma, defined as the negative view of self that comes from accepting the presence of a mental illness and seeking treatment (e.g. loss of self-pride, damaged self-ego).
Examples: Fear of Judgment, Stigma, Negative Feedback From Others, Labeled, Damage to Pride/Self-Ego

2 Career Ramifications

Definition: This code is used for responses that indicate that fear of career ramifications, discharge, loss of security clearance, medical disqualification, or disenrollment from the ROTC program would make it difficult or prevent the respondent from seeking help.
Examples: Hurt Future Career, Discharge, Lose Security Clearance, Medically disqualified, Loss of Scholarship

3 Financial Expense

Definition: This code is used for responses that indicate counseling being expensive, costly, or difficult to obtain for financial reasons (e.g. no insurance coverage) would make it difficult or prevent the respondent from seeking help.
Examples: Cost, Money, Expensive, Payment, Finances, No Insurance Coverage
4 **Time Constraints**

Definition: This code is used for responses that indicate a perceived lack of time to seek counseling, concerns related to scheduling counseling sessions, or perceptions regarding counseling being time extensive would make it difficult or prevent the respondent from seeking help.

Examples: Time, Scheduling Problems, Time Consuming

5 **Perceived Ineffectiveness**

Definition: This code is used for responses that indicate that the perceived ineffectiveness of counseling, for the particular respondent or others, would make it difficult or prevent the respondent from seeking help.

Examples: Would Not Help, May Not Be Helpful, Did Not Help Others

6 **Preference For Alternative Coping Mechanisms**

Definition: This code is used for responses that indicate that the respondent’s preference to cope with problems on their own, through the use of family support, or through other methods (e.g. exercise, religion) would make it difficult or prevent the respondent from seeking help.

Examples: Deal With It On My Own, Use Family For Support, Other Methods Of Support

7 **None**

Definition: This code is used for responses that indicate that there are no factors or circumstances that would make it difficult or prevent the respondent from seeking help.

Examples: None

8 **Discomfort With Counseling Process**

Definition: This code is used for responses that indicate that anxiety or discomfort associated with opening up, discussing deep personal issues, trusting someone with personal problems, or talking with a stranger would make it difficult or prevent the respondent from seeking help. This code should also be used when the respondent describes a distressing emotion that they perceive would result from the counseling process (e.g. uncomfortable).

Example: Discussing Deep Personal Issues, Opening Up, Uncomfortable, Awkwardness in Counseling, Talking To A Stranger, Trusting Someone With Your Problems

9 **Breach In Confidentiality**

Definition: This code is used for responses that indicate that a fear of a break in confidentiality, or the belief that the respondent’s private information could become public, would make it difficult or prevent the respondent from seeking help.

Example: If Confidential Information Was Made Public, A Break In Confidentiality, If Information Got Out

10 **Problems Accessing Counseling Services**

Definition: This code is used for responses that indicate that perceived problems in accessing counseling services, transportation, geographical distance, or the scarcity of available services would make it difficult or prevent the respondent from seeking help. This code should not be used when the response more clearly represents uncertainty regarding the types of services that are available, or a lack of knowledge about available services (see code 11).

Examples: Hard To Access, Lack Of Psychologists Around, No Resources Close, Too Far Away, Transportation, Lack Of Counseling Services
11 Uncertainty Regarding The Types Of Available Services

Definition: This code is used for responses that indicate that uncertainty regarding the types of counseling services that are available, or a lack of knowledge regarding counseling resources, would make it difficult or prevent the respondent from seeking help. This code should not be used when the response more clearly represents uncertainty regarding where to obtain counseling services, or where to find contact information for mental health professionals (see code 12).

Examples: Not Knowing Of Resources, Little Knowledge Of Counseling, Lack Of Knowledge

12 Lack Of Knowledge Regarding Where To Go For Help

Definition: This code is used for responses that indicate that a lack of knowledge regarding where to obtain counseling services, where to find contact information for mental health professionals, or where to find information on counselors would make it difficult or prevent the respondent from seeking help.

Examples: Don’t Know Where To Go, Not Knowing Where You Can Find Help, Not Knowing Contact Information, Not Sure Where Psychologist Is, Problem Knowing Where To Find Information On Counselors

13 Other

Definition: This code is used for responses that are either too vague or do not clearly fit in the established categories.

Examples: Awkward Instructor, Trust, Health, Uncertainty Regarding The Problem, Counselor Councils Friends, Personal Preference, Females


Theory of Planned Behavior

The Theory of Planned Behavior (TPB) suggests that intentions to perform a behavior are best predicted by attitudes toward the behavior, subjective norms related to the behavior, and PBC over the action of performing the behavior. These three determinants are shaped by behavioral beliefs, normative beliefs, and control beliefs respectively (Fishbein & Ajzen, 2010). The theory goes on to state that intentions and PBC combine to predict behavior (Ajzen, 1980, 1985, 1991). While this is the foundation of the Theory of Planned Behavior, it is important to understand the complexities regarding how these constructs interact.

Fishbein and Ajzen (1975) define attitudes as a person’s feelings of favorableness or unfavorableness regarding performing the behavior. Attitude formation results from the summation of salient behavioral beliefs regarding a behavior, as well as the strength of each individual belief (Ajzen & Fishbein, 1980). Salient beliefs are those beliefs that are easily accessible and activated spontaneously when confronted with the target object or situation. These beliefs often center on the expected outcomes of performing the behavior, as well as the evaluation of these outcomes, a concept that has been termed the expectancy-value approach (Ajzen, 2006). When individuals perceive performing the behavior as resulting in more positive outcomes than negative outcomes, they are likely to form a positive attitude towards the behavior. Fishbein and Ajzen (2010) further describe how attitudes are evaluative, and thus they range from positive to negative on a continuum with a neutral point. In regards to PHS, attitudes are likely formed on the basis of beliefs that center on expected outcomes, such as the perceived effectiveness of counseling services.

Subjective norms are an individual’s belief that important others think a behavior should or should not be performed (injunctive norms), and their perception of whether they believe these important others engage or do not engage in the behavior (descriptive norms). When an individual believes that the majority of important others support engaging in the behavior, and that the majority of important others perform the behavior themselves, the individual may feel social pressure to engage in the behavior. However, when the individual perceives that most important others do not support the behavior, nor do they engage in the behavior themselves, the individual may feel social pressure not to perform the behavior (Fishbein & Ajzen, 2010). The subjective norms held by an individual derive from their many normative beliefs regarding the behavior. Normative beliefs are similar to subjective norms except that they relate to multiple specific reference groups. For example, an individual may have different normative beliefs regarding the behavior of help seeking from various reference groups, including; their romantic partner, immediate family, close friends, coworkers, and health care professionals (Ajzen, 2012). An individual’s subjective norms are the result of the summation of their many normative beliefs, weighted by their motivation to comply with each of these beliefs (Fishbein & Ajzen, 2010). Additionally, the TPB suggests that it is important to take into account the degree to which the individual is motivated to act in accordance with these opinions. When an individual is not motivated to act according to the beliefs of others, they are less likely to be impacted by the perceived subjective norms surrounding a behavior (Ajzen, 1985; Ajzen & Fishbein, 1980). It is
important to note that Fishbein and Ajzen (2010) have recently begun referring to subjective norms as perceived norms in order to reduce confusion related to the prior terminology. However, the term subjective norms will continue to be used in the current study due to its familiarity amongst help seeking researchers.

Ajzen (1991) defined PBC as the individual’s perception of the difficulty of performing a specific behavior, as well as the perception that the behavior is under the control of the individual despite known barriers. An individual’s PBC results from their salient control beliefs, or those beliefs relating to the factors that may assist or impede their engaging in the behavior (Ajzen, 2012). These control beliefs may stem from previous experiences, information shared by others, and any other factors that may influence perceived ability to engage in the behavior. Specifically, control beliefs may relate to the relevant skills, opportunities, and resources necessary to perform the behavior (Fishbein & Ajzen, 2010). PBC is then the summation of these control beliefs, after each has been weighted by its perceived power (Ajzen, 2012). Ajzen (1991) describes the construct of PBC as being similar to Bandura’s concept of self-efficacy. Self-efficacy relates to an individual’s belief that they have the ability to carry out a behavior in order to obtain a desired outcome (Bandura, 1977a, 1977b, 2004).

The TPB goes on to suggest that an individual’s attitudes, subjective norms, and PBC lead to the development of their behavioral intentions. Fishbein and Ajzen (2010) define behavioral intention as the readiness to perform the behavior. Individuals are likely to have greater intentions to engage in a behavior when they have favorable attitudes and perceived norms, as well as greater PBC. However, these three factors are expected to contribute disproportionately depending on the behavior, individual, context, time period, and population of interest. For example, for some behaviors, attitudes may make more of a significant impact on an individual’s intentions to engage in the behavior than their perceived norms or PBC. In fact, for some behaviors it is possible that one of the three determinants will not be a statistically significant predictor of intentions. While this may seem problematic for the TPB, this finding only suggests that for this behavior the determinant is irrelevant. Further, in these instances the intentions to perform the behavior are then accounted for by the remaining determinants. Recognizing the weight that each determinant contributes to intentions, as well as identifying irrelevant determinates for a behavior, is essential for developing effective interventions. Interventions can then be designed to target problematic determinants that are contributing largely to the group’s intentions or lack of intentions to perform the behavior (Fishbein & Ajzen, 2010).

In addition to the disproportionate contributions by the determinants on intentions to engage in the behavior, it is important to understand the unique role of perceived behavioral control. PBC was added to the Theory of Reasoned Action, a precursor to the TPB that included only attitudes and subjective norms as predictors of behavioral intentions (Netemeyer, Burton, & Johnson, 1991). In the TPB, PBC is thought to moderate the effects of attitudes and subjective norms on intentions. That is a person may have favorable attitudes and subjective norms, but as a result of having little PBC may develop little intention of engaging in the behavior. Further, PBC is expected to moderate the effects of intentions on behavior. As a result, a person may have intentions to engage in a behavior but may not carry out the behavior due to little perceived control over the behavior of interest. For example, a person may have intentions to seek mental health treatment but may not seek help, as they perceive that they lack the financial resources to perform the behavior. PBC also differs from the other two determinants in that we would not necessarily expect a strong correlation with intentions to perform the behavior. Essentially,
people are not necessarily going to have intentions to perform a behavior simply because they have the perceived ability to engage in the behavior (Fishbein & Ajzen, 2010). For example, a person may perceive that they have the ability to seek mental health treatment, but may have no intention to engage in psychological services.

It is important to note that PBC is not an important factor in predicting all behaviors. When PBC is high, intentions will be a good predictor of behavior, and PBC will be unlikely to account for much if any unique variance. However, when PBC is low, this becomes an important component to include, as intentions will likely be a poor predictor of behavior (Fishbein & Ajzen, 2010). For example, an individual with low perceived control over the behavior of obtaining psychological services, perhaps for financial reasons, is unlikely to seek treatment despite having the intention to seek help stemming from favorable attitudes and subjective norms.

The TPB goes on to suggest that behavioral intentions are the best predictor of actually engaging in the behavior. The greater an individual’s intentions to engage in the behavior, the more likely they are to perform the behavior. However, as noted previously, PBC acts as a moderator of the intention-behavior relationship. Individuals may lack perceived or actual control over the behavior if they lack the skills necessary to perform the behavior, or face environmental constraints. In these instances, intentions are likely to be a poor predictor of behavior. Intentions are thus a better predictor of behavior when the behavior of interest is under the volitional control of the individual and when PBC is high (Fishbein & Ajzen, 2010).

Numerous studies have supported the model proposed in the TPB. Researchers have found that the TPB can be used to explain and predict such behaviors as exercising, donating blood, compliance with a diet, use of contraception, and use of illicit substances (Conner & Sparks, 2005; Hardeman et al., 2002; Sheehan, Lecrubier, & Sheehan, 1998). Ajzen (1991) performed a meta-analysis that reviewed previous studies that used the TPB to predict a behavior. Results of the meta-analysis found that approximately 50% of the variance in behavior could be accounted for by attitudes towards the behavior, subjective norms, and perceived control over the behavior. A significant limitation of the meta-analysis was that it only included 16 studies. Additionally, the variance of behavior accounted for varied considerably in the included studies, ranging from 18-88%. Armitage and Conner (2001) conducted a follow-up meta-analysis again reviewing studies that used the TPB to predict intentions and behavioral engagement. The researchers hoped to improve upon the limitation found in Ajzen (1991) of including only 16 studies, and after a thorough review of the literature they analyzed the results of 185 studies. Results of the meta-analysis provided additional support for the TPB. Specifically, the researchers found that 39% of the variance in behavioral intention and 27% of the variance in behavior could be accounted for by using the TPB.

Researchers have explored the use of the TPB to explain and predict PHS with mixed success. Stecker et al. (2010) explored the use of the TPB to predict PHS in a group of 150 members of the Army National Guard from a rural southern state. All participants had completed a Mini International Neuropsychiatric Interview (MINI), and all participants screened positive for either a major depressive disorder, panic disorder, generalized anxiety disorder, PTSD and /or alcohol abuse disorder. Results of the study indicated that only 35% of participants had sought psychological services for their symptoms. The use of the TPB to predict PHS was partially validated, as only attitudes and PBC were significant predictors of intentions, accounting for 41% of the variance in intentions. Intentions to seek help was a significant predictor of the behavior of PHS, explaining 29% of the variance in carrying out the behavior. Interestingly,
subjective norms related to mental health was not found to be a significant predictor of intentions to seek help. This may be partially explained by the way subjective norms were measured in the current study. Stecker et al. (2010) measured subjective norms with three items that assessed service members’ injunctive norms regarding PHS. These items included “My family would approve of my going to mental health treatment,” “People I work with would approve of my going to mental health treatment,” and “My friends would approve of my going to mental health treatment” (Stecker et al., 2010, p. 47). While these appear to be valid items to assess injunctive norms, Fishbein and Ajzen (2010) recommend including items to assess descriptive norms. It is possible that the finding that subjective norms was not a significant predictor of intentions, could be accounted for by Stecker et al. (2010) only measuring half of the construct of subjective norms as defined by the TPB. However, the results of this study may also suggest that subjective norms is not a relevant determinant for predicting intentions to seek help for Army National Guard participants.

Britt et al. (2011) found similarly mixed evidence related to the use of the TPB in predicting PHS. Using a sample of 760 National Guard and Reserve Component service members, Britt et al. (2011) found that attitudes, subjective norms, and PBC each when considered in isolation were significant predictors of intentions to seek mental health treatment. However, only attitudes towards psychological services accounted for unique variance in PHS. Similar to Stecker et al. (2010) this study also had potential limitations in its measurement of subjective norms, as Britt et al. (2011) also failed to include items designed to assess participants’ descriptive norms regarding PHS. A review of Britt et al.’s (2011) measurement of PBC also reveals that the scale utilized in the study likely did not fully capture the construct of PBC as defined by the TPB. Fishbein and Ajzen (2010) suggest that researchers measure both the capacity and autonomy components that an individual has regarding the target behavior. Capacity items are designed to target the participant’s perceived confidence in their ability to seek counseling. In contrast, autonomy items are designed to capture the participant’s perceived level of personal control over seeking counseling. While Britt et al. (2011) assessed reservists’ perceived autonomy over the behavior of PHS, no items were administered that measured their capacity over the behavior of obtaining treatment. It is possible that the finding that PBC was not a significant predictor of reservists’ intentions to seek help was the result of failing to measure fully the construct of PBC as defined by Fishbein and Ajzen (2010). The Stecker et al. (2010) and Britt et al. (2011) studies are the only known studies that have utilized the TPB to predict service members’ intentions to seek help, however, issues related to construct validity bring into question the results of the studies. The current study will attempt to improve upon these limitations by measuring subjective norms and PBC as recommended by Fishbein and Ajzen (2010), and as defined within the TPB.

**Attitudes in College Students**

Several studies have focused on the relationship between attitudes and intentions to seek psychological services, and have generally supported the existence of a positive relationship between the two constructs (Choi, 2008; Kleinman, Millery, Scimeca, & Polissar, 2002; Vogel & Wester, 2003; Vogel et al., 2005; Ægisdóttir & Gerstein, 2009). These studies suggest that when individuals hold more positive attitudes regarding mental health treatment, they will also have greater intentions to seek services. Researchers have found a number of factors to be important in contributing to more favorable attitudes towards PHS. For example, individuals who have sought counseling previously are more likely to develop favorable attitudes towards PHS (Vogel, Wester, Larson, & Hackler, 2007).
College students may possess a number of behavioral beliefs that contribute to the formation of less favorable attitudes regarding PHS. College students often struggle to recognize when they have a problem that warrants seeking counseling services. Students also often feel uncertain as to how to best utilize counseling when they are in distress. Further, they may lack confidence in psychological services, and believe that even if they were to seek treatment they would obtain little benefit (Cellucci et al., 2006).

Schaffer, Vogel, and Wei (2006) explored the mediating effects of perceived benefits, risks, and attitudes towards mental health between attachment styles and intentions to seek psychological services. The sample consisted of 821 undergraduate students enrolled in psychology classes at a Midwestern University. Results of the study indicated that perceived risks and benefits predicted attitudes towards seeking help, which in turn predicted intentions to seek mental health treatment. Schaffer, Vogel, and Wei (2006) reported that perhaps the most important factor associated with anticipated risks is the level of stigma that the individual expects. Thus, when an individual expects a greater degree of stigma for seeking help, they are likely to perceive greater anticipated risk, which in turn leads to more negative attitudes related to PHS and fewer intentions to seek help.

Fear of stigma from important others may be the most significant factor that prevents college students from seeking psychological services (Cellucci et al., 2006). Researchers have found that fear of mental health stigma leads to more negative attitudes and fewer intentions to seek treatment amongst college students (Ludwikowski, Vogel, & Armstrong, 2009; Moran, 2007; Shaffer et al., 2006; Vogel, Wade, & Ascheman, 2009). Ludwikowski, Vogel, and Armstrong (2009) conducted a study that directly looked at the impact of mental health stigma on attitudes towards PHS. Participants in the study were 509 college students enrolled in a psychology course at a Midwestern university. Results of the study indicated that both public and personal stigmas were uniquely related to self-stigma, which in turn was related to the student’s attitudes towards seeking career counseling. Both public and personal stigmas appeared as uniquely related to attitudes towards career counseling and the development of self-stigma. These results provide evidence for the differentiation of public and personal stigma, as well as the important role that each play in PHS. The results of this study clearly support the importance of stigma in shaping attitudes towards PHS.

There are several significant limitations of the Ludwikowski, Vogel, and Armstrong (2009) study. The sample over represents Caucasian students, which is a problem for external validity, as the results may not generalize to college students of racial minority groups. There are also several issues with statistical conclusion validity. The authors performed several t tests without using a Bonferroni correction. This is problematic as the researchers failed to account for the inflated type 1 error rate associated with conducting several t tests. As a result, the differences that they found may actually be a side effect of this inflated type 1 error. The researchers also only looked at student’s attitudes and perceived stigma towards career counseling, so the results may not generalize to other forms of mental health treatment. Despite these limitations, the study does provide clear evidence of the role that stigma plays as a behavioral belief in influencing attitudes and intentions towards PHS.

**Subjective Norms in College Students**

The research supporting the importance of subjective norms in predicting college students’ intentions to seek help appears to be mixed. Several researchers have provided evidence of a positive relationship between subjective norms and intentions to seek mental health treatment (Bayer & Peay, 1997; Christian & Abrams, 2003, Codd & Cohen, 2003; Howland,
PHS in ROTC Students

1997; Kleinman et al., 2002; Mackenzie et al., 2004; Mo & Mak, 2009). For example, a college student who perceives her family and friends as being supportive of her engaging in psychological services, and who is motivated to act in accordance with these opinions, is likely to develop favorable subjective norms regarding PHS. As a result, she is more likely to have greater intentions to engage in treatment. While this intuitively makes sense, the research supporting the relationship between subjective norms and intentions is scarce and ripe with methodological limitations.

Vogel et al. (2007) explored the relationship between subjective norms and intentions to seek help in 780 students from a large Midwest university. Results indicated that 75% of those who sought help had been prompted by others to seek services, as compared to only 12% of those who had not sought treatment. Additionally, 95% of those who sought professional help knew someone who had engaged in treatment, as compared to 53% of those who did not seek help. These results support the notion that individuals who possess favorable injunctive norms as a result of perceiving important others as being supportive of PHS, and favorable descriptive norms resulting from the perception that important others engage in mental health treatment themselves, are more likely to develop positive subjective norms related to PHS. Further, these subjective norms go on to increase intentions to engage in treatment.

The importance of injunctive norms, which are an individual’s belief that important others think a behavior should or should not be performed, on intentions has been supported in additional research studies. Leaf et al. (1985) found that individuals, who perceived greater support to engage in treatment from family, were also more likely to engage in PHS. Kimura and Mizone (2008) found similar results in a study that examined the role of injunctive norms on intentions to seek help in a sample of Japanese undergraduate students. Results of the study indicated that perceived support of important others was predictive of intentions to engage in treatment. Dew, Bromet, Schulberg, Parkinson, & Curtis (1991) examined the ability of psychiatric and psychosocial characteristics to distinguish between depressed individuals who sought help and those who did not. Results of the study found that participants who sought treatment were more likely to have had someone recommend that they obtain help for their depression. Similarly, Cameron, Leventhal, and Leventhal (1993) found that 92% of those who obtained services had received encouragement from important others prior to entering treatment. The beliefs held by important others about whether or not counseling should be obtained, is also important because individuals most commonly first seek help from a family member or friend (Angermeyer et al., 2001; Cabassa & Zayas, 2007). These findings taken together suggest that individuals who develop favorable injunctive norms as a result from receiving feedback from important others that encourages them to seek help are more likely to develop favorable intentions to obtain treatment.

In addition to injunctive norms, research studies have also explored the relationship between descriptive norms and the behavior of PHS. Descriptive norms relate to an individual’s perception of whether they believe important others engage or do not engage in the behavior themselves. Rickwood and Braithwaite (1994) examined predictors of PHS in a sample of Australian adolescents. Results of the study found that knowing someone who had sought mental health treatment was predictive of general PHS. However, when only those who were in emotional distress were examined, knowing someone who had sought counseling was no longer a significant predictor of engaging in treatment. These results suggest that descriptive norms likely play an important role in the development of subjective norms, and ultimately contribute to intentions to seek help. However, this relationship may be weakened during periods of
significant distress. Additionally, since the sample in Rickwood and Braithwaite (1994) consisted of Australian adolescents, it is questionable whether these results will generalize to college students in the United States. Since the current study is utilizing the TPB to explain the predictors of intentions to seek help in ROTC participants, it is important to review past studies that have incorporated the TPB to examine the relationship between subjective norms and intentions to seek help in college students.

Researchers exploring PHS through the lens of the TPB have generally opted to focus more on the influence of attitudes on intentions. As a result, there is significantly less research exploring the relationship between subjective norms and intentions to engage in mental health treatment. Further, the research that does exist frequently relies on single-item unstandardized measures (Britt et al., 2011, Smith, Tran, & Thompson, 2008), measures of stigma tolerance (Hartong, 2011), or measures that only assess for injunctive norms (Britt et al., 2011; Stecker et al., 2010). In perhaps the most significant study utilizing the TPB to examine the importance of subjective norms on intentions to seek help in college students, Choi (2008) found mixed support for the relationship between the constructs. Choi (2008) sampled the attitudes, subjective norms, PBC, and intentions to seek help of 497 undergraduate college students. In order to assess subjective norms, Choi created a scale based on the TPB as well as other commonly used PHS measures. This scale consisted of two subscales, one measuring Expectancy for Positive Norms (EPN) and the other Tolerance for Negative Norms (TNN). Results of the study found that EPN was positively correlated with intentions to engage in mental health treatment. However, the results failed to produce any kind of significant correlation between intentions and TNN. Additionally, EPN was not significantly correlated with TNN. Choi (2008) speculated that TNN was a poor measure of subjective norms, and additional data analysis supported this assumption. For example, Choi (2008) found that the TNN subscale was not able to differentiate between those who had sought treatment previously and those who did not, providing evidence of poor known groups validity. Despite these limitations, Choi (2008) provided some evidence for the importance of subjective norms in the development of intentions to seek help in college students.

Hartong (2011) similarly provided conflicting evidence in a doctoral dissertation utilizing the TPB to examine the effectiveness of an intervention at influencing PHS intentions in a sample of college students. Participants included in the study were 420 college students from a Midwestern University. Results of the study suggested that attitudes and PBC were significant predictors of intentions to engage in treatment for both treatment conditions. However, subjective norms were not a significant predictor of intentions for either the control or experimental groups. This is an important finding as it may provide evidence that subjective norms is not a relevant determinant for predicting college students intentions to seek help.

It is important to note that there were significant errors in how Hartong (2011) measured subjective norms that may partially confound these results. Hartong (2011) used the Stigma Tolerance subscale of the BAPS scale to assess for subjective norms. However, most researchers argue that attitudes fully mediate the relationship between stigma and intentions to seek help (Bathje & Pryor, 2011; Ludwikowski, Vogel, & Armstrong, 2009; Schaffer, Vogel, & Wei, 2006; Stecker et al., 2010). As a result, it is possible that Hartong’s (2011) use of a measure not intended to assess subjective norms, led to the non-significant findings. However, other researchers have also reported subjective norms as not being a significant predictor of intentions to engage in mental health treatment (Jarvis, 2002; Westerhof, Maessen, de Bruijn & Smets, 2008). While it appears that this is not a unique finding, the majority of researchers have found subjective norms to be a significant predictor of intentions (Christian & Abrams, 2004;
Christopher et al., 2006; Codd & Cohen, 2003; Kleinman et al., 2002; MacKenzie et al., 2004; Mo & Mak, 2009). Nevertheless, the results of the Hartong (2011) study partially validate the use of the TPB in predicting college students’ intentions to seek help, and provide evidence that attitudes and PBC may be better predictors of college students’ intentions to obtain mental health treatment than their subjective norms.

**Perceived Behavioral Control in College Students**

Despite the majority of college students having access to free mental health treatment (Blanco et al., 2008), there are a number of control beliefs that may limit college students’ perceived ability to seek psychological services. One significant control belief is that students are often unaware that counseling services are provided by their university. Studies have indicated that over one-half of all college students are unaware of the services available to them (Fouad et al., 2006; Henggeler, Harbin, & Sallis, 1982; Kahn, Wood, & Wiesen, 1999). Benedict, Aspler, and Morrison (1977) examined the factors that prevent college students from seeking mental health treatment and found that 86% of participants were unaware of where the counseling center was located. One important limitation of this study is that it was conducted in 1977, so it is possible that the results do not generalize to current college students. However, subsequent studies have replicated these findings. Kahn et al. (1999) performed a similar study and found that while the majority of students knew there was a counseling center at their university, few participants were familiar with the location of the center or the services provided.

Yorgason et al. (2008) reported similar findings in a study exploring the awareness of college counseling centers in distressed and non-distressed college students. Participants in the study were 266 undergraduate students enrolled in an introductory psychology course. All participants completed a web-based questionnaire that assessed for reported levels of distress, knowledge of psychological services, awareness of the services offered, and reported use of treatment. Results of the study indicated that students who reported higher levels of distress were more likely to be aware of and utilize the services offered. The results also suggested that the most common reason why students do not utilize services is that students perceive they lack the time necessary to obtain treatment, with the second most common explanation being lack of awareness of services. These results indicate that college students may be likely to possess unfavorable control beliefs related to uncertainty regarding the types of counseling services that are provided through their university, doubt regarding where the services are provided, and a perceived lack of time necessary to seek treatment. As a result of these control beliefs, college students may perceive that they have little control over the behavior of PHS, which may ultimately produce fewer intentions to engage in mental health treatment.

**Attitudes in the Military**

Service members often hold less favorable attitudes regarding psychological services than the general public. Shaffer et al. (2006) found that members of the military might be less likely to possess positive behavioral beliefs as they may be inclined to perceive treatment as ineffective. One proposed explanation for this perception is that soldiers may feel that a mental health practitioner is unable to relate to the unique experiences they acquire through service in the military (Visco, 2009). Service members may also be less likely to recognize situations where mental health treatment is warranted, as they often assume that mental health problems will resolve themselves in time, and believe that counseling is only for severe mental health concerns (Ouimette et al., 2011). Service members may also perceive a high level of risk involved in seeking counseling, thereby increasing the expected probability of a negative outcome. Consequently, service members may be more likely than the general public to hold
negative behavioral beliefs regarding mental health treatment and less likely to hold positive
behavioral beliefs regarding PHS (Britt et al., 2011; Shaffer et al., 2006). In turn these behavioral
beliefs result in a less favorable attitudes towards PHS.

Service members are often socialized early in their military careers in a way that results
in the formation of negative behavioral beliefs related to PHS (Knox & Price, 1995). Through
the process of organizational socialization service members are encouraged to adopt military
values, as those who do so successfully receive positive reinforcement from other members of
the military (Burns & Mahalik, 2001; Gruman, Saks, & Zweig, 2006; Louis, 1980; Van Maanen
& Schein, 1979). Additionally, researchers have speculated that young male service members
may be especially vulnerable to this socialization process as they are often in a critical period of
adolescent development and are beginning to form adult gender roles (Burns & Mahalik, 2001).
In general, military values place a high value on toughness, competitiveness, evading
vulnerability, and restriction of emotionality (Levant, 1997). These values, therefore, often lead
to the formation of negative behavioral beliefs, and less favorable attitudes towards PHS
amongst service members. For example, researchers have described how often service members
are reluctant to express emotions to male counselors for fear of coming across as homosexual.
This expected negative outcome of appearing homosexual can than serve as a negative
behavioral belief that leads to the formation of less favorable attitudes towards PHS (Berger et
al., 2005; Good et al., 1989). In other instances, service members may fear appearing weak if
they express emotions other than anger. As a result, they may develop a lack of intentions to
engage in treatment in order to avoid this perceived negative outcome expectation of perceived
weakness (Lorber & Garcia, 2010). Interestingly the values that are commonly reinforced in the
military overlap considerably with the values that define the masculine ideology, suggesting that
these two constructs are strongly related (Burns & Mahalik, 2001; Lorber & Garcia, 2010).

Traditional Masculine Ideology. Berger et al. (2005) defined the traditional masculine
identity, or traditional masculine ideology, as high rates of avoidance of feminine traits,
independence, aggression, focus on maximizing achievement, and restrictive affect. Members of
the military are more likely than the general public to identify with the traditional masculine
identity (Enloe, 1993). Researchers have argued that the values inherent in the traditional
masculine ideology are antithetical to PHS. For example, since a person who seeks mental health
treatment must be willing to admit personal weakness, this may be problematic for someone who
holds strongly to a masculine identity preaching strength and independence (Fischer & Turner,
1970). Several research studies have provided empirical evidence for a negative relationship
between the traditional masculine ideology and both attitudes towards PHS as well as utilization
of treatment (Berger et al., 2005; Good, Dell, & Mintz, 1989; Heimerdinger-Edwards, Hammer,
& Hubbard, 2011; Levant et al., 2009; Rochlen & O’Brien, 2002; Rochlen, Blazina, &
Ragunathan, 2002).

Berger et al. (2005) analyzed the relationship between traditional masculine identity and
attitudes towards PHS. The sample consisted of 155 men who lived in Palm Beach County,
Florida. Results of the study supported the hypotheses that attitudes towards PHS were
negatively related to traditional masculine ideology and gender role conflict. Further, attitudes
were more strongly related to traditional masculine ideology than gender role conflict. One
interesting finding was that older males tended to have more favorable attitudes than younger
males, a result that was contrary to what was expected. Berger et al. (2005) suggested that this
finding could be the result of men adhering less to the traditional masculine ideology as they age.
Good, Dell, and Mintz (1989) carried out a study with college students and found similar results. In this study 401 male undergraduate psychology students from a larger Midwestern University completed questionnaires looking at attitudes towards PHS and adherence to the traditional masculine ideology. Results indicated that 7.6% of the variance in attitudes towards PHS was explained by adherence to the traditional masculine ideology. Other researchers have found similar results when looking at adherence to masculine ideology and attitudes towards seeking career counseling in college students (Rochlen & O’Brien, 2002; Rochlen, Blazina, & Raghunathan, 2002). The results of this study, as well as similar studies, suggest that individuals who hold more strongly to the traditional masculine ideology are likely to have less favorable attitudes towards PHS. Since members of the military are more likely to adhere to the masculine ideology, it is not surprising that they also tend to hold less favorable attitudes towards mental health treatment.

**Gender Composition.** Researchers have speculated that another reason why service members tend to hold less favorable attitudes toward PHS than the general public is due to the gender composition that exists in the military. The vast majority of individuals who serve in the armed forces are male (Forneris et al., 2002), and numerous studies have found that men are less likely than women to hold favorable behavioral beliefs about the efficacy of counseling (Leong & Zachar, 1999; Oliver et al., 1999; Rones et al., 2005; Schomerus et al., 2009). Despite some mental health concerns such as substance abuse, suicide, sexual disorders, antisocial tendencies, and behavioral disorders being more prevalent amongst men than women (Levant, Wimer, Williams, Smalley, & Noronha, 2009), men are less likely to identify psychological concerns that may benefit from treatment (Ang, Lim, Tan, & Yau, 2004). Ang et al. (2004) suggested that men might also have less confidence in their counselor and in the effectiveness of psychological services, resulting in the development of fewer positive behavioral beliefs regarding treatment. As a result, men may be likely to develop less favorable attitudes about counseling.

While the vast majority of researchers have supported the notion that males are likely to hold less favorable attitudes regarding PHS, others have found contradicting evidence (Jackson, Kruczek, & Ægisdóttir 2011; Mackenzie et al., 2006; Westerhof et al., 2008). This has led several researchers to propose that it is not so much gender that is related to attitudes towards PHS, but rather the extent of adherence to the masculine ideology (Courtenay, 2000). This is supported by studies that have found that women who score high on scales measuring masculine ideology are also likely to hold less favorable attitudes towards mental health treatment (Magovcevic & Addis, 2005). As a result, it is likely that it is more adherence to the traditional masculine ideology rather than gender composition that results in service members having less favorable attitudes towards PHS.

**Career Ramifications.** Researchers have frequently described how service members commonly have less favorable attitudes towards PHS as a result of possessing behavioral beliefs regarding the negative outcome expectation of career ramifications. Possible career ramifications appears to be one of the most significant barriers that prevents service members from obtaining treatment during periods of distress (Fikretoglu et al., 2009; Gould et al., 2007; Langston et al., 2007; Rowan & Campise, 2006; Visco, 2009; Warner et al., 2008). Service members are highly motivated to advance in rank, and are thus likely to avoid engaging in behaviors such as seeking treatment that may result in losing security clearances or discharge from the military (Cozza et al., 2004). In addition to being reluctant to seek treatment on their own accord, service members are also hesitant to obtain psychological services after receiving a referral from a commanding officer (Gould et al., 2007). Reluctance to obtain mental health services is especially likely when
symptoms are severe, a finding that may be the result of service members believing the probability of discharge is high in times of significant symptom severity (Hoge et al., 2004; Visco, 2009). A number of studies have explored the relationship between fear of possible career ramifications and intentions to seek mental health treatment in service members.

Bray et al. (1992) examined barriers to PHS in Air Force personnel who had been diagnosed with a substance abuse problem. Results of the study found that 36% of service members believed that seeking treatment would result in career ramifications, and 60% believed that seeking services would result in some other type of disciplinary action. Approximately 43% of participants reported that their commanding officers would find out if they sought counseling, which in turn might lead to some type of damage to the service member’s career. The generalizability of this study is questionable as participants only came from Air Force personnel. Additionally, the results may not generalize to service members with other types of mental health disorders as the study only included participants with substance abuse problems. Despite these limitations, Bray et al. (1992) does provide evidence that a large percentage of service members believe that seeking mental health treatment would result in career ramifications.

Coolbaugh (1994) conducted focus groups with 100 spouses of service members who reported being victims of domestic violence. Participants expressed that they were reluctant to obtain treatment for problems related to domestic abuse because they were worried about damage to their service member partner’s career. A strength of this study is that it was conducted with spouses of service members. This provides a unique perspective as most studies look only at the beliefs held by service members. Furthermore, it strengthens the argument that seeking services will result in career ramifications as both spouses and service members share this perception. It is important to note that a significant limitation of the Coolbaugh (1994) study is that participants were only discussing PHS for issues related to domestic violence. Thus, spouses may have described barriers to treatment differently had the study explored other causes of PHS.

Rowan and Campise (2006) similarly explored the consequences service members face when deciding to seek mental health treatment. Rowan and Campise examined the records of 693 active duty service members in the Air Force who had sought treatment in an outpatient mental health clinic over a three-year period. Results indicated that 10% of those who obtained mental health treatment were discharged from the military, 4% were recommended for a change in career, and 13% were ordered to mandated treatment. Additionally, service members who were higher-ranking were more likely to self-refer to treatment. These results suggest that service members who obtain services do face actual career ramifications. However, it is important to note that service members were more likely to self-refer to treatment if they were higher ranking. This might be because service members who are higher in rank are not as worried about career ramifications, as they have already climbed the military ranks.

**Perceived Stigma.** The stigma related to mental illness and PHS often has vast and severe ramifications for service members with a psychological disorder. As a result, service members commonly develop behavioral beliefs regarding the expectation of stigma as a negative outcome resulting from obtaining mental health treatment. Fear of stigma related to PHS may be the most cited explanation for why service members have less favorable attitudes and fewer intentions to seek psychological services (Corrigan, 2004; Dingfelder, 2009; Fikretoglu et al., 2009; Friedman, 2004; Grieg & Bell, 2000; Hoge et al., 2006; Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001; Warner et al., 2008; Shaffer et al., 2006; Visco, 2009; Vogel et al., 2009). Wright et al. (2009) found that service members returning from deployment were likely to express reluctance to utilize psychological services for fear that others may view them as weak,
treat them differently, or lose confidence in the service member’s abilities. Mental health related stigma might be even more detrimental to the service member than the original presenting problem, forcing service members to seriously consider possible consequences before deciding to seek psychological services (Feldman & Crandall, 2007; Gould et al., 2007).

Mental health related stigma could also have detrimental effects on those members of the military who are in counseling. Corrigan (2004) found that stigma is one common explanation for premature termination from mental health treatment in the military population. Those service members who stay in treatment may find a diminished impact from psychological services, as the fear of stigma prevents them from seeking social support to aid in the treatment process (Hill, Johnson, & Barton, 2006). These research results suggest that military members may be disproportionately more likely to possess behavioral beliefs related to stigma as a negative outcome from PHS, which in turn results in the formation of less favorable attitudes towards obtaining mental health treatment.

The Department of Defense (DOD) made explicit the seriousness of stigma amongst veterans in 2009 when they listed mental health related stigma as one of the most difficult obstacles the armed forces and VA face in terms of the prevention and treatment of service members’ mental health. The importance of the fight against mental health related stigma became clear when the DOD launched a service wide anti-stigma campaign worth an estimated $2.7 million dollars in May of 2009 (DOD, 2007). Researchers have also devoted a significant amount of resources into exploring the impact of stigma on attitudes towards PHS, as well as its eventual role in influencing intentions to seek psychological services amongst service members. Specifically, researchers have analyzed the important role that public, personal and self-stigma play in shaping attitudes, and ultimately intentions, regarding PHS (Magovcevic & Addis, 2005).

Ludwikowski (2009) argued that two types of external stigmas, public and personal, interact to shape an individual’s self-stigma related to PHS. Public stigma is the negative beliefs about mental illness and PHS that are held in the general public. Personal stigma is similar to public stigma except that it refers only to those beliefs held by people that an individual interacts with on a consistent basis. Both public and personal stigmas are influential in shaping an individual’s self-stigma, which is the negative view of self that comes from accepting the presence of a mental illness and seeking treatment (Vogel et al., 2007). Vogel et al. (2009) expressed the importance of personal stigma in the development of the self-stigma, as important people in the individual’s life hold these beliefs. Since members of the military generally possess less favorable attitudes towards mental illness and PHS, new service members are likely to develop a personal stigma that is less favorable towards PHS. As a result, they are likely to develop a less favorable self-stigma towards engaging in mental health treatment. Service members thus appear to be in a social group that leads to the development of behavioral beliefs focused on stigma as an expected negative outcome from obtaining psychological services. Subsequently, these behavioral beliefs result in less favorable attitudes towards PHS, and ultimately lead to fewer intentions to seek psychological services (Gould et al., 2007; Smith et al., 2008; Vogel et al., 2009).

Some researchers have speculated that service members also face a unique type of stigma related to PHS, termed structural stigma. The 2007 Department of Defense (DOD) Task Force on Mental Health describes structural stigma as the stigma resulting from military policies that inhibit service member’s willingness or opportunities to seek mental health treatment (DODTFMH, 2007). One common example of structural stigma is a military policy that limits service members’ confidentiality by mandating that military psychologists notify commanding
officers when a service member seeks psychological services (Rowan & Campise, 2006). This loss of confidentiality is a major deterrent of seeking mental health treatment in the military population (Galvin, 1996). Confidentiality is further jeopardized by permitting officers’ access to mental health records. A service member’s medical file can be accessed for a number of reasons, including everything from security clearances to criminal investigation. Despite the lack of confidentiality that is rampant in the military, the importance of confidentiality in mental health treatment has been supported by previous research (Lindenthal & Turner, 1982; Howe, 1989).

Lindenthal and Turner (1982) found that 22% of civilian participants did not seek mental health treatment for fear of a loss of confidentiality. While this study did not directly look at a military sample, it is possible that the percentage would be even higher amongst service members who understand that a lack of confidentiality is required by current military policies. A study by Howe (1989) supports this claim, as he found that 60-95% of participants in a military sample would be concerned if they knew their medical records would be seen by others. Since members of the military are likely familiar with military policies limiting confidentiality, the results of the Howe (1989) study add credence to the behavioral beliefs of expecting career ramifications and stigma as negative outcomes of PHS. Since civilians are protected by confidentiality, they are less likely to develop these behavioral beliefs. As a result, structural stigma frequently leads service members to possess less favorable attitudes and fewer intentions to seek mental health treatment than civilians.

Service members are likely to hold a number of behavioral beliefs that may result in the formation of less favorable attitudes towards PHS. These behavioral beliefs include negative outcome expectations such as possible mental health related stigma (Corrigan, 2004) and career ramifications (Bray et al., 1992). Additionally, service members may be less likely to have some of the behavioral beliefs focused on positive outcome expectations that are found in the general public. For example, research suggests that service members may be less likely to perceive psychotherapy as effective (Shaffer et al., 2006). Service members are also more likely to adhere to military values and the traditional masculine ideology, which likely results in the formation of behavioral beliefs that are unfavorable towards PHS (Berger et al., 2005). The summation of service members’ behavioral beliefs results in the formation of less favorable attitudes towards PHS than those found in the general public. As a result, these attitudes contribute to fewer intentions to seek help amongst service members. It is however important to note that service members as a group do have positive attitudes towards PHS, and that it is only when compared to the general public that these attitudes appear as less favorable towards engaging in mental health treatment (Britt et al., 2011).

Several researchers have supported the importance of attitudes in predicting intentions to seek psychological services, as well as the actual behavior of PHS. Britt, Bennett, and Crabtree (2011) utilized the TPB to predict intentions to seek help in a sample of 760 National Guard and Reserve Component service members. Results of the study indicated that negative beliefs towards PHS were correlated with attitudes towards mental health treatment. Additionally, attitudes towards psychological services was the only TPB determinant which accounted for unique variance in intentions to engage in treatment. Kim, Britt, Klocko, Riviere, and Adler produced similar findings, reporting that attitudes was a significant predictor of obtaining mental health treatment. Specifically, results of the study indicated that service members who endorsed less favorable attitudes were 40% less likely to have obtained mental health treatment in the three months prior to the study. Stecker et al. (2010) reported similar results in a study utilizing the TPB to predict PHS in a group of 150 members of the Army National Guard from a rural
southern state. Results of the study found that attitudes was a significant predictor of intentions, and that attitudes when combined with PBC accounted for 41% of the variance in service members’ intentions to seek help. Taken together, these results suggest that it is important to have a clear understanding of the behavioral beliefs with lead to the formation of service members’ attitudes, as attitudes make a significant impact on service members’ intentions to seek help as well as actual utilization of services.

**Subjective Norms in the Military**

Previous research has supported the positive relationship that exists between subjective norms and intentions to seek mental health treatment amongst service members (Adler et al., 2008; Britt et al., 2006; Pietrzak et al., 2009). Britt et al. (2006) investigated the predictors of seeking treatment amongst 3,000 service members. Measures included in the study were designed to assess psychological distress, whether service members had sought treatment and through what source, and the perceived stigma related to seeking help. Results indicated that those veterans who sought help reported greater levels of perceived support from both noncommissioned officer leadership and family. Pietrzak et al. (2009) reported similar findings when examining the impact of social support on intentions to engage in mental health treatment in a sample of 272 reservist and National Guard OEF/OIF veterans. Results of the study indicated that perceived social support from one’s military unit predicted increased likelihood of engaging in treatment. Additionally, the results also suggested that most service members do not perceive their unit as being supportive of PHS. These results stress the importance of perceived support from family members, the military unit, and commanding officers. However, as evidenced in the findings of Pietrzak et al. (2009), service members may develop normative beliefs from their military unit that are not favorable towards PHS. As a result, these normative beliefs may lead to the formation of less favorable subjective norms towards engaging in mental health treatment.

Service members are also likely to develop normative beliefs from military leadership that are not supportive of PHS. Members of the military commonly perceive that commanding officers are likely to disapprove of PHS. However, research suggests that the majority of commanding officers support service members seeking treatment (Adler et al., 2008; Porter & Johnson, 1994). Adler et al. (2008) explored the training that 172 international military leaders obtained in managing unit stress. Results of the study indicated that military leadership was primarily supportive of PHS. Further, the majority of military leaders used supportive statements such as “It is the best/right/smart/responsible/reasonable/sensible thing to do” in regards to obtaining treatment during periods of distress (Adler et al., 2008, p. 15). Military leaders in the study also described how they had greater respect for service members who were courageous enough to seek help. These results provide evidence that military leaders believe that individuals should seek counseling during times of distress. However, it is important to note that one important limitation for the Adler et al. (2008) study is that since the sample examined international military leaders, it is possible that these results do not generalize to military leadership within the United States. Fortunately, these results have been produced in other studies focusing on commanding officers in the United States.

Porter and Johnson (1994) explored the perceptions of service members seeking treatment held by commanding officers in the U.S. Navy and U.S. Marine Corps. Results of the study suggested that commanding officers largely view service members who seek psychological services positively. However, commanding officers viewed service members who had sought inpatient psychiatric care, taken psychotropic medication, received treatment for substance
abuse, or who had been placed on limited duty for mental health reasons more negatively than those service members who sought mental health treatment for other reasons. These results suggest that for the majority of presenting problems, military leadership is supportive of service members engaging in mental health treatment.

One important limitation of the Porter and Johnson (1994) study is that the researchers did not include a control condition. Instead they analyzed whether the commanding officers’ ratings of service member’s competence differed significantly from a neutral point on a 5-point Likert scale. Most ratings were at or around the neutral point, and it is possible that commanding officers could have rated service members who did not seek counseling higher on the scale. Since the study did not include a control group, it is uncertain as to how the officer’s perceptions of those service members who sought treatment may have varied from service members who did not obtain psychological services. Nevertheless, the results of the study indicate that commanding officers view service members who seek treatment positively. Despite the research of Adler et al. (2008) and Porter and Johnson (1994) that suggests military leadership is likely to support service members obtaining mental health treatment, service members are still likely to develop unfavorable normative beliefs as it is their perception of military leadership support that is important (Adler et al., 2008; Porter & Johnson, 1994).

Service members are likely to develop a number of normative beliefs from important reference groups that will be summed to form their subjective norms regarding PHS. Research suggests that some of these normative beliefs, such as those from one’s military unit and military leadership, are likely to lead to the development of less favorable subjective norms (Adler et al., 2008; Porter & Johnson, 1994). As a result, these less favorable subjective norms are likely to contribute to fewer intentions to seek mental health treatment amongst service members.

**Perceived Behavioral Control in the Military**

There are a number of control beliefs that service members may have that result in decreased PBC regarding PHS. These control beliefs frequently center around perceived logistical barriers such as difficulty in getting time off work during the day to seek help, challenges associated with scheduling appointments, uncertainty regarding the types of services that are available, lack of knowledge regarding where to go for help, and lack of adequate transportation (Burnam et al., 2008; Kim et al., 2010; Ouimette et al., 2011; Sayer et al., 2009; Schell & Marshall, 2008; Slone & Friedman, 2008; Wright, 2009). These perceived barriers are commonly referred to as “access barriers” or “institutional barriers” in the military psychology literature (Sayer et al., 2009).

Hoge et al. (2004) explored barriers to care in a sample of service members prior to deployment (n=2530), and a sample of service members 3 to 4 months after returning from combat duty in Iraq or Afghanistan (n=3671). Results provided evidence for a number of salient control beliefs. Specifically, being unaware of where to seek help, the perception of it being difficult to schedule an appointment, and the belief that treatment would be financially expensive all served as control beliefs that resulted in lower PBC towards PHS. Results of this study identified relevant control beliefs that may lead service members to have lower perceived control over obtaining mental health treatment. As a result, service members may be less likely to have intentions to engage in the behavior of PHS.

Britt et al. (2008) identified additional salient control beliefs in a study of 3,648 active duty service members examining how the relationship between stressors and psychological symptoms is moderated by stigma and barriers to care. Results of the study indicated that uncertainty regarding where to obtain services, lack of sufficient transportation, perceived
difficulty in scheduling an appointment, problems getting the necessary time off work, and the perception that mental health treatment would be too financially expensive all served as important control beliefs regarding PHS. One important limitation of the Britt et al. (2008) study is that the sample consisted of only active duty service personnel working on a military base. As a result, the findings from this study may not generalize to other military personnel, such as reservists or those enrolled in an ROTC program.

Stecker et al. (2010), however, found similar results when examining the impact of PBC on intentions to seek help in a sample of 150 OIF National Guard reservists. Results of the study found that the control belief of perceived difficulty finding transportation was highly negatively correlated with intentions to engage in mental health treatment. The results of the Stecker et al. (2010) study suggest that reservists similarly possess control beliefs that relate to logistical challenges associated with seeking treatment while maintaining employment as a member of the military.

Other researchers have not found these control beliefs to be as prevalent in the veteran population. Ouimette et al. (2011) examined barriers to care amongst 490 VA patients who had received a PTSD diagnosis by a VA provider, but who were not receiving psychological services. Participants included in the study ranged in age from 18-69 and were Vietnam era veterans or later. Participants were asked to rate the degree to which various barriers prevented them from obtaining treatment. Results of the study found that participants reported stigma-related barriers as “slightly to moderately” hindering them from obtaining treatment. However, participants reported a number of logistical barriers as “not at all” to “slightly” preventing them from seeking help. These logistical barriers included difficulty finding transportation, uncertainty regarding the services that were available, financial concerns, conflict with work schedule, and length of time before first appointment. These results suggest veterans utilizing VA services may not be as likely as active duty service members to possess control beliefs that lead to diminished PBC regarding PHS. This is an important finding as it suggests that veterans may hold different control beliefs than active duty service members due to their contrasting membership with the military and type of services offered.

Despite the findings of Ouimette et al. (2011), it appears that there are a number of common control beliefs that may limit a service member’s PBC regarding PHS. These control beliefs include problems getting time off work to seek help, difficulty scheduling appointments, uncertainty regarding available services, lack of knowledge regarding where to go for help, financial concerns, and difficulty obtaining transportation (Britt, 2008; Hoge, 2004; Stecker et al., 2010). These control beliefs likely lead to service members developing a diminished PBC regarding PHS.

Diminished perceptions of control regarding the behavior of PHS are likely to impact service members in one of two ways. Low PBC is likely to influence intentions directly. For example, a service member’s uncertainty regarding the types of counseling services offered may lead to fewer intentions to engage in treatment. However, remembering that PBC also directly influences the probability of performing a behavior, there is a second important way that this determinant may impede PHS. A service member may have favorable intentions to engage in treatment because of positive attitudes and subjective norms, but may still not seek help because they have low PBC regarding PHS. For example, a service member may believe that mental health treatment is expensive and thus not seek help despite favorable intentions. Since service members are likely to possess a number of control beliefs that result in a diminished sense of
PBC, they may in turn be less likely to form intentions to engage in PHS and less likely to perform the behavior of PHS.

**Behavioral Intentions**

Fishbein and Ajzen (2010) define behavioral intention as the readiness to perform a target behavior. Individuals are likely to have greater intentions to engage in a behavior when they have favorable attitudes and perceived norms, as well as greater PBC. The TPB goes on to suggest that intentions to perform the behavior are the best predictor of actual behavioral engagement. The greater an individual’s intentions to engage in the behavior, the more likely they are to perform the behavior. However, as noted previously, PBC acts as a moderator of the intention-behavior relationship. Individuals may lack perceived or actual control over the behavior if they lack the skills necessary to perform the behavior, or face environmental constraints. In these instances, intentions are likely to be a poor predictor of behavior. Intentions are thus a better predictor of behavior when the behavior of interest is under the volitional control of the individual and when PBC is high (Fishbein & Ajzen, 2010).

Researchers have found empirical support for the influence of intentions on actual engagement in the behavior. Cooke and French (2008) reviewed attendance at health-related programs, and found that intentions shared a correlation of .42 with the actual behavior of attending the program. Additional evidence was provided in a meta-analysis by Sutton (1998) who reviewed studies utilizing the TPB to explain health-related behaviors. Results of the meta-analysis indicated that attitudes, subjective norms, and PBC accounted for 40-50% of the variance in intentions, and intentions explained 19-38% of the variance in performing the health-related behavior. These results provide clear support for the role of behavioral intentions in predicting future behavior.

**Limitations of Previous Psychological Help-Seeking Research**

There are a number of noteworthy methodological limitations that are commonly found in previous studies examining PHS. It is important to understand these limitations, as the methodology of the current study is designed to improve upon these flaws. One significant limitation of previous studies exploring PHS is the lack of adherence to a particular theory. Frequently researchers explore variables of interest, without any theoretical basis for identifying how constructs might be related (Willis & Gibbons, 2009). Researchers then report their findings in terms of significant relationships between constructs, without placing these constructs into a larger model that explains actual engagement in mental health treatment (Kim et al., 2011). Even when researchers do claim to be utilizing a theory to guide their research, important elements of the theory are often not accounted for. For example, Smith et al. (2008) incorporated the TPB into their study exploring predictors of PHS, however, they did not include measures of subjective norms or PBC. While results of the study did conclude that attitudes towards PHS was a significant predictor of intentions to seek help, they were not able to conclude anything further in terms of support for the TPB model.

In light of this common limitation, the current study will explore PHS intentions through the framework of the TPB. By incorporating a theoretical model, the primary researcher will be able to discuss more fully how the variables of interest interact to predict PHS intentions. Additionally, the results of the study can then be used to support partial elements of the TPB or the model in its entirety. Utilizing a TPB framework also prevents a flawed method of data analysis where relationships between constructs are discussed only after the results of the study are collected (Willis & Gibbons, 2009). Fortunately, some researchers have previously analyzed PHS behaviors through a TPB framework (Britt et al., 2011; Hartong, 2011; Smith et al., 2008;
Stecker et al., 2010). However, the results of these studies are questionable due to significant limitations in how they measured the TPB constructs.

Researchers have frequently utilized measures of critical variables that are of questionable validity and reliability when examining PHS. Vogt (2011) examined the measures of previous studies that explored the impact of unfavorable beliefs on obtaining mental health treatment. Results of the study indicated that seven out of the twelve studies reviewed utilized measures of questionable validity. The researchers in these seven studies incorporated measures that had been adapted from previous studies, but did not report on the psychometric properties of these new measures. Failure to report the psychometric properties of these new measures, seriously calls into question the validity of these studies’ results. Even when psychometric properties are reported, researchers commonly rely on brief measures of the variable that may fail to completely measure the construct. For example, Britt et al. (2011) measured attitudes towards PHS with a single item, “Overall, what is your current attitude towards seeking treatment for a potential psychological problem from a mental health professional (e.g. psychiatrist, psychologist, social worker,) were you to develop a problem?” (Britt et al., 2011, p. 88). While this item is designed to measure participants’ attitudes towards PHS, it is unlikely that a single item can be sufficient in assessing attitudes due to the multidimensionality of the construct (Ægisdóttir & Gerstein, 2009).

Researchers relying on the TPB to predict PHS have also commonly incorporated measures that fail to assess important constructs as they are defined by Ajzen and Fishbein (1981). For example, Britt et al. (2011) incorporated items that appear to examine injunctive norms when measuring subjective norms, but failed to include items assessing descriptive norms. For example, one item included in the measure of subjective norms was “Most people who are important to me would think I should seek treatment if I were having a psychological problem” (Britt et al., 2011, p. 88). This item appears be a valid measure of injunctive norms, as these are an individual’s belief that important others think a behavior should or should not be performed. However, Britt et al. (2011) failed to include a measure of descriptive norms, as the scale did not assess for participants’ perception of whether they believe these important others engage or do not engage in mental health treatment. As a result, the finding of a non-significant relationship between subjective norms and intentions found in the study may be the result of an inadequate measure of subjective norms.

Similarly, researchers utilizing the TPB in PHS research have used established scales that often do not define the TPB constructs as they were intended by Ajzen and Fishbein (1981). For example, previous researchers have measured subjective norms with stigma related measures. Hartong (2011) measured subjective norms with the Stigma Tolerance subscale from the BAPS (Ægisdóttir & Gerstein, 2009). Since most researchers have found that attitudes mediates the relationship between stigma and intentions to seek help, it is clear that this is an invalid way to measure subjective norms.

Researchers have also frequently relied upon the Attitudes Toward Seeking Professional Psychological Help scale (ATSPPH; Fischer & Turner, 1970) to measure attitudes towards seeking mental health treatment (Al-Darmaki, 2003; Berger, Levant, McMillan, Kelleher, & Sellers, 2005; Ludwikowski, Vogel, & Armstrong, 2009; Shaffer, Vogel, & Wei, 2006; Smith, Tran, & Thompson, 2008). While a review of the attitudes regarding PHS literature will likely provide evidence of the ATSPPH as being one of the most commonly utilized scales to assess attitudes, it is important to note that some items on this scale directly measure intentions. For example, item 25 “At some future time I might want to have psychological counseling” (Fischer
PHS in ROTC Students

& Turner, 1970, p. 82), is most closely a measure of intentions to seek help. This is an important limitation of using the ATSPPH, as the relationship between attitudes and intentions will likely be inflated due to including intention items in the measure of attitudes. The common use of the ATSPPH, in conjunction with this noteworthy limitation, may lead to an inflated relationship between these constructs in the literature. However, since researchers utilizing other measures have found similar evidence for the importance of attitudes towards PHS on intentions to seek help (Kleinman, Millery, Scimeca, & Polissar, 2002; Stecker et al., 2010; Vogel & Wester, 2003; Vogel et al., 2005), it is unlikely that this relationship is only the result of this measurement limitation.

The current study will attempt to improve upon these methodological limitations. The study will rely on the TPB to provide a model to explain the critical variables in predicting PHS. Results of the study will then be discussed in relation to this model, and a discussion of the degree of empirical support for the model will be provided. When measuring the determinants of the TPB, measurements will be used that are created to be in direct alignment with the constructs as they are defined by Fishbein and Ajzen (2010). The study will also make sure to improve upon previous methodological issues by assessing for both injunctive and descriptive norms when measuring subjective norms, and including a measurement of attitudes that is both complete enough to capture the construct but does not include a measure of intentions. A more thorough review of the exact measures included in the current study is provided in the methods section.

**Previous Counseling Experience**

Fishbein and Ajzen (2010) described how, in theory, attitudes, subjective norms, and PBC should completely mediate the relationship between past behavior and intentions. For example, an individual having previously sought mental health treatment will likely influence their intentions to seek help, but only as a result of the impact of this past counseling on the three determinants. In this scenario, an individual may develop more or less favorable attitudes as a result of engaging in counseling previously, which will in turn influence intentions accordingly. However, a number of researchers have found that the impact of past behavior on intentions is not fully mediated by the predictors in the TPB (Ajzen, 1991; Bagozzi, 1981; Conner & Armitage, 1998; Fredricks & Dossett, 1983; Ouellette & Wood, 1998). Abraham (2003) found that attitudes, subjective norms, and PBC accounted for 41% of the variance in intentions to engage in exercise over a two-week period. However, when they included past exercise behavior as a predictor variable, they were able to explain 51% of the variance in intentions to exercise. Similar results have been reported in meta-analyses studying condom use (Albarracin et al., 2001), exercise, diet, smoking cessation, and gambling (Rise, Sheeran, & Hukkelberg, 2010; Sandberg & Connor, 2005). In fact, Fishbein and Ajzen (2010) themselves report that past behavior consistently accounts for an additional 10% of the variance in intentions. This finding clearly suggests that researchers utilizing the TPB model should consider including a measure of past behavior.

Including past behavior as an additional predictor variable of intentions appears to be especially important for studies exploring PHS. Researchers have consistently found that engaging in counseling previously influences attitudes towards PHS and intentions to engage in treatment (Halgin, Weaver, Edell, & Spencer, 1987; Kim, 2007; Vogel, 2003; Ægisdóttir & Gerstein, 2009). It will therefore be crucial for the current study to include a measure of past engagement in mental health treatment, as it is possible that this variable can account for unique variance in intentions beyond the three TPB determinants. Questions regarding previous
counseling experience will be included in the demographics section, and previous counseling experience will be entered into the regression model as a predictor variable for intentions. Including previous counseling experience as an additional predictor variable in the current study will likely help to explain a greater degree of variance in ROTC students’ intentions to seek help.
Appendix K

Help Seeking Propensity and Intent Subscale Overlap

<table>
<thead>
<tr>
<th>Help Seeking Propensity Subscale</th>
<th>Intent Subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I believed I were having a mental breakdown, my first inclination would be to get professional attention</td>
<td>If I believed I were having a serious problem, my first inclination would be to see a counselor.</td>
</tr>
<tr>
<td>I would want to get professional help if I were worried or upset for a long period of time.</td>
<td>I would see a counselor if I were worried or upset for a long period of time.</td>
</tr>
<tr>
<td>If good friends asked my advice about a psychological problem, I might recommend that they see a professional.</td>
<td>If a good friend asked my advice about a serious problem, I would recommend that he/she see a counselor.</td>
</tr>
<tr>
<td>I would willingly confide intimate matters to an appropriate person if I thought it might help me or a member of my family.</td>
<td>I would be willing to confide my intimate concerns to a counselor.</td>
</tr>
</tbody>
</table>