

TELL US HOW YOU REALLY FEEL:  
USING THE IMPLICIT ASSOCIATION TEST TO MEASURE ATTITUDES  
TOWARDS SEEKING PSYCHOLOGICAL HELP

A THESIS

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For too long we have swept the problems of mental illness under the carpet... and hoped that they would go away. —Richard J. Codey

## **Chapter One**

### **Introduction**

Research on psychological help-seeking has revealed that as little as one-third of psychologically distressed individuals seek help from mental health professionals (Andrews, Issakidis, & Carter, 2001). Some of the public may perceive counseling and psychotherapy as humiliating, invasive, and overall risky (Kushner & Sher, 1989). Past research has shown that the majority of the general public views counseling as the final resort after all other attempts to cope with their difficulties have failed (Hinson & Swanson, 1993). Furthermore, even though research has demonstrated that psychotherapy can help lower distress, and that refusal to seek psychological help can cause significant negative consequences, this harmful refusal to seek psychological services still exists (Bergin & Garfield, 1994). Such resistance against seeking help is a serious issue given the demonstrated helpfulness of counseling and psychological services (Bergin & Garfield, 1994).

There are many reasons why people may be hesitant to seek psychological help. One reason is the stigma surrounding those who seek help (Vogel, Wade, & Hackler, 2007; Vogel, Wester, & Larson, 2007; Vogel, Wester, Wei, & Boysen, 2005) and questions surrounding the work and qualifications of mental health professionals (Corrigan, 2004; Steir & Hinshaw, 2007). This stigma has consequences that go beyond the avoidance of help-seeking (Steir & Hinshaw, 2007). Because of the negative connotations associated with seeking psychological help, those who seek help often experience lower self-esteem and encounter reduced social opportunities (Corrigan, 2004). For example, if a person seeking psychological help is labeled as “crazy,” he or she may be shunned by others and thus denied healthy social interaction (Corrigan, 2004). The consequences of being labeled and the resulting denial of societal interaction can severely inhibit the recovery and mental health improvement normally attained through counseling (Corrigan, 2004; Steir & Hinshaw, 2007). Client labeling can cause a vicious cycle of stigmatization, resulting in increased need for psychological help.

Individuals are not always willing to tell the truth about a topic when it carries a stigma, is kept private, or is socially charged (Goldstein, 1960). This fear of telling their “true” beliefs can lead individuals to provide a socially acceptable answer or response to an explicit question (Goldstein, 1960). The psychological term for when people answer in a way that is inconsistent with their own beliefs but in a manner that is considered socially acceptable has been labeled “social desirability” (Goldstein, 1960). Social desirability refers to when people answer positively or congruently with society’s preferred response even when the individual may not necessarily feel or behave in a way that is congruent with society’s preferred response (Goldstein, 1960). For example, past

research has found that traditionally measured attitudes are often different than actual attitudes and actions (Greenwald & Banaji, 1995). Because participants often give an answer congruent with what they believe is socially desirable rather than expressing their “true” attitudes, direct assessments, or “explicit” measures may fail to accurately measure underlying or true attitudes (Greenwald & Banaji, 2005). Explicit measures are extremely vulnerable to a social desirability bias because the purpose of the direct assessment is often obvious to participants. Because of this vulnerability, social psychologists have explored a different approach to measuring attitudes: the implicit attitude. In their book “Predicting and Changing Behavior,” Fishbein and Ajzen (2009) wrote:

These ideas lead to the conclusion that prejudice was still present but that standard attitude scales—which measure explicit stereotypes and prejudice— were incapable of capturing the subtle implicit nature of contemporary prejudice. Investigators therefore turned to implicit measures of prejudice under the assumption that such measures are not subject to social desirability biases and can capture acknowledged negative sentiments (p.13).

Fishbein and Ajzen (2009) alluded to how the combined effects of social desirability and unconscious thoughts have led researchers to question whether direct, explicit assessments of attitudes and cognitions can accurately predict behavior (Goldstein, 1960; Egloff & Schmuckle 2002; Greenwald & Banji, 1995; Greenwald, McGhee, & Schwarz, 1998; Rosenthal & Rubin, 2010). While Fishbein and Ajzen’s concerns bear on many topics, they are certainly of interest to this study’s major focus (i.e., attitudes toward seeking professional help for mental health issues). Fishbein and Ajzen mention in the previous quote that researchers have turned to hidden or “implicit”

measures to circumvent concerns of social desirability and unconscious bias. Implicit attitudes are judgments or evaluations automatically created outside of a person's conscious awareness. The Implicit Association Test measures these unconscious and automatic evaluations (Greenwald, Nosek, & Banaji, 2003).

Research has shown that sometimes individuals may not be consciously aware of their true beliefs and cognitions (Dijksterhuis, 2004; Greenwald & Banaji, 1995). These unconscious beliefs and cognitions can unknowingly influence thoughts that affect individuals behaviors, attitudes, self-esteem, and stereotypes (Greenwald & Banaji, 1995; Greenwald, McGhee, & Schwarz, 1998; Wegner, Ansfield, & Pilloff, 1998).

Many studies have examined attitudes towards seeking psychological help, but they have all used direct, explicit measures to assess attitudes towards seeking help from mental health professionals (e.g., Cepada-Benito & Short, 1998; Constatine, 2002; Cramer, 1999; Deane & Todd, 1996; Fischer & Turner, 1970; Fisher & Farina, 1995; Kelly & Achter, 1995; Kushner & Sher, 1989; Meyer, 2001; Vogel & Wester, 2003; Ægisdóttir & Gerstein, 2009). However, because direct measures are subject to social desirability along with both conscious and unconscious biases, these studies may overestimate participants' psychological help-seeking attitudes (Steir & Hinshaw, 2007). Because of this, researchers (i.e., Steir & Hinshaw, 2007) have called for a method to measure the implicit and unconscious attitudes towards seeking psychological help. Only one study to date has been performed to measure the implicit stigmatization of those with mental illness (Teachman et al., 2006). No studies have used an IAT to measure the public's willingness to seek psychological help and their belief in the expertness of

psychological services. Combining the IAT with an explicit measure should provide a more accurate measure of overall attitudes towards seeking psychological help.

### **Statement of Problem**

This study attempts to measure both implicit and explicit attitudes toward seeking psychological help. It is anticipated that because explicit attitudes are prone to social desirability and unconscious biases, the IAT results will demonstrate a more negative view of psychological help-seeking. More specifically, through the IAT individuals will report that greater stigma is attached to seeking psychological services, will have less intention to seek psychological help, and will be less likely to believe in the expertness of psychological professionals. Finally, it is expected that the correlations between the implicit and explicit attitudes will be low. Such a finding would be consistent with prior research that has compared implicit and explicit scores.

## **Chapter Two**

### **Literature Review**

There is a large amount of research focused on people's explicit attitudes towards seeking psychological help. Much of this literature focuses on how explicit attitudes towards seeking psychological services vary as a function of different cultural aspects and ethnicities (Atkinson & Gim, 1989; Barksdale & Molock, 2009; Faye, 2005; Price & McNeill, 1992; Solberg, 1994; Sheikh & Furnham, 2000; Snider, 2003; Tata & Leong, 1994). For example, in the Asian-American culture, students who were more acculturated to the mainstream American culture were more likely to see the need for psychological help, more tolerant of the stigma attached to seeking such help, and more open to seeking counseling compared to those less acculturated to the mainstream U.S. culture (Atkinson & Gim, 1989). Another study revealed that African American college students were more likely to seek psychological help if their families had positive attitudes towards seeking psychological help (Barksdale & Molock, 2009). A study by Faye (2005) found that a combination of racial discrimination for ethnic groups and the stigma attached to mental illness doubled the impediments that keep minority group members from seeking help.

Other research indicated that among American Indians, those who were more committed to their native culture were less open to seeking help compared to those less committed to the native culture (Price & McNeill, 1992). British Asian participants from the United Kingdom were also found to be influenced by cultural beliefs regarding their willingness to seek help (Sheikh & Furnham, 2000). Snider found that collectivism and attitudes towards counseling among ethnic Chinese, Australians, and Americans were related to their willingness to seek help (2003). Other researchers found that cultural values, individualism and collectivism, social support, and social network orientation were all significant predictors of help-seeking among Chinese Americans (Tata & Leong, 1994). A study by Rickwood, Deana, and Wilson (2007) found that ethnic minority young men tended to be the least likely to seek psychological help.

Past research also focused on the influence gender has on seeking counseling (Blazina & Watkins 1996; Good & Wood 1995; Lane & Addis, 2005; Robertson & Fitzgerald, 1992). Findings reveal a general trend such that women are often more open and willing to seek psychological services compared to men (Fischer & Turner, 1970; Good, Dell, & Mintz, 1989; Joinson, 1988; Komiya, Good, & Sherrod, 2000; Leong & Zachar, 1999; Rickwood, Deane, & Wilson, 2007; Ægisdóttir & Gerstein, 2009). For example, Blazina and Watkins found that male gender role conflict was significantly related to negative attitudes towards seeking counseling (1996). Another group of researchers found that traditional attitudes about the male gender role and concern about expressing emotion were significantly related to attitudes towards seeking help (Good, Dell, & Mintz 1989). Johnson (1988) found that compared to men, women were more tolerant of the stigma related to seeking help, more willing to recognize the need for help,

and more open to sharing problems. Other researchers demonstrated that masculinity was associated with negative attitudes towards seeking psychological help (Robertson & Fitzgerald, 1992). Furthermore, researchers have found that the male perception of the stigma associated with counseling, discomfort with sharing emotions, and lower distress accounted for 25% of the variance in attitudes towards help seeking (Komiya, Good, & Sherrod, 2000). Using the BAPS scale, Ægisdóttir & Gerstein (2009) found that women expressed greater intent to seek psychological services, greater tolerance of the stigma attached to seeking psychological services, and expressed greater belief in the expertness of psychologists than men.

In addition to gender, previous research has demonstrated that those with past therapy experience are more likely to seek psychological help (Fischer & Cohen, 1972) than those without such experience. Also, those with past experience report more positive attitudes toward seeking help than those who do not have this experience (Fischer & Farina, 1995; Fischer & Turner, 1970; Kelly & Achter, 1995; Lopez, Melendez, Sauer, Berger, & Wyssman, 2003; Price & McNeil, 1992; Tata & Leong, 1994; Vogel & Wester, 2003, Ægisdóttir & Gerstein, 2009).

Kelly and Achter (1995) found that self-concealment was related to less favorable attitudes toward seeking psychological and with higher help seeking intentions. A group of researchers found that outcome expectations and risks of disclosing emotions were related to attitudes surrounding seeking psychological help (Vogel et al., 2005). Research has shown that seeking help is related to problem severity, such that less social support can lead to higher distress, and that self-concealment is more important than relief from distress (Cramer, 1999). A similar result was found by Hinson and Swanson (1993)

where problem severity and self-concealment influenced willingness to seek psychological help. Other variables that significantly influence attitudes towards seeking help include social class and religion (Fischer & Coehn, 1972). Furthermore, Kushner and Sher (1989) found that fear of treatment was related to avoidance of counseling and therapy.

Despite these studies indicating factors that hinder or enhance individuals' attitudes toward and willingness to seek help, all of these studies have relied on direct explicit assessments of these constructs. In these studies researchers have typically used the brief, 10-item version of Fischer and Turner's Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPH; Fischer & Farina, 1995). Some have used the more recently published BAPS (Ægisdóttir & Gerstein, 2009). Given the propensity for responses being subject to social desirability bias and the stigma attached to seeking psychological help, one may question whether these explicit measures can accurately predict people's actual psychological help-seeking intentions.

There are several reasons one may choose to use the BAPS scale instead of the ATSPPH scale (Ægisdóttir & Gerstein, 2009) to explicitly measure psychological help seeking attitudes and intentions. The BAPS scale is more current compared to the ATSPPH scale which uses more outdated language (Ægisdóttir & Gerstein, 2009). In addition, the 10-item ATSPPH scale fails to measure a significant issue regarding attitudes towards seeking psychological help—the stigma attached to receiving mental health services (Ægisdóttir & Gerstein, 2009). Stigma is believed by many researchers to be a main reason why many individuals will not seek psychological help (Vogel, Wade,

& Hackler, 2007; Vogel, Wester, & Larson, 2007; Vogel, Wester, Wei, & Boysen, 2005). The BAPS includes a measure of stigma as one of its three dimensions.

The BAPS has three subscales that were created by the use of factor analyses: Intent, Stigma Tolerance, and Expertness. The BAPS' factorial validity was supported in two studies by the use of Confirmatory Factor Analyses (Ægisdóttir & Gerstein, 2009). The BAPS has good test-retest reliability ( $r > .70$ ) and support has been found for its convergent validity through its high correlations ( $r = 0.83$ ) with the ATSPPH scale (Ægisdóttir & Gerstein, 2009). While both the BAPS and the ATSPPH may accurately assess conscious and explicit attitudes towards seeking help, they are unable to measure the unconscious and implicit aspect of attitudes (Greenwald & Banaji, 1995.) Therefore, in the present study an implicit measure of attitudes towards seeking psychological help was developed using the three dimensions represented on the BAPS.

Despite the utility of the BAPS and the ATSPPH scales for measuring explicit attitudes towards seeking psychological help, questions remain about their susceptibility to bias and unconscious attitudes. Bessenhoff and Sherman (2000) used the IAT to measure implicit and explicit attitudes towards people who are obese and found that when using explicit measures, there were no biases reported against those who were perceived as obese, even though implicit measures found a significant bias. This study demonstrates that explicit measures may not measure hidden and implicit biases, perhaps due to social desirability and an unconscious bias created by cultural influences.

In order for researchers to account for social desirability bias when using explicit measures, researchers often use the Marlowe-Crowne Social Desirability Scale (MCSDS). Responses to the MCSDS have been administered along with explicit

psychological help seeking measures such as the BAPS and the ATSPPH to demonstrate that they do not fall prey to social desirability biases. However, researchers have questioned both the utility and validity of the MCSDS as a measure of social desirability bias. As Leite and Beretvas noted (2005), the items in the MCSDS allegedly create an evaluation situation that measures a personality trait deemed *need for approval* (Barger, 2002; Crowne & Marlowe, 1964). The items used in the scale represent behaviors that are either socially desirable and rare (such as “Before voting I thoroughly investigate the qualifications of all the candidates”) or socially undesirable and common (such as “I like to gossip at times”) (Leite & Beretvas, 2005). A person will be rated as high on *need for approval* if their responses reflect a need to seek approval from others and attempt to avoid disapproval. That is, researchers have questioned whether the test measures a personality trait or actual social desirability (Barger, 2002; Leite & Beretvas, 2005). Regardless of this limitation with the MCSDS, both the BAPS and ATSPPH scores did show some effect of social desirability as some of their subscales correlated with the MCSDS scores. For the BAPS scale, a significant correlation was found between the stigma tolerance subscale and social desirability ( $r = .21$ ) (Ægisdóttir & Gerstein, 2009). For the ATSPPH scale, correlations with the social desirability scale varied by gender. For women, a significant correlation was found between social desirability and need for approval. For men, a significant correlation was found between social desirability and openness, confidence, and for the total score on the ATSPPH scale. These results are significant given the findings of Beretvas, Meyers, and Leite (2002), who found that results from female participants using the MCSDS showed more internal consistency and reliability compared to scores from male participants. This led the researchers to

recommend further analysis of the relationship between gender and responses on the MCSDS (Beretvas, Meyers, & Leite, 2002). These significant findings, along with researchers' questions surrounding the use of the MCSDS to measure social desirability have led to some suspicion regarding social desirability of direct assessments that perhaps an indirect implicit assessment could circumvent (Barger, 2002; Beretvas, Meyers, & Leite, 2002; Leite & Beretvas, 2005).

The influence of the unconscious on attitudes towards seeking psychological help remain unmeasured because no explicit test can completely account for the unconscious (Fazio & Olson, 2002). The IAT allows for a look at the unconscious by forcing the individual to respond quickly with little time to consciously consider association between the concepts presented to the respondents. The benefit of the IAT is the test's ability to measure unconscious attitudes, which helps lower the social desirability bias. A meta-analysis that focused on the prediction of behavior using IAT's and parallel explicit measures found that the IAT significantly exceeded the predictive validity of direct attitude measures for socially sensitive topics such as racial discrimination where direct measurement had shown low predictive validity (Greenwald et al., 2009). The same study found that the stronger the positive correlation of the IAT and the direct self-assessment measures, the higher the predictive validity was for each assessment. Therefore, because attitudes towards psychological help seeking is a stigmatized issue, the IAT may be a better measure of attitudes toward psychological help seeking. The IAT will be most effective for measuring these attitudes if it is kept as similar as possible to the explicit scales such as the BAPS scale. More specifically, the IAT will use the three BAPS

subscales; Intent, Stigma, and Expertness to measure overall attitudes towards psychological help seeking.

### **Benefits of Using an IAT to Measure Attitudes Towards Seeking Psychological Help**

Explicit measures of help-seeking attitudes and intentions are susceptible to socially desirable responding, and perhaps most importantly, to an unconscious bias created by the stigma surrounding psychological help seeking (Connor et al, 2007; Fazio & Olson, 2002; Greenwald & Banaji, 2005; Rydell & McConnell, 2006). Direct measures such as surveys may be unable to get to the unconscious and implicit aspect of attitudes towards seeking psychological help. The Implicit Association Test (IAT) was created by Greenwald, McGhee, and Schwartz (1998) to measure individuals' implicit, unconscious, and undisclosed attitudes. The IAT allows researchers to measure unconscious and implicit attitudes that may otherwise fall prey to unconscious cognitions or beliefs. This is particularly important when a topic carries a stigma, such as psychological help-seeking (Teachman, Wilson, & Komarovskaya, 2006). The IAT can assess hidden or unconscious attitudes by measuring reaction time to automatic memory-based associations between two target concepts and an evaluative element that does not allow conscious contemplation (Greenwald et al., 1998). The time in milliseconds it takes for a person to process and respond is the measure of the individuals' association between the target concepts and the evaluative element (Fazio & Olson, 2003). The individual will respond more quickly when the target concepts and the evaluative element are congruent with how they associate the words in their memory. Thus, the dependent variable is the time it takes for participants to respond to the pairing of the target concepts (mental health as good) and the evaluative element (e.g., a word to associate with the target such

as “sane”). The speed of response is presumably based on their association in memory. The dependent variable is manipulated by switching the targets to opposite sides of the computer screen. The IAT used in the process will be explained further in the methods section.

The IAT has been used in social psychological research to measure socially charged implicit attitudes towards race, gender, obesity, disability, religion, and sexuality (Aidman & Carroll, 2002; Bessenhoff & Sherman 2000; Greenwald, McGhee, & Schwarz, 1998; Greenwald et al., 2009; Pruet & Fong, 2006; Sekaquaptewa et al., 2003; Shariff, Cohen, & Norenzayan 2008). For instance, a group of researchers used the IAT to predict behavior towards those of different races and revealed unconscious and hidden racial stereotyping (Sekaquaptewa et al., 2003). An IAT measuring gender bias found a pro-female worker bias by female participants but no comparable bias by males for male workers (Aidman & Carroll, 2002). Researchers have also used the IAT to measure attitudes towards those with disabilities (Pruett & Fong, 2006). Pruet and Fong found that the more direct contact a participant had with a person that has a disability, the better the participant’s attitudes were toward people with disabilities. Research using the IAT has also been used to measure religiousness as a personality trait and to demonstrate the trait’s flexibility (Shariff, Cohen, & Norenzayan 2008). Bessenhoff and Sherman (2000) found that implicit bias towards obese people existed even when explicit measures did not detect bias.

Nock et al. (2010) recently used the IAT to measure implicit attitudes toward death and suicide to help predict suicidal behavior in patients seeking treatment at a psychiatric emergency department. The relative strength of each participant’s association between

“death” and “me” was made into an index for each participant (Nock et al., 2010). This death-suicide index was found to predict suicide attempts with better predictive accuracy than known risk factors and both patients’ or clinicians’ predictions (Nock et al., 2010). Specifically, the test predicted 50% of suicide attempts after the test and correctly identified 32% of participants as suicide attempters (Nock et al., 2010). This study demonstrates that implicit measures such as the IAT can detect and predict sensitive behaviors that otherwise would go unreported (Greenwald, McGhee, & Schwarz, 1998; Greenwald et al., 2009; Nock et al., 2010). These results support the idea that the IAT may be able to better assess implicit and unreported attitudes towards seeking psychological help compared to other types of assessments.

In an additional example of the IAT’s use, Teachman, Wilson, and Komarovskaya (2006) used the IAT to measure implicit stigmatization surrounding those who are mentally ill. The researchers compared the findings to two explicit measures, a researcher-created scale measuring stigma surrounding those who are mentally ill and the Perceived Dangerousness Scale (Teachman et al., 2006). The explicit measure they created asked participants to rate their attitudes toward “persons with mental illness” and “persons with physical illness” on a 7-point semantic differential scale (Teachman et al., 2006). The IAT used “physical illness” and “mental illness” as the two associative categories. Participants then responded to the associative categories of either “bad,” “blameworthy,” and “helpless” or the opposite, corresponding choices of “good,” “innocent,” and “competent.” Results indicated that even with the recent efforts to lower stigma surrounding mental illness, according to both the explicit and implicit measures, the stigma remained strong. Individuals with mental illness were perceived negatively

and were associated with a helpless and blaming stereotype (Teachman et al., 2006). It was also found that those who were in treatment distanced themselves from being categorized as mentally ill and that the stigma surrounding mental illness was still present with those who were receiving treatment. The findings were consistent across two studies and across the student population, general population, and a diagnosed sample. The reliability of their IAT was adequate for response latency data with split half reliability for the average of the three IAT's at .58 (Teachman et al., 2006). Teachman et al. (2006) concluded that:

...society's continued stigmatizing response to mental illness makes it one of the most marginalized conditions in modern Western societies (Link & Phelan, 1999). Further, the implicit biases make evident that even wishing to be tolerant or feeling conscious positive evaluations may not be sufficient to override the enormous number of negative social messages about mental illness encountered every day. (p. 92).

### **Criticism of the IAT**

The IAT is the most widely used and most effective strategy for assessing implicit attitudes (Greenwald & Banaji, 2007). Yet, several researchers have challenged the use of the IAT (Arkes & Tetlock, 2004; Karpinski & Hilton, 2001; Olson & Fazio, 2004; Rothermund & Wentura, 2004). Scholars have suggested that the IAT measures associations related to familiarity and salience of categories (Rothermund & Wentura, 2004), exposure of cultural beliefs and cognitions (Arkes & Tetlock, 2004; Karpinski & Hilton, 2001), or societal associations between the target and the evaluative element (Olson & Fazio, 2004). For example, Greenwald and Farnham (2000) found construct

divergence between implicit and explicit measures of self-esteem and self-concept. Subsequent research has lessened these concerns (Cunningham et al., 2001; Egloff & Schmuckle, 2002; Greenwald, Nosek, & Banaji, 2003; Kaprinski & Steinman, 2006). Egloff and Schmuckle (2002) used an IAT to predict anxiety and social desirability and showed that the IAT has good predictive validity (hierarchical regression yielded:  $\Delta R^2 = .185, p = .016$ .) consistent with that of an explicit anxiety instrument. In contrast, research has demonstrated low positive correlations between explicit and implicit measures of attitudes. For instance, Kaprinski and Hilton (2001) found that, where certain explicit measures predicted behavior, the implicit measures did not. They also found that mere exposure to the concepts used in their IAT tended to influence participants' response and concluded that this weakened the validity of the IAT, presumably because participants were primed to view the concepts a certain way thus their own attitudes were not shown in the IAT. Other scholars, however, have refuted these concerns by demonstrating that the IAT shows good internal, external, construct, and predictive validity (Cunningham et al., 2001; Egloff & Schmuckle, 2002; Greenwald & Banaji, 2007; Greenwald et al., 2009; Nock et al., 2010; Nosek, Greenwald, & Banaji, 1995). For example, a group of researchers found that when measuring socially sensitive topics such as discrimination toward a group of people and political candidate preferences, the IAT showed better construct and predictive validity than self-report measures (Nosek, Greenwald, & Banaji, 2007). Furthermore, Greenwald and Banaji (2007) found that with the use of a new scoring algorithm, the IAT demonstrated good internal consistency (split half correlations or alphas ranging from .70 to .90), construct (correlations between the IAT and self-report measures have ranged from  $r = .24$  to  $r = .37$ ), and predictive validity (outperform

self-report measures when measuring discrimination toward a social group, mean  $r_{\text{IAT}} = .25$ , mean  $r_{\text{self-report}} = .13$ ) when used correctly.

The relationship of implicit and explicit measures is another topic that has been researched and debated because both moderately high and low positive correlations between the two types of measures have been found (Conner et al., 2007; Kaprisnki & Hilton, 2001; Gawronski & Bodenhausen, 2006; Greenwald, Nosek, & Banaji 2003; Nosek, 2005; Nosek, 2007). In order to explain these discrepancies, it has been suggested that attitude importance may moderate the relationship between the IAT and explicit measures (Kaprisnki, Steinman, & Hilton 2005). It appears that the more important the variable is to the participant, the better the IAT will be in predicting relevant behavior and the stronger the relationship it will have with explicit measures (Kaprisnki, Steinman, & Hilton 2005). One example of a moderately high positive correlation was found by Nosek (2005), who reported an average correlation for 57 word pairs (such as Abstaining – Drinking, American – Canadian, Coke – Pepsi, Liberals – Conservatives) of  $r = .36$  between implicit and explicit measures. An example of a low positive correlation between implicit and explicit measurements was found by Greenwald and Farnham (2000) with correlations of  $r = .12$  and  $r = .21$  along with a large construct difference between implicit and explicit self-esteem measures. Other researchers have stated that many factors influence the size of relationship between implicit and explicit measures such as individual differences, context, and the attitude domain (Kaprisnki, Steinman, & Hilton, 2005). Payne, Burkely, and Stokes (2008) found that differences in the structure of the explicit and implicit measures undermine the relationship between the two measures. In the current study, the three subscales of the BAPS' (e.g., Intent, Stigma

Tolerance, and Expertness) were compared to their corresponding IAT categories which were kept as similar to the BAPS scales as possible. Please note that for Stigma the BAPS scale measured stigma towards seeking psychological help and the IAT measured stigma towards mental illness.

In summary, past research has focused on attitudes towards seeking psychological help using explicit scales (Ægisdóttir & Gerstein, 2009; Fischer & Farina, 1995). This research has found differences of willingness to seek help by race, gender, education, religion, and many more demographic attributes (Atkinson & Gim, 1989; Barksdale & Molock, 2009; Faye, 2005; Price & McNeill, 1992; Solberg, 1994; Sheikh & Furnham, 2000; Snider, 2003; Tata & Leong, 1994). However, explicit scales are known to be affected by social desirability and unconscious biases. Therefore, past research could be underestimating negative attitudes towards seeking psychological help (Steir & Hinshaw, 2007). It is because of this that researchers have called for a way to measure hidden and unconscious bias towards psychological help-seeking (Steir & Hinshaw, 2007). The IAT has been used to measure such biases towards race, disability, obesity, and recently stigma toward those with mental illness (Aidman & Carroll, 2002; Bessenhoff & Sherman 2000; Greenwald, McGhee, & Schwarz, 1998; Greenwald et al., 2009; Pruett & Fong, 2006; Sekaquaptewa et al., 2003; Shariff, Cohen, & Norenzayan 2008; Teachman, et al., 2006).

## Hypotheses

Although explicit scales have been used to measure individuals' attitudes towards seeking psychological help, unconscious biases and social desirability remain a concern. An IAT was created to measure implicit attitudes towards seeking psychological help, which was administered alongside the BAPS. The following hypotheses were tested:

1. The IAT scores will indicate greater Stigma toward seeking psychological help than the BAPS Stigma Tolerance scale.
2. The IAT scores will indicate less Intent to seek psychological help than the BAPS Intent scale.
3. The IAT scores will suggest a lower belief in the Expertness of psychology professionals than the BAPS Expertness scale.
4. It is expected that correlations between the implicit and explicit measure of the corresponding three psychological help seeking constructs (stigma, expertness, intent) will be consistent with prior research where  $r$  is relatively low ( $r = .12$  to  $r = .30$ ).

## **Chapter Three**

### **Methods**

#### **Participants**

The total number of participants that completed both sections of the study was 129. The mean age of the participants was 27.68 ( $SD = 11.15$ ), their ages ranged from 18 to 66 years. More women ( $n = 81$ ) than men ( $n = 48$ ) participated in the study. The majority of the participants had not sought psychological help in the past ( $n = 69, 53.5\%$ ) while 59 of the participants (45.7%) had sought psychological help in the past. Participant background information is presented in Table 1.

Table 1

<i>Number of Psychology Classes Taken</i>		<i>Educational Experience</i>	
<i>Classes Taken</i>	<i>Participants</i>	<i>Education</i>	<i>Participants</i>
0	16	High School	12
1	31	Some College Experiences	59
2	26	Associate's Degree	15
3	16	Bachelor's Degree	22
4	8	Master's Degree	15
5 or more	32	Doctoral Degree	6
N = 129		N = 129	

Participants included 68 Ball State University (BSU) students who were recruited via email. To diversify the sample, the general public was recruited using a snowballing technique which was done by having participants give email addresses of other potential participants. Thirty-two members of the general public were recruited using multiple media outlets. Other participants included 16 BSU faculty members and 13 students from other colleges who were recruited by multiple media outlets and the snowballing technique.

### **Measures**

**Creation of the IAT.** The creation of the IAT for this study was based on ideas and concepts measured by the three BAPS scales: Intent, Stigma Tolerance, and Expertness. The Intent scale measures persons' intentions to seek help in the future if in need. The Stigma scale measures stigmatized labeling associated with seeking psychological help and negative stereotypical views about and psychological services. Note that this is different than the BAPS scale, which measures stigma towards seeking psychological

help while the IAT measured stigma towards mental illness. The third scale, Expertness, measures beliefs in the merits of psychological services (Ægisdóttir & Gerstein, 2009).

The IAT looks at implicit attitudes by measuring reaction time to automatic memory-based associations without permitting conscious contemplation. The amount of time it takes for a person to respond is the implicit measure of the individual's association between the two concepts. The speed of the response measures the strength of the association between the two concepts. The individual should respond quicker when the paired categories are congruent with how the person associates the words in their memory. Thus, the dependent variable is the individual's response time to the paired categories.

The following is an example of how the IAT is administered. First, note the term "Mental Health" on the left side of the computer screen shown below and "Mental Illness" on the right side. An additional word phrase, the evaluative phrase, then appears at the bottom of the screen. The phrase is randomly drawn from the following list: Mentally Healthy, Mentally Content, Mental Order, Mental Comfort, Mental Disorder, Mentally Distressed, Mentally Ill, and Mental Disease. If the participant associates the phrase at the bottom with Mental Health he or she is to press the 'E' key. If the association is with Mental Illness the 'I' key is to be pressed. Notice that the evaluative words are close synonyms for Mental Illness or Mental Health. Participants complete several practice trials so that they associate the targets (mental health and mental illness) with the left and right side of the screen and to practice pairing the center evaluative term to the associated target by pressing the 'E' or the 'I' key. The practice trials are also used as a baseline to compare with the test trials. If a respondent selects the "wrong" key, the

individual must correct it to proceed to the next evaluative term. The next screen will have a new target (Good) on the left and (Bad) on the right. Again a word will appear in the center that must be paired with the associated target by pressing ‘E’ or ‘I’ on the keyboard. Words again are randomly drawn and include Helpless, Blameworthy, Crazy, Weak, Competent, Innocent, Sane, and Strong. As before these words are connotatively either good or bad. The next screen then combines the two targets (Mental Health and Good on the left and Mental Illness and Bad on the right). Targets stay in the same previously learned location. Now the evaluative terms will randomly be the associated terms for either Mental Health and Mental Illness or the terms associated with “Good” and “Bad” terms as demonstrated by the following depiction. This section is done twice—once as practice and once as the test block. Both of those blocks are used in measurement.

Press ‘E’ For	Press ‘I’ For
Mental Health	Mental Illness
OR	OR
Good	Bad
Crazy	

The process is then repeated in its entirety (along with the learning practice blocks) with the only change being the target (mental illness) is now on the left and mental health is on the right. The new screen is depicted below.

Press 'E' For	Press 'I' For
Mental Illness	Mental Health
OR	OR
Good	Bad
Mentally Distressed	

The IAT measures in milliseconds the amount of time it takes for the participant to associate the evaluative element with the target concept. The time it takes participants to respond and complete the first set of pairings is then compared to the second (flipped) set of pairings. A “d score” is the average difference between these two response times. Thus, the d score is a measure of the strength of mental association between the target concept and the evaluative element (IAT d scores should not be confused with “Cohen’s d” (1992), an effect size estimate). The same learning process was used for each of the three IAT’s created for the current study. The first target (“Willing to seek help versus Unwilling to seek help”) was shown and paired with the evaluative terms (“Me and Others”). To measure Intent, the targets were “willing to seek help” (i.e., inclined to seek help, compliant with seeking help, prone to seek help, voluntarily seek help) and “unwilling to seek help” (i.e., against seeking help, oppose seeking help, resistant to seek help, reluctant to seek help). The next screen had the other target “me” (i.e., I, myself, mine, self) and “not me” (i.e., they, them, their, theirs, others). The terms “me” and “not me” were used in the death/suicide IAT created by Nock and colleagues (2010). The final screen had both “Willing to seek help” or “Me” and “Unwilling to seek help” or “Others” as shown in the following. The evaluative terms can then be any of the associated words

from the both word groupings (Willing to seek help, Unwilling to seek help, Me, and Others).

Press 'E' For	Press 'I' For
Willing to seek help	Unwilling to seek help
OR	OR
Me	Others
Myself	

The process continues again with the practice and test trails to relearn the new location of “Unwilling to seek help” OR “Me” on the right and “Willing to seek help” OR “Others” on the left as shown below.

Press 'E' For	Press 'I' For
Unwilling to seek help	Willing to seek help
OR	OR
Me	Others
Them	

To measure Expertness, the IAT consisted of “psychologist” (i.e., counselor, therapist, and clinician) and “friend” (i.e., ally, associate, and companion) as the targets. The words used for psychologist (i.e., counselor, therapist, and clinician) were used for two reasons. One was to attempt to be consistent with the BAPS scale created by Ægisdóttir and Gerstein (2009) and the other to allow for more generalizable results to the related psychology fields. The evaluative word links were “expert” (i.e., professional, qualified, and helpful) and “non-expert” (i.e., unqualified, nonprofessional, and not

helpful). The term “friend” (i.e., ally, associate, and companion) was used to describe a person that someone might be able to talk to but does not provide the expert advice and guidance that a psychology professional would provide. The depiction below demonstrates the IAT test screen for Expert.

Press ‘E’ For		Press ‘I’ For
Psychologist		Friend
OR		OR
Qualified	Expert	Unqualified

Again the process is repeated along with the practice trials. The only thing that changes is the side on which the attribute is placed.

Press ‘E’ For		Press ‘I’ For
Friend		Psychologist
OR		OR
Unqualified	Professional	Unqualified

A full list of attributes used in the IAT can be found in Appendix A.

**Beliefs About Psychological Services.** The BAPS is an 18-item self-report scale created to measure attitudes towards seeking psychological help (Ægisdóttir & Gerstein, 2009). Participants are asked to rate how strongly they agree or disagree with statements about psychological help-seeking using a 6-item Likert scale, with 1 denoting “strongly

disagree” and 6 denoting “strongly agree.” The BAPS scale has seven negatively worded statements and 11 positively worded statements. The BAPS has three subscales: Intent which has six statements, Stigma Tolerance which has eight statements, and Expertness which has four statements. Examples of BAPS items are “At some future time, I might want to see a psychologist.” (Intent), “Because of their training, psychologists can help you find solutions to your problems.” (Expertness), and “Having received help from a psychologist stigmatizes a person’s life.” (Stigma Tolerance). The subscales are scored individually with scores ranging from 1 to 6, with the negative worded items scored in reverse (Ægisdóttir & Gerstein, 2009) so that higher scores indicate more positive beliefs in psychotherapy expertness, greater tolerance for the stigma associated to seeking psychological help, and greater intentions to seek psychological services. In a recent study, the BAPS scale was found to have good internal consistency reliability and test-retest reliability ( $r > .70$ ) (Ægisdóttir & Gerstein, 2009). The BAPS total score was correlated highly ( $r = 0.83$ ) with the ATSPPH total scale score, thus supporting its convergent validity (Ægisdóttir & Gerstein, 2009).

**Demographic and background information.** An author-generated demographic and background information sheet was created for this study. Respondents were asked for their gender, year in school, previous counseling experience, number of psychology courses taken, and their ethnicity.

### **Procedures**

As previously stated, BSU students were recruited via email. Members of the general public were recruited using multiple media outlets including: bulletins at local grocery stores, restaurants, and churches in the Muncie, Indiana, and Rock Falls, Illinois

areas. The participants who were recruited by email clicked on a link to bring them to the website where the IAT was located. Those who were recruited via the media outlets were told to visit a website to complete the study which took them directly to the IAT. The first screen before the IAT included an informed consent which stated, “By clicking continue I agree to participate in this research project entitled, ‘Tell us how you really feel: Using the IAT to measure implicit attitudes towards seeking psychological help.’ I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I also understand that if I feel uncomfortable at any moment I can drop out and still be entered into the drawing. To the best of my knowledge, I meet the inclusion/exclusion criteria for participation (described on the previous page) in this study.” After clicking “continue,” the introduction screen to the IAT was shown followed by the practice and then the test trials. After completing all three sections of the IAT a new window opened for the BAPS scale followed by another new window which asked for demographic characteristics. After they had responded to the questions about their demographic characteristics a new window opened for the snowballing technique. On this window participants could list emails of potential participants.

It took participants 22 minutes on average to complete all the measures. All participants were given an informed consent form at the beginning of the study and were debriefed about the purpose of the study at the end. Participants were given the opportunity to enter a drawing for a \$50 Visa gift card.

## **Chapter Four**

### **Results**

#### **Data reduction**

The data from all three sections of the IAT were scored using the new scoring procedure outlined by Greenwald, Nosek, and Banaji (2003), which is argued to maximize the relationship between implicit and explicit measures. The use of this procedure was particularly important for this study because all sections of the IAT were designed to match the three dimensions of the BAPS scale. This scoring procedure also improves the predictive validity of the IAT by measuring each participant's response latency and also a latency that penalizes for errors by replacing error trials with the mean of the correct responses plus 600 milliseconds. Eighteen participants were removed from final calculations. These participants either had overall error rates above 40%, completed 10% or more of their trials in less than 300 milliseconds, or did not correctly complete all sections of the study. The average error rate for all three sections of the IAT was 9.43%. The following analyses were completed on the remaining 111 participants.

### **Reliability, Means, and Standard Deviations for Measures**

Cronbach's alpha for the BAPS Intent subscale was .90, the BAPS Stigma subscale was .86, and the BAPS Expertness subscale was .81. To calculate Cronbach's alpha for the IAT, the 20 practice trials and 40 test trials of each section were paired, revealing a reliability coefficient of .60 for Intent, .95 for Stigma, and .74 for Expertness. Mean scores for the IAT and BAPS scales are reported in Table 2. As previously explained, the "d score" is the difference between the two associations of the target concept and the evaluative element. Thus, the d score is essentially a measure of the strength of association between the target concepts and the evaluative element. The IAT results for "willing to seek psychological help" and "me" were positive, which suggests an association between "me" and "willing to seek help" ( $d \text{ score} = .56, SD = .31$ ). The results of the explicit BAPS scale measuring Intent or willingness to seek psychological help showed an overall moderately high mean ( $\text{mean} = 4.29, SD = 1.17$ ).

One explanation about why people do not seek psychological help is that they may not perceive counselors as experts. However, the IAT revealed that there was a relatively strong positive association between psychologist (including counselor, therapists, and clinician) and the term expert ( $d \text{ score} = .46, SD = .418$ ). Scores of the explicit BAPS scale suggested a similar belief that counselors were experts, with an overall mean score of 4.76 ( $SD = .91$ ).

For the Stigma category of the IAT, "mental health" (mentally healthy, mentally content, mental order, or mental comfort) and "mental illness" (mental disorder, mentally distressed, mentally ill, or mental disease) were paired with "bad," (helpless,

blameworthy, crazy, or weak) and “good” (competent, innocent, sane, or strong). There was unexpectedly little to no relationship association between mental health and the term “good” or for mental illness and the term “bad;” the *d* score was .07 (*SD* = .92). The implicit measure thus showed that mental health or its absence is not associated with either good or bad. This contrasts strongly with the BAPS Stigma Tolerance scale. This scale received the highest of all three BAPS scores with a mean of 4.85 (*SD* = .91). This high score on Stigma Tolerance scale reflects a positive view of seeking psychological help.

Table 2

*Descriptive Statistics of the IAT and BAPS Measures*

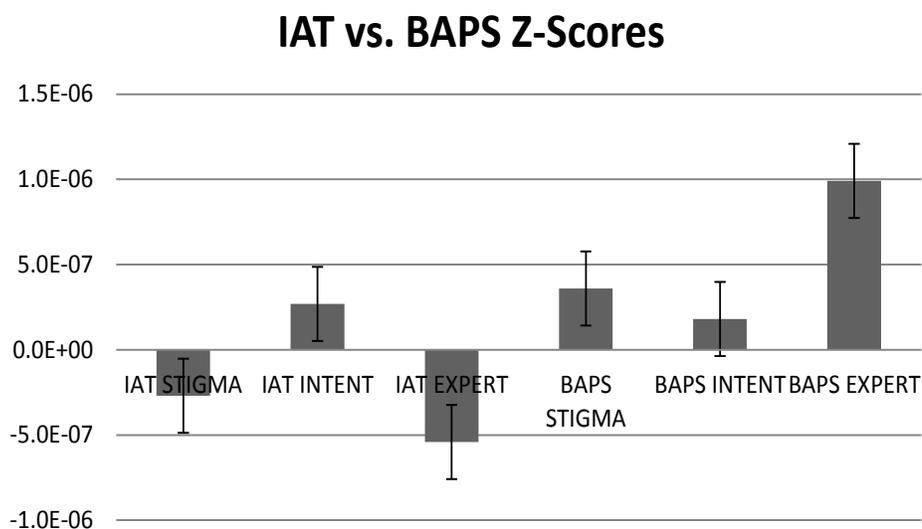
	Minimum	Maximum	Mean	Z Scores	<i>SD</i>
IAT Intent <i>D</i> Score	-.20	1.45	.56	2.70E-07	.31
IAT Stigma <i>D</i> Score	-1.54	1.36	.08	-2.70E-07	.92
IAT Expertness <i>D</i> Score	-.64	1.30	.45	-5.40E-07	.42
BAPS Intent	1.00	6.00	4.29	1.80E-07	1.17
BAPS Stigma	1.00	5.00	4.85	3.60E-07	.92
BAPS Expertness	1.00	6.00	4.76	9.90E-07	.91

N = 111

### Hypotheses Testing: Implicit vs. Explicit Results

To compare the implicit and explicit measures of psychological help-seeking attitudes and intentions, the six scale scores were standardized by converting them into z scores. This was done by subtracting the mean scores from each scale and dividing by the standard deviation of each score. The results are reported in Table 1 and Figure 1. Figure 1 demonstrates the relationship between the two measures on all three dimensions (Intent, Stigma, and Expertness) after being standardized for comparison purposes.

**Figure 1**



*Note.* Scientific notation was used because the z scores are very small.

The first hypothesis stated that IAT scores would indicate greater stigmatization toward psychological services compared to the BAPS. This hypothesis was not supported. As Figure 1 reveals, the average IAT scores on stigmatization were lower (lower IAT Stigma scores reflect a more positive view while lower BAPS scores reflect a more negative view) than the corresponding BAPS scores. In general the IAT was

constructed to be similar to the BAPS scale such that higher scores on the stigma construct would reflect more positive views toward psychological help seeking. However for stigma this was not the case. One of the problems with using an IAT is that the relationships between the categories cannot be isolated which means that those who associated “mental health” as “good” could not be separated from those associating “mental illness” with “bad.” This was a design flaw, which caused the data to not be normally distributed so the z score requirement was not fulfilled. Furthermore, the Stigma Tolerance scale of the BAPS measures persons’ indifference to the stigma attached to seeking psychological help instead of stigma toward mental illness which was the idea targeted on the IAT measure. Therefore these results should be interpreted with caution. It should be noted that there was a very small positive association between mental health as good, and mental illness as bad ( $d$  score = .08) (See Table 1).

The second hypothesis stated that the IAT would indicate less Intent to seek psychological help than the BAPS scale. On average the BAPS Intent scale indicated lower intention to seek psychological help than the IAT. Therefore this hypothesis was not supported (see Figure 1). The third hypothesis stated that the IAT scores would suggest lesser belief in counselor Expertness than the BAPS Expertness scale. Figure 1 shows that responses to the IAT suggested lower belief in the Expertness of psychology professionals compared to responses from the BAPS scale. Therefore, this hypothesis was supported.

The final hypothesis stated that the IAT and the BAPS would show low correlations similar to what past research comparing explicit and implicit scores has demonstrated. This hypothesis was supported. As Table 3 reveals, none of the BAPS and

the corresponding IAT scores were significantly correlated. Nevertheless, there were unanticipated and significant correlations between some of the BAPS scores and the IAT scores. BAPS Intent significantly correlated in the positive direction with the IAT Stigma scores ( $r = .25, p = .01$ ) and the IAT scores for psychologist as experts ( $r = .25, p = .01$ ). BAPS Stigma scores correlated significantly with the IAT Expertness scores ( $r = .21, p = .03$ ) and approached a significant correlation with IAT Stigma, ( $r = .19, p = .05$ ). These correlations between explicit and implicit measures are consistent with prior research which has found correlations ranging from  $r = .12$  (Greenwald & Farnham, 2000) to  $r = .30$  (Nosek, 2005). These low but significant correlations suggest that these different types of measurements and scales all assess similar attitudes and beliefs. Yet it is unclear why the correlations between implicit and explicit measures of purportedly the same constructs were lower than what previous research has found ( $r = .08, r = .08, r = .06$ ). Future research should consider why these correlations were so low.

Table 3

*Correlations Between and Among Measures*

	IAT	IAT	IAT	BAPS	BAPS	BAPS
	INTENT	STIGMA	EXPERT	INTENT	STIGMA	EXPERT
IAT	1	<b>.26**</b>	<b>.20*</b>	<b>.08</b>	<b>.08</b>	<b>.06</b>
INTENT						
IAT	<b>.26**</b>	1	<b>-.01</b>	<b>.25**</b>	<b>.19</b>	<b>.15</b>
STIGMA						
IAT	<b>.20*</b>	<b>-.01</b>	1	<b>.25**</b>	<b>.21*</b>	<b>.14</b>
EXPERT						

N = 111

\*\*. Correlation is significant at  $p < 0.01$  (2-tailed).\*. Correlation is significant at  $p < 0.05$  (2-tailed).

## Chapter Five

### Discussion

Prior research using the IAT has shown that there are negative implicit and explicit attitudes towards those with mental illness (Teachman et al., 2006). Past research has also demonstrated that these negative attitudes are worse than participants will openly acknowledge on a direct assessment (Teachman et al., 2006). The present study supported the hypothesis that the IAT would demonstrate less belief in the expertness of psychology professionals compared to those beliefs found using the BAPS scale. Contrary to what was expected, the present study found that the BAPS scale revealed less willingness to seek psychological help than did the IAT. It was proposed that the three sections of the IAT and the BAPS would significantly correlate with one another but this was not the case. Prior research has shown correlations between implicit and explicit measures to range from  $r = .12$  to  $.36$  (Greenwald & Farnham, 2000; Nosek, 2005). Consistent with prior research, the correlations between the IAT and the BAPS for Expertness and Stigma ranged from  $r = .14$  to  $.25$ . However, the correlations between the BAPS and the IAT Intent were low in comparison ( $r = .06$  to  $.08$ ). More research on these varying correlations is needed.

## **Limitations**

One fundamental issue with the IAT used to measure attitudes towards seeking psychological help is that it must be paired with opposite attributes, which can be difficult to do when dealing with such complicated matters as help-seeking attitudes and intentions. Finding opposite attributes for mental illness and counselors versus friends was challenging. Future research could improve the IAT that was used in this study by using better word pairings. There may be better attributes to assess Stigma, Expertness, and Intent to seek psychological help than those used in the current study. One word pairing that was very difficult was the mental health with “good” and mental illness with “bad.” Perhaps a better way to assess stigma would be to pair “embarrassed to seek help” with “comfortable with seeking help”. This would measure how ashamed participants feel about seeking help and could be a better measure of stigma than trying to pair mental health with “good” and mental illness with “bad.” One may assume that most people want to be mentally healthy. Also future research should pay careful attention to stigma because there are two types of stigma related to seeking psychological help: stigma towards mental illness and the stigma associated with seeking help. These are two related concepts that should be treated separately. If future researchers seek to use an IAT to measure stigma and compare it to an explicit measure they should measure the same stigma concept. Another word pairing that could be improved is in the “expert” category with the friend and non-expert word pairing. Perhaps someone like a group leader who has not had professional psychological training would be a better opposing attribute.

Another issue that posed a challenge to this study was the difficulty in using just one word to represent help-seeking attitudes and intentions. This limitation was dictated

by usual practice with the IAT. In the present study, the present researcher attempted to address this problem by using short word pairings such as “Unwilling to seek help.”

Another method used in this experiment was to have a sentence explaining the association throughout the experiment such as “This demonstration of the Implicit Association Test (IAT) will measure how willing you and those close to you are to seek psychological help when in need.” It is unknown if these techniques had a particular influence on the participants’ perception of the IAT. Further research on this matter is needed.

### **Conclusion**

Because people do not always want to tell someone how they really feel or think about sensitive topics, using an explicit scale to ask questions about topics that are socially charged may be problematic. Whether or not someone is willing to seek psychological help is something that he or she may answer differently depending on if the questioner is a researcher, a loved one, or a close friend. The present study hypothesized that by utilizing the IAT it would be possible to obtain a more accurate response. Yet, it is unclear if the present results support this contention. Much more work needs to be done with the IAT before one can assume it effectively measures psychological help seeking attitudes and intentions. In the future, it may be possible to utilize the IAT to measure how people truly feel about seeking psychological help.

The present study demonstrated that by utilizing the IAT and the BAPS, it may be possible to measure individuals' conscious, unconscious, and hidden attitudes towards seeking psychological help. It was discovered that when participants responded to the implicit IAT measure, they reported greater willingness to seek psychological help, they reported lower stigma towards seeking psychological help, and lower belief in the expertness of psychology professionals than when they responded to the explicit BAPS scale. Thus, given that only two of the four hypotheses proposed were supported it remains unclear at this time if the implicit measure does reflect a less biased and more accurate representations of participants' true attitudes towards seeking psychological services compared to responses from the BAPS scale.

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## Appendix A

### List of Attributes used in the IAT Measure

**Intent-** Willing to seek help, Inclined to seek help, Compliant with seeking help, Prone to seek help, Voluntarily seek help

Unwilling to seek help, Against seeking help, Oppose seeking help, Resistant to seek help, Reluctant to seek help

Me, I, Myself, Mine, Self

Not Me, They, Them, Their, Theirs, Others

**Stigma-** Mentally Healthy, Mentally Content, Mental Order, Mental Comfort

Mental Disorder, Mentally Distressed, Mentally Ill, Mental Disease

Bad, Helpless, Blameworthy, Crazy, Weak

Good, Competent, Innocent, Sane, Strong

**Expertness-** Psychologist, Counselor, Therapist, Clinician

Friend, Ally, Associate, Companion

Expert, Professional, Qualified, Helpful

Non-expert, Unqualified, Nonprofessional, Not helpful

## Appendix B

### Beliefs About Psychological Services Scale

Instructions: Please rate the following statements using the scale provided. Place your ratings to the left of each statement by recording the number that most accurately reflects your attitudes and beliefs about seeking psychological services. There are no “wrong” answers, just rate the statements as you honestly feel or believe. It is important that you answer every item.

Strongly Disagree						Strongly Agree
1	2	3	4	5	6	

- \_\_\_ 1. If a good friend asked my advice about a serious problem, I would recommend that he/she see a psychologist.
- \_\_\_ 2. I would be willing to confide my intimate concerns to a psychologist.
- \_\_\_ 3. Seeing a psychologist is helpful when you are going through a difficult time in your life.
- \_\_\_ 4. At some future time, I might want to see a psychologist.
- \_\_\_ 5. I would feel uneasy going to a psychologist 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 psychologist.
- \_\_\_ 7. Because of their training, psychologists can help you find solutions to your problems.
- \_\_\_ 8. Going to a psychologist means that I am a weak person.

- \_\_\_\_\_ 9. Psychologists are good to talk to because they do not blame you for the mistakes you have made.
- \_\_\_\_\_ 10. Having received help from a psychologist stigmatizes a person's life.
- \_\_\_\_\_ 11. There are certain problems that should not be discussed with a stranger such as a psychologist.
- \_\_\_\_\_ 12. I would see a psychologist if I were worried or upset for a long period of time.
- \_\_\_\_\_ 13. Psychologists make people feel that they cannot deal with their problems.
- \_\_\_\_\_ 14. It is good to talk to someone like a psychologist because everything you say is confidential.
- \_\_\_\_\_ 15. Talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.
- \_\_\_\_\_ 16. Psychologists 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 psychologists.
- \_\_\_\_\_ 18. If I thought I needed psychological help, I would get this help no matter who knew I was receiving assistance.

**Appendix C****Demographic Questions****Are you one of the following?**

Community member

Faculty/staff of a college/university

Student

Other

**Have you had counseling experience?**

Yes

No

**How many psychology courses have you taken?**

1

2

3

4+

**What is your gender?**

Female

Male

Other

**How would you classify yourself?**

African American/Black

American Indian or Alaska Native

Asian

Caucasian/White

Hispanic/Latino

Middle Eastern

Multiracial

Pacific Islander or Native Hawaiian

Other

**What is the highest level of education you have completed?**

High school or equivalent

Vocational/technical school (2 year)

Some college

Associate's degree

Bachelor's degree

Master's degree

Doctoral degree

Professional degree (MD, JD, etc.)

Other