A COMPARISON OF THE ROLE OF SELF-REPORTED MINDFULNESS IN PREDICTING INTERPERSONAL FUNCTIONING IN INDIVIDUALS WITH SYMPTOMS OF DEPRESSION AND ANXIETY.

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Chapter I

Interpersonal Relationships

Positive interpersonal relationships are characterized by the reciprocity of behavior, which fulfills an individual’s social motives (Horowitz et al. 2004). When an individual interacts socially, an exchange is made. For example, a person’s behavior can elicit, evoke, or invite the response (or complement) of the other; when the complement satisfies the individual’s motive the interaction is seen as successful (Horowitz et al. 2004). A behavior and its complement, in a successful social interaction, are said to be similar with respect to affiliation (i.e. hostility and friendliness) and control (i.e. dominance and submission); a complement can be verbal or non-verbal (Horowitz et al. 2006). For example, if an individual acts dominantly toward another person, the rules of complement posit, the other person will become submissive (Horowitz & Vitkus, 1986). Individuals negotiate their interactions through a mutually accepted distribution of control while reciprocating each other’s levels of friendliness (Horowitz & Vitkus, 1986). Positive interpersonal relationships are a fundamental aspect of psychological well-being; a state which supports and maintains life satisfaction, environmental mastery, self-efficacy, happiness, and quality of life (Ryff & Singer, 2000; Segrin & Taylor, 2007). Positive relationships have the potential to
decrease stress and have been shown to reduce the negative effects related to symptoms of psychopathology (Siegal, 2009). Successful relationships enhance sense of purpose and self-acceptance; they decrease stress and promote the ability to effectively deal with traumatic life events (Ryff & Keyes, 1995; Segrin & Rynes, 2009).

Interpersonal difficulties can create the environment in which symptoms of mental illness emerge and persist (Sroufe et al. 2000). Interpersonal problems are defined by behavioral excess (i.e. too nurturing, too domineering, too socially avoidant, too vindictive, too neglectful; Puschner et al. 2005). During a social interaction, an individual who has interpersonal problems will elicit responses that do not complement their interpersonal motive (Horowitz et al. 2004). Non-complementary interactions lead to negative affect and, when an individual’s motives are frequently frustrated they are said to have an interpersonal problem (Puschner et al. 2005). Interpersonal problems and psychological distress arise as an individual develops and maintains a pattern that frustrates their interpersonal motives (Puschner et al. 2005). When the result of interpersonal interactions bring about a response which is counter to the individuals intent it can activate symptoms of psychopathology and potentially sustain or intensify their distress (Horowitz & Vitkus, 1986). For example, individuals who exhibit depressive symptoms and do not have social ability may arouse feelings of guilt in others; this feeling of guilt leads the other individual to restrict their expressions
of annoyance and hostility (Coyne, 1976). Individuals who experience the guilt caused by another person’s depressive symptoms become reassuring and supportive in a disingenuous way and, begin to distance themselves from the depressed individual (Coyne, 1976). The discrepancies between these actions of distance and false reassuring create an environment in which the depressed individual is confirmed of their not being accepted and distances themselves from social situations (Coyne, 1976). This maladaptive cycle leads to social isolation causing the individual to become more distressed (Coyne & DeLongis, 1986).

However, social isolation is not the worst possible outcome of a maladaptive relationship. Individuals who seek support in malfunctioning relationships tend to exhibit negative behaviors such as: alcoholism, violence, excessive worry, and depressive symptoms (Duck et al. 1984). Interpersonal problems develop differently in each individual based on their level and type of distress (Horowitz & Vitkus, 1986). For example, individuals with depressive symptoms tend to lack interpersonal abilities within the categories of socializing (engaging in conversation with others), assertiveness (making or refusing demands), and intimacy (giving or receiving complements) (Horowitz & Vitkus, 1986).

Mental Illness

Psychopathology, or mental illness, has a substantial impact on society. Psychopathology is defined as a behavioral or psychological syndrome associated with distress, impaired functioning, and increased risk of injury or loss
of freedom (American Psychiatric Association, 2004). The prevalence for psychopathology among adults in the United States is also substantial. The lifetime prevalence for a mental illness is 46.4%, and the 12-month prevalence is 26.2% (National Institute of Mental Health, 2011). In addition, the costs of psychopathology to society are large. For example, the American Medical Association (AMA, 2001) estimates that mental illness costs $81 billion per year; this estimate includes direct costs (i.e. medication and hospital expenses) as well as indirect costs (i.e. lost wages, care giving, and suicide) and, affects all of the United States.

Psychopathology may have a large part in predicting interpersonal difficulties. Individuals experiencing psychopathology posses a limited range of perception when evaluating others (Erickson, Newman, & Pincus, 2009) and, provide inappropriate solicitation of interpersonal feedback (Gotlib & Hammen, 2008). The limited range in which individuals with symptoms of mental illness view others can lead to a misinterpretation of behavior; when an individual misinterprets another’s behavior it can result in reactions that leave motives unfulfilled (Horowitz et al. 2006). As a result, those who experience depression have distressed personal relationships, lower relational quality, and higher levels of loneliness when in relationships (Segrin, Powell, Givertz, & Brackin, 2003). In addition, individuals with depression tend to be more hostile in social environments (Constantino et al. 2008), have the belief that negative social events are due to their actions (Safford et al. 2008), and are more likely to dwell
on these negative events (Lyubomirsky, & Nolen-Hoeksema, 1995). Further, depression may increase instances of inappropriate interpersonal communication. For example, studies have found links between depression, negative speech content, and lower levels of eye contact (Gotlib & Hammen, 2008).

Anxiety disorders and the excessive worry associated with them (Wells, & Papageorgiou, 1998) can also have a negative impact on social functioning. Worry is a relatively common emotion with an adaptive value (Baer, 1994). Though, in excess it becomes self-defeating and maladaptive (Belzer et al. 2002). Worriers tend to describe themselves as more publicly self conscious, more socially anxious, and more concerned with their public displays; these concerns about the outside view of themselves do not transcend into private social event (Pruzinsky & Borkovec, 1990). Worry can prevent the processing of emotional material (Pruzinsky & Borkovec, 1990) and, result in over-nurturance in personal relationships (Borkovec et al. 1998). As a result of this over-nurturance, worriers are less likely to have their interpersonal needs met and more likely to be seen as intrusive by others (Borkovec et al. 1998). In addition, research indicates that excessive worry is based more on social concerns and therefore interferes with interpersonal functioning (Ladouceur et al. 2002). The fear and anxiety inherent in social phobia can also interfere significantly with social activities and relationships (American Psychiatric Association, 2004). Individuals who experience social phobia typically show a decrease in eye
contact, self-esteem, and have decreased social support (American Psychiatric Association, 2004). Individuals who experience generalized anxiety disorder have difficulty in social functioning and may be unable to keep their thoughts from interfering with tasks (American Psychiatric Association, 2004). In addition, panic attacks have been linked to a decrease in interpersonal functioning (Marshall et al. 2008).

Mindfulness

Mindfulness is defined as awareness, in all mental states, experienced in the present moment without judgment (Kabat-Zinn, 1994). There are five different aspects of mindfulness: an individual's ability to observe their internal and external environment, an individual's ability to describe their inner and outer experience, the ability to act with awareness, being non-judgmental of inner-experience, and an individual's reactivity to their inner-experience (Baer et al, 2004). Mindfulness provides a state of mind, which enables the individual to pause and think before responding (Siegel 2009); these pauses provide the opportunity of release from anger, fear, and judgment across a myriad of situations (Atkinson, 2004).

Mindfulness can be examined in traits which vary between high levels of sensitivity and clarity of emotions to low levels of maladaptive habits and automatic thinking (Wallace, 1999). Higher dispositional mindfulness, when measured by self-report, has been correlated with overall emotional well-being
(Brown & Ryan, 2003). Further, specific facets of mindfulness are linked to increases in specific emotional benefits. For example, individuals who score high on the trait of openness exhibit receptivity and interest to new experiences (Brown & Ryan, 2003) and act to these experiences with greater awareness (Baer et al. 2004). Higher scores on awareness are correlated with an ability to be in tune with emotions and the ability to effectively express psychological needs therefore, increasing the chances of psychological needs being met (Brown & Ryan, 2003). In addition, higher levels of awareness are correlated with an increased ability to repair negative moods (Baer et al. 2004). The facet “describe” has been correlated with increased social ability and increased knowledge of emotions (Baer et al. 2004).

Individuals with a low dispositional mindfulness are vulnerable to psychopathology (Baer, et al. 2006). The relationship of dispositional mindfulness to psychopathology may arise from repetitive thoughts, a continuous thinking of sometimes negative aspects, these thoughts are found in depression (rumination) and in anxiety disorders (worry) (Evans & Segerstrom, 2010). Repetitive thoughts serve to maintain depressive symptoms because; individuals perceive negative evaluations of interpersonal interactions and predict negative outcomes for the future (Teasdale, et al. 1995). In individuals with anxiety disorders, these repetitive thoughts are uncontrollable and have an extremely negative tone which serves to maintain an anxious state (Pruzinsky & Borkovec, 1990).
There is evidence suggesting mindfulness can ameliorate symptoms of psychopathology and facilitate successful interpersonal interactions. Automatic thought processes associated with depression (Teasdale, et al. 1995) may be due to less awareness in the present moment and, behaviors which are typically driven by fear and insecurity (Kabat-Zinn, 1994). These cognitive patterns can be changed through mindful awareness which stifles the repetition of thought and response (Siegel, 2009). This change in repeating patterns can be attributed to the change from top-down to bottom-up processing of information; mindfulness retrain the brain preventing it from projecting previously learned information onto a situation which is established from top-down processing (Siegel, 2009). Studies have found that the increase in attention which comes from mindfulness helps to facilitate the processing of emotions which in turn can lead to less intensity in social situations (Teasdale et al. 1995), and decrease the amount of time individuals experience negative mood affect (Brown et al. 2007) causing them to become more tolerable. Thought processes lacking mindfulness tend to focus on the past and future events leading individuals to become unaware of their present reality (Brown et al. 2007). In this way, it is possible that mindfulness plays a large role in relieving social issues and creating behavior which benefits interpersonal relationships. Thus, it is possible that mindfulness may have more to do with interpersonal functioning than symptoms of depression.

Studies have found high correlations between traits of mindfulness, mental health, and psychological well-being (Brown et al. 2007). Higher mindfulness is
associated with a low frequency of negative thinking such as: worry, depressive thoughts, and social fears (Frewen, et al. 2008). Mindfulness practices teach participants to perceive their negative thoughts, rumination and worry, as temporary passing events which can be acknowledged and let go (Frewen, et al. 2008). In addition, through mindfulness individuals are able to reduce the intensity of their reaction to negative thoughts (Frewen, et al. 2008). Mindfulness may alter the effects of psychopathology on interpersonal functioning by: increasing interpersonal problem solving (Wupperman, Neuman, & Axelrod, 2008), reducing stress in social situations, and increasing the ability of people to respond constructively to stress within relationships (Kabat-Zinn, 2009).

Recently, mindfulness has been linked to an increase in well-being associated with social functioning by ameliorating some social problems (Burgoon et al. 2000). Mindfulness can directly improve well-being by encouraging human contact, adding understanding to current experiences, and the promotion of self control and goal directed behavior (Brown et al. 2007).

The practice of mindfulness is an individual experience, which involves an examination of the self, our view of the world, and our view of each moment in its entirety (Kabat-Zinn, 1994). Through these benefits individuals can improve their social interactions (Erickson, Newman, & Pincus, 2009) by freeing their thoughts of negative assumptions and false opinions (Kabat-Zinn, 1994). Individuals come to experience mindfulness through intense training and practice (Baer, 2003). In one common practice, individuals learn to focus their attention onto a part of their
environment (e.g. sound, visual stimulus, breathing, or a body part) (Kabat-Zinn, 1990). While the individual focuses on their specific stimulus, they practice being aware of each moment (Kabat-Zinn, 1990). Finally, as the individual practices being aware of each moment and focusing on their stimulus, they practice noticing their thoughts and feelings without becoming affected by their content (Kabat-Zinn, 1990).

Training in mindfulness has become a staple in several successful treatment programs including mindfulness-based stress reduction (MBSR) (Kabat-Zinn, 1990) and mindfulness-based cognitive therapy (MBCT) (Segal, Williams, and Teasdale, 2002). MBSR is derived from Buddhist insight meditation techniques (Ree & Craigie, 2007). MBSR is an 8 week program consisting of weekly appointments; in these appointments mindfulness meditation and practice is taught while individuals learn to cope with distress (Ree & Craigie, 2007). MBCT was developed with the intention of reducing relapse associated with depression (Ree & Craigie, 2007); mindfulness teaches attentional control which can help an individual to recognize and stop destructive thought patterns which may lead to the onset of depression (Teasdale, et al. 1995). MBCT was modeled after MBSR though; it incorporates cognitive therapy which helps the individual to develop a detached view of negative thoughts (Ree & Craigie, 2007). MBCT and MBSR teach individuals to stay in the present moment without the need to ruminate on their past or worry about their future (Ree & Craigie, 2007).
Mindfulness based therapies are effective in the treatment of a variety of psychopathology (Baer, 2003). MBCT has shown to be effective in the treatment of individuals with recurrent depression by significantly reducing the rates of relapse and recurrence (Teasdale et al. 2000). MBCT has also shown results in individuals with bipolar disorder; MBCT led to immediate decreased anxiety and a reduction in depressive symptoms in individuals with bipolar disorder (Williams et al. 2008). In addition, MBCT has shown an increase in coping ability in individuals with Parkinson’s disease (Fitzpatrick et al. 2010).

MBSR has proven efficacious in the reduction of stress and mood symptoms in a variety of clinical diagnoses (e.g. cancer) (Bishop, 2002). MBSR has also shown increased quality of life and a decrease in psychological distress in heterogeneous samples (Reibel et al. 2000). MBSR has also proven efficacious in the treatment of tension, confusion, and fatigue in medical students (Rosenzweig et al. 2003). In addition, MBSR has been found to increase emotion regulation, the ability to monitor, evaluate, and modify emotions in order to meet one’s goals (Thompson, 1994), in individuals suffering from social anxiety disorder (Goldin & Gross, 2010).

Past research shows that individuals who experience psychopathology typically show decreases in interpersonal functioning (Erickson et al. 2009). The ability to be mindful has been linked to relationship quality (Kabat-Zinn, 2004) and decreases in the symptoms associated with psychopathology (Siegel, 2009). However, it is unclear if this decrease in interpersonal functioning is related to the
psychopathology itself or a lack of dispositional mindfulness. The current study seeks to evaluate the impact of mindfulness on interpersonal functioning and, to determine if mindfulness has an impact above and beyond the effects of symptoms of depression and anxiety. The hypotheses for the study are as follows: 1) higher levels of worry and depressive symptoms predict deficits in interpersonal functioning; 2) lower levels of dispositional mindfulness predict deficits in interpersonal functioning above and beyond worry and depressive symptoms.
Chapter II

Method

Participants

Participants consisted of 151 incoming freshman at Kent State University (74% female) deemed “at risk” \( n = 87 \) or “not at risk” \( n = 64 \) for drop out by the university provost’s office. The sample had a mean age of 18.54 \( (SD=2.09) \) and consisted of 83.4% Caucasians, 9.3% African Americans, 1.3% Asian Americans, 2.6% Hispanics, and 3.3% Other. Out of the total sample, 23 participants did not have sufficient data to be included in the final analysis.

Procedure

The present study utilized archival data provided by a previous study. In the previous study, participants were recruited through email if their names appeared on the list of incoming freshman and were deemed “at risk” or “not at risk” for drop out. Risk for drop out was determined by factors ostensibly unrelated to mental health (i.e. high school GPA and, ACT scores). Participants were compensated 15 dollars for each part in the study. The first part consisted of a clinical interview. During the second part of the study participants completed
a battery of online questionnaires assessing: symptoms of depression, worry, dispositional mindfulness, and interpersonal functioning.

Materials

*The Five Facets of Mindfulness Questionnaire* (FFMQ; Baer et al. 2006). This scale assesses the use of mindfulness in everyday life: observing, describing, acting with awareness, reactivity to inner experience, and non-judging of inner experience. Examples such as “I notice the smell and aroma of things” are rated on a likert scale from 1 (*never*) to 5 (*always*). Higher scores on this measure were associated with higher levels of dispositional mindfulness. The FFMQ was shown to have good construct validity in a number of populations. The internal consistency of the FFMQ in the current study was $\alpha=.86$.

*The Inventory of Interpersonal Problems-Short Circumplex* (IIP-SC; Soldz et al. 1995). This is a questionnaire used to measure interpersonal functioning. Participants respond to statements such as “It’s hard for me to experience a feeling of love for another person” on a scale from 0 (*not at all*) to 4 (*extremely*). Higher scores on this measure were associated with more difficulty functioning interpersonally. The possible scores for this measure range from 0 to 256. The IIP-SC has excellent internal consistency, reliability, and good test-retest reliability. The internal consistency of the IIP in the current study was $\alpha=.96$. 
Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). This is a 20-item self report of symptoms associated with depression for use in the general population. Each item has a range from 0 (rarely or none of the time) to 3 (most or all of the time) resulting in a total possible score of 0 to 60. Each item measures the severity of depressive symptoms within the past week with items such as “I felt that people dislike me.” Higher scores on this measure were associated with more symptoms of depression. The CES-D has been shown to have high internal consistency and adequate test-retest reliability. The internal consistency of the CES-D in the current study was $\alpha=.89$.

The Penn State Worry Questionnaire (PSWQ; Meyer et al. 1990). This is a 16-item self report which measures the amount of worry experienced by an individual. The total possible score ranges from 16 to 80. The PSWQ asks participants positively (I do not tend to worry about things.) and negatively (My worries overwhelm me) coded questions. Each item is scored on a likert scale ranging from 1 (Not at all typical of me.) to 5 (Very typical of me.) Higher scores on this measure indicate more worry. The PSWQ has demonstrated high reliability and substantial convergent validity. The internal consistency of the PSWQ in the current study was $\alpha=.92$. 
Chapter III

Results

*Examination of dataset fitness*

This first set of analyses sought to determine the fitness of the dataset in terms of psychometric properties, data normality, and outliers. To determine dataset fitness normality of the variables was examined which revealed that interpersonal functioning (measured with the IIP) was slightly positively skewed (.14), depression (measured with the CES-D) was slightly positively skewed (.253) and mindfulness (measured with the FFMQ) was slightly positively skewed (.30). All other variables were within the normal range. Transforming worry and interpersonal functioning did not yield a different pattern of results; therefore, all variables were analyzed in their raw form. No outliers existed for any variables, based on the criteria of three standard deviations above or below the mean (Tabachnick & Fidell, 2007).

The second set of analysis sought to determine if individuals with missing data varied significantly on gender, or any of the measures used (i.e. FFMQ, IIP, CES-D, or PSWQ). Results indicated groups did not significantly differ on gender or measures.
Examination of psychopathology indices and mindfulness in relation to interpersonal problems

The central hypothesis of this study was that lower levels of dispositional mindfulness would predict deficits in interpersonal functioning above and beyond worry and depressive symptoms. To test the central hypothesis a hierarchical regression analysis was conducted to determine if lower scores on mindfulness would predict deficits in interpersonal functioning above and beyond scores of worry and depression. When the regression was examined, lower mindfulness significantly predicted less interpersonal functioning above and beyond symptoms of depression and anxiety. In addition, when mindfulness was added to the regression, anxiety was no longer a significant predictor of less interpersonal functioning. (see Table 2).
Discussion

The current study sought to examine whether symptoms of psychopathology could predict difficulties with interpersonal functioning and if dispositional mindfulness would have effects on interpersonal functioning above and beyond symptoms of psychopathology. Results revealed that high levels of depression and worry predicted deficits in interpersonal functioning. Further, lower dispositional mindfulness significantly predicted deficits in interpersonal functioning above and beyond depression and worry.

In the current study higher levels of depressive symptoms and worry were predictive of deficits in interpersonal functioning. These findings replicate previous research indicating correlations between low levels of interpersonal functioning, symptoms of psychopathology, and distress (Horowitz & Vitkus, 1986). It is possible that the frustrations which come from negative interpersonal interaction (i.e. failure to elicit a wanted complement and failure to provide others with the fulfillment of their motives) lead to an increase in the symptoms of psychopathology and prolong their duration. Past research has shown that negative interpersonal interactions lead to increased distress (Horowitz, 2004)
and interpersonal problems are often indicated when an individual seeks therapy for mental illness (Puschner et al. 2005). Correcting the negative cycles associated with interpersonal functioning and symptoms of psychopathology (Coyne, 1976) may serve to reduce recovery time and prevent relapse of symptoms. These findings further suggest the importance of addressing interpersonal problems in a therapeutic setting.

Interpersonal problems are indicated in the development and, maintenance of mental disorders (Puschner et al. 2005). It is possible that deficits of specific interpersonal behaviors (i.e. being sociable, intimate, and dominating) are the main risk factor in developing specific symptoms of psychopathology. The symptoms related to mood disorders and interpersonal problems vary between individuals in type, quantity, and intensity (APA, 2004; Horowitz & Vitkus, 1986). Future research should focus on the relationship between specific interpersonal domains and specific symptoms of psychopathology. Studies have already shown a strong relationship between depressive symptoms and deficits in intimacy, social behavior, and assertiveness (Horowitz & Vitkus, 1986). However, strong relationships have not been made between specific symptoms and the interpersonal deficits attached to them.

In the present study lower mindfulness predicted concurrent deficits in interpersonal functioning above and beyond depressive symptoms and worry. This finding suggests that dispositional mindfulness may be significantly related to the development and maintenance of interpersonal problems than symptoms.
of psychopathology. The central theme of interpersonal functioning is the reciprocity of behavior; i.e., one individual’s behavior elicits a response, or complement, of the other (Horowitz, 2004). The awareness of internal events and ability to describe thoughts and emotions which is inherent in mindfulness (Baer et al. 2006) may serve to facilitate interpersonal interaction by helping an individual to recognize what their social motives are. If individuals are aware of their social motives they may be more able to guide a social interaction toward fulfilling them. Mindfulness enables an individual to embrace a non-judgmental attitude (Baer et al. 2006), the ability to be non-judgmental may decrease the frequency an individual misinterprets social cues. By reducing the amount of misinterpreted social cues an individual can increase the likelihood of providing a social response, which is more complementary toward the person who elicits it. The improvement in an individual’s ability to fulfill their motives and the motives of those in their social circle can reduce the likelihood of negative affect (Horowitz, 2004). Therefore, mindfulness may create a buffer that improves interpersonal relationships. Research is needed to determine if certain facets of mindfulness effect interpersonal functioning differently. For example, the ability to be non-judgmental may have a much larger impact on positive social relationships than internal awareness.
Limitations

This study consisted of a relatively small population of college students. Therefore, replication of this study in a larger, more diverse, population is necessary. The population in the current study consisted primarily of young, Caucasian participants and may not generalize to other populations. In addition, interpersonal functioning was measured as a whole. It is possible that only certain areas of interpersonal functioning are affected by mindfulness and, not knowing this impacts the total understanding of the current findings. Finally, it is unknown how the “at-risk” for drop out population is different from other populations; this difference could create confounding variables and warrants further investigation. Finally, participants completed questionnaires through an online format in the environment of their choice. It is possible that different environments created distractions or an inability for the individual to be truthful while completing the questionnaires.
Table 1. Means and Standard Deviations of Inventory of Interpersonal Problems, Five Facets of Mindfulness Questionnaire, Penn State Worry Questionnaire, and Center for Epidemiological Studies Depression Scale.

<table>
<thead>
<tr>
<th></th>
<th>Total Sample (N=128)</th>
</tr>
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<tbody>
<tr>
<td><strong>IIP</strong></td>
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</tr>
<tr>
<td>Mean</td>
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<tr>
<td>SD</td>
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<td><strong>FFMQ</strong></td>
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<tr>
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<td>SD</td>
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<td><strong>PWSQ</strong></td>
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<tr>
<td><strong>CES-D</strong></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>17.77</td>
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<tr>
<td>SD</td>
<td>10.49</td>
</tr>
</tbody>
</table>

*Note. IIP= Inventory of Interpersonal Problems FFMQ= Five Facets of Mindfulness Questionnaire, PSWQ= Penn State Worry Questionnaire, CES-D= Center for Epidemiological Studies Depression Scale.*
Table 2. Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictors</th>
<th>( B )</th>
<th>( t )</th>
<th>( p )</th>
<th>( R^2 \text{Change} )</th>
<th>( F \text{ Change} )</th>
<th>( df )</th>
<th>( p )</th>
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<td>1</td>
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<td>.000</td>
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<td>2</td>
<td>PSWQ</td>
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<td>2.39</td>
<td>0.018</td>
<td>0.03</td>
<td>5.73</td>
<td>(1, 125)</td>
<td>.018</td>
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<tr>
<td>3</td>
<td>FFMQ</td>
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<td>-3.23</td>
<td>0.002</td>
<td>0.04</td>
<td>10.43</td>
<td>(1, 124)</td>
<td>.002</td>
</tr>
</tbody>
</table>

*Note. FFMQ= Five Facets of Mindfulness Questionnaire, PSWQ= Penn State Worry Questionnaire, CES-D= Center for Epidemiological Studies Depression Scale.*
References


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