MINDFULNESS AND COMMUNICATION APPREHENSION.

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Mindfulness and Communication Apprehension. Examining the Relationship

Between the FFMQ and the PRCA-24.

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Approval Date
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DEDICATION

To my mother and father, who have continually and endlessly supported me throughout all these years. Without your love and support, I would not be where I am today. I continue to learn so much from both of you and words cannot even begin to articulate the love and gratitude I have.
Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom.

~ Victor Frankl
ABSTRACT OF THE THESIS

Mindfulness and Communication Apprehension. Examining the Relationship Between the FFMQ and the PRCA-24.

by

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Master of Arts in Communication
San Diego State University, 2011

Communication apprehension, the fear of real or anticipated communication, affects the vast majority of Americans. In fact, less than 25% of all Americans are comfortable communicating to some degree and almost every American experiences communication apprehension in their lives. Mindfulness is usually defined to include bringing one’s complete attention to the experiences occurring in the present moment, in a nonjudgmental or accepting way. To date, there have been no studies examining whether the relationship between mindfulness and communication apprehension. This present study sought to examine the correlation (if any) between these two concepts.

In order undertake the investigation of the relationship between mindfulness and communication apprehension, two questionnaires, the Personal Report of Communication Apprehension – 24 Item Scale and the Five-Facet Mindfulness Questionnaire, were administered to 200 respondents at a large, public southwestern university. Results indicate that overall self-reported levels of mindfulness strongly and negatively correlated with self-reported levels of communication apprehension. In addition, the ‘Describe’ dimension of the Five-Facet Mindfulness Questionnaire showed the strongest negative correlation with every dimension of the PRCA-24 while the ‘Observe’ dimension showed the weakest negative correlation with every dimension of the PRCA-24. Overall, the results indicate that there is indeed a relationship between mindfulness and communication apprehension. Future studies needed to be conducted in order to investigate and examine the nature of this relationship.
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CHAPTER 1

RATIONALE

Academic research on the construct of mindfulness has increased greatly over the past decade. According to the research database EBSCOhost, over 1000 scholarly, peer-reviewed articles relating to mindfulness have been published since the year 2001. Mindfulness is commonly defined as the process of consciously attending to one’s own moment-to-moment experience (Brown & Ryan, 2003) and can be thought of as both a statelike and a traitlike quality (Bishop et al., 2004; Brown & Ryan, 2004; Segal, Williams, & Teasdale, 2002). It has also been described as a skill (or set of skills) that can be developed with practice (Bishop et al., 2004; Linehan, 1993). Research on the construct of mindfulness tends to blend the definitions of mindfulness between a state-like quality of doing something (i.e., practicing mindfulness) and a trait-like quality of being a certain way (i.e., being mindful) (Frewen, Evans, Maraj, Dozois, & Partridge, 2008). This ambiguity tends to cloud the definition and operationalization of mindfulness. This paper discusses both aspects of mindfulness as currently defined in the research: a trait an individual possesses to some varying degree and a specific practice an individual can undertake.

The mindfulness construct has excited academicians, researchers, and scholars for several reasons. First, mindfulness in contemporary psychology has been examined as an approach for increasing awareness to any perturbing emotional distress and learning how to skillfully respond to such maladaptive behavior (Bishop et al., 2004). Specifically, scholars and researchers are interested in mindfulness as a potential treatment that can enhance emotional well-being and mental health. Several studies have looked at the mediating effect of mindfulness on psychological outcomes (Bränström, Brandberg, & Moskowitz, 2010) and accumulated evidence that mindfulness shows beneficial effects on a variety of psychological outcomes (Brown, Ryan, & Creswell, 2007) as well as an increase in health & well-being (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006; Baer et al., 2008; Brown et al., 2007; Diener, Suh, & Lucas, 1999; Lau et al., 2006).
Second, research on mindfulness has typically shown that mindfulness has a strong probability to be significantly correlated with lower levels of anxiety in individuals. Hofmann, Sawyer, Witt, and Oh (2010), in their meta-analysis examining the effect of mindfulness-based therapy on anxiety and depression, found that a mindfulness-based intervention/therapy helped to decrease anxiety and mood disorder symptoms in patients who participated in the intervention/therapy. Many researchers have found that self-reported levels of mindfulness are significantly and negatively correlated with depressive affect, negative cognitions, and social anxiety (Brown & Ryan, 2003; Dekeyser, Raes, Leijssen, Leysen, & Dewulf, 2008; Gilbert & Christopher, 2010).

In addition, a multitude of research studies have investigated the positive effects of mindfulness on everything from stress experienced by medical students to depression experienced by clinical patients (Biegel, Brown, Shapiro, & Schubert, 2009; Evans et al., 2008; Jain et al., 2007; Kabat-Zinn et al., 1992). Roberts and Danoff-Burg (2010) administered the Five-Facet Mindfulness Questionnaire (one of the assessments used in this study) and found that mindfulness was significantly negatively associated with self-reported levels of binge eating, poor sleep quality, and higher stress in college students. They also found the higher levels of self-reported mindfulness (as measured by the FFMQ) were associated with self-reported levels of physical and psychological functioning (Roberts & Danoff-Burg, 2010). Indeed, the list of research studies examining various aspects of mindfulness is growing quickly, with newer studies utilizing tools like neuro-imaging or biofeedback.

To date, however, there have been no studies examining whether higher levels of self-reported mindfulness correlates with lower levels of self-reported communication apprehension. Communication apprehension, the fear of real or anticipated communication, affects the majority of Americans (Sullivan, 2009). These experiences can include specific contexts, like asking for a date, giving a speech, or meeting new people or can generally apply to one’s disposition and personality. In the recent past, public speaking, encompassed by communication apprehension, has been reported as the single most common fear of the general public- surpassing fears of heights, the dark, and even sickness and loneliness (Buss, 1980). Communication apprehensives tend to avoid interpersonal communication in order to prevent experiencing the fear or anxiety they have learned to associate with the specific
communication encounter (McCroskey, 1977). This phenomenon is pervasive throughout American society and a substantial minority of people experience it to some degree in their daily lives.

The current study seeks to identify the relationship (if any) between mindfulness and communication apprehension. Investigating facets of mindfulness is likely to improve our understanding of the specific skills that are cultivated through the practice of mindfulness and how these are related to psychological adjustment (Baer et al., 2008). In addition, investigating the relationship between mindfulness and communication apprehension can help scholars gain a deeper, more nuanced understanding of both concepts and how they interact with each other. More importantly, this study might help to illuminate just exactly how the mindfulness construct can be utilized to help people alleviate communication apprehension or reduce the level of communication apprehension they experience.

**MINDFULNESS DEFINED**

Most scholars in the academic literature have defined mindfulness as a state of consciousness involving present-centered attention and awareness (e.g. Brown & Ryan, 2003; Kabat-Zinn, 1990; Shapiro, Carlson, Astin, & Freedman, 2006; Van Dam, Earleywine, & Danoff-Burg, 2009). This state of consciousness is unique to mindfulness; it is a type of attention that focuses on moment-to-moment experience (thoughts, sensations, emotions, and cognitive experiences) in a manner that is present-centered, non-elaborative, non-judgmental, and open to a variety of experiences (Bishop et al., 2004; Brown & Ryan, 2003; Kabat-Zinn, 1990; Marlatt & Kristeller, 1999; Segal et al., 2002). This dispassionate observation focuses attention on thoughts and feelings without automatically reacting or trying to alter thoughts, moods, or feelings. Instead, attention and awareness is given to these temporary internal states without becoming subsumed by them (Bishop et al., 2004; Brown & Ryan, 2003; Shapiro et al., 2006). Simply put, mindfulness is recognizing the current feelings that have arisen without trying to explain or interpret these feelings, thus enabling a more reflective response to different situations (as opposed to a reflexive response) (Bishop et al., 2004). Fear and anxiety can be recognized and acknowledged without letting such experiences become overwhelming.
Since meditation teaches unbiased observation of all stimuli, it may reduce maladaptive forms of selective attention (Baer et al., 2008). Experienced meditators may be able to notice a wide range of internal and external stimuli, rather than focusing selectively on the threatening or unpleasant ones or being preoccupied by a certain set of emotions. Attention shifts flexibly rather than becoming rigidly absorbed in any particular class of stimuli. Different responses to observed internal stimuli are learned and implemented. Observation to inner stimuli is given without placing judgment or reacting in maladaptive ways.

Several authors give a more in-depth definition of mindfulness. The authors of the Five-Facet Mindfulness Questionnaire (i.e. Baer et al., 2006; Baer et al., 2008), write that mindfulness includes five component skills: observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience.

Observing includes noticing or attending to internal and external experiences, such as sensations, cognitions, emotions, sights, sounds, and smells. Describing refers to labeling internal experiences with words. Acting with awareness includes attending to one’s activities of the moment and can be contrasted with behaving mechanically while attention is focused elsewhere (often called automatic pilot). Nonjudging of inner experience refers to taking a nonevaluative stance toward thoughts and feelings. Nonreactivity to inner experience is the tendency to allow thoughts and feelings to come and go, without getting caught up in or carried away by them. (Baer et al., 2008, p. 330)

**MECHANISMS OF MINDFULNESS**

In the past decade, several researchers have begun to conceptualize mindfulness as a set of skills. The construct is comprised of three qualities as defined by Brown et al. (2007) including insight, exposure, and non-attachment. According to the authors, metacognitive insight is the ability to consciously perceive phenomena (i.e., thoughts and feelings) as insubstantial in nature. That is, thoughts are ‘just thoughts’ and feelings are ‘just feelings’ rather than accurate reflections of reality – any current feelings and experiences are detached and dissolved. Exposure is the ability to sustain a ‘clear seeing’ of internal and external phenomena they are and to voluntarily remain with unpleasant thoughts and emotions without judgment (Brown et al., 2007). This lack of judgment is known as nonattachment. It is the acceptance of and willingness to be with whatever thoughts and emotions arise.
Researchers’ previous studies have identified metacognitive insight as a key mechanism in mindfulness. Mindfulness entails a distancing between thoughts and reactions to those thoughts; there is recognition between objective reality and thoughts and feelings that arise in the mind (Frewen et al., 2008). Bishop et al. (2004) consider mindfulness to be a metacognitive skill (cognition about one’s cognition) because its evocation requires both control of cognitive processes (i.e., attention and self-regulation) and monitoring of the stream of consciousness. This cognitive flexibility helps to regulate emotions (Frewen et al., 2008) by introducing a “space” between perception of thoughts, feelings, and emotions and cognitive responses (Bishop et al., 2004, p. 232).

Emotional regulation and cognitive flexibility is another key mechanism in mindfulness. The decentered perspective of mindfulness that elicits insight may be able to discourage automatic, habitual thought patterns, including rumination and obsession (Teasdale et al., 2002) and encourage a willingness to face and accept threatening thoughts and emotions (Brown et al., 2007). Exposure may lead to desensitization, a reduction in emotional reactivity, and an increase in effective affect regulation (Borkovec, 2002). Finally, nonattachment may be able to facilitate equanimity whatever the situation may be and may reflect a stable experience of well-being not contingent on circumstances (McIntosh, 1997; Tart, 1994). In simpler terms, nonattachment may lead to gradual decoupling habitual patterns (e.g., emotional reactions) from certain situations.

**MINDFULNESS AND PSYCHOLOGICAL FUNCTIONING**

Mindfulness as a set of skills has been shown in several studies to reduce psychological symptoms as well as increase health and well-being (Baer et al., 2006; Brown et al., 2007; Diener et al., 1999; Lau et al., 2006). In fact, a multitude of research studies have investigated the effects of mindfulness and the practice of mindfulness meditation on everything from stress experienced by medical students to depression experienced by clinical patients (e.g., Biegel et al., 2009; Evans et al., 2008; Jain et al., 2007; Kabat-Zinn et al., 1992). In these studies, participants who reported or exhibited a higher level of mindfulness showed lower levels of emotional disturbance (e.g., depressive symptoms, anxiety, and stress) and higher levels of subjective well-being (e.g., high positive affect, satisfaction with life), and higher levels eudemonic well-being (e.g., self-actualization, vitality) (Brown & Ryan,
Researchers have reported that increased levels of mindfulness correlated with a greater willingness to tolerate and remain experientially present with unpleasant stimuli (i.e. thoughts, emotions) without cognitive reactivity (Eifert & Heffner, 2003; Levitt, Brown, Orsillo, & Barlow, 2004). This in turns imparts an increased ability in affect regulation to meditators— they often have a greater awareness, understanding, and acceptance of emotions and a greater ability to correct or repair unpleasant moods (Arch & Craske, 2006; Baer, Smith, & Allen, 2004; Broderick, 2005; Brown & Ryan, 2003; Brown et al., 2007).

**COMMUNICATION APPREHENSION**

Communication apprehension (CA) is a concept that is well known in the communication discipline. Indeed, communication scholars have written about it extensively since the mid-1970s. A query of several research databases with the phrase “communication apprehension” yields search results of over 100 articles.

Communication apprehension, which affects the vast majority of Americans, refers to the fear of real or anticipated communication, and is closely related to a number of concepts, including reticence, shyness, unwillingness to communicate, and stage fright (Allen & Bourhis, 1996). McCroskey (1977) defines the phenomenon as “an individual’s level of fear or anxiety associated with either real or anticipated communication with another person or persons” (p. 78). People who experience communication apprehension tend to avoid interpersonal communication in order to prevent experiencing the fear or anxiety they have learned to associate with the specific communication encounter (Allen & Bourhis, 1996; McCroskey, 1977).

Communication apprehension has been studied in various contexts and relationships. Some early work into the construct of communication apprehension revealed that it has a significant relationship with several personality variables, including a positive correlation with maladaptive personality characteristics like anxiety, dogmatism, external control, and a negative correlation with emotional maturity, surgency, confidence, and self-control (McCroskey, Daly, & Sorensen, 1976). High levels of communication apprehension were found to be associated with a wide range of socially maladaptive personality characteristics.
In addition, in their meta-analysis of 36 studies with over 3700 participants, Allen and Bourhis (1996) found that there was a consistent negative relationship between the level of communication apprehension and communication skills (r = -0.22). This negative relationship indicates that more apprehension leads to a diminishing in the quantity and quality of the communication behavior. Furthermore, students in the traditional educational environment experiencing high CA are at a distinct disadvantage when compared to their low or moderate counterparts (Bourhis & Allen, 1992).

**MINDFULNESS AND COMMUNICATION APPREHENSION**

Mindfulness’ relationship with communication apprehension has yet to be explored. Researchers have reported that increased mindfulness is related to decreases in psychological symptoms and negatively correlated with many of the personality traits typically exhibited communication apprehensives (Baer et al., 2008). Increased mindfulness might lead to a decrease in communication apprehension. Frewen et al. (2008) found in their study that greater self-reported levels of dispositional mindfulness significantly correlated with a decreased frequency of negative thoughts. In addition, higher self-reported levels of dispositional mindfulness experience correlated with a decrease in the intensity of negative thoughts. A greater level of dispositional mindfulness might mean an increased ability to release negative thoughts and perceive negative thoughts as more controllable, less intrusive, and not as bothersome (Frewen et al., 2008). The capacity to let go of negative thoughts may increase cognitive flexibility that allow direction of cognitive attention toward more adaptive lines of thought, problem solving, and courses of action. High self-reported levels of mindfulness might correlate with the ability to recognize negative emotions like anxiety or fear common to communication apprehension without becoming overwhelmed by these emotions. These predictions are listed as a research question and as hypotheses (listed in Table 1).

**RQ1:** Is there a relationship between an individual’s self-reported level of mindfulness and their self-reported level of communication apprehension?

**H1a:** An individual's PRCA-24 score in the 'group' dimension negatively correlates with an individual's FFMQ score in the 'describing' dimension.

**H1b:** An individual's PRCA-24 score in the 'meeting' dimension negatively correlates with an individual's FFMQ score in the 'describing' dimension.
### Table 1. FFMQ & PRCA-24 Correlation Direction

<table>
<thead>
<tr>
<th>PRCA-24 (Communication Apprehension)</th>
<th>Types</th>
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<tbody>
<tr>
<td></td>
<td>Group</td>
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<tr>
<td>H1a</td>
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<td>H2a</td>
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<tr>
<td>H3a</td>
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<td>H4a</td>
<td></td>
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<tr>
<td>H5a</td>
<td></td>
</tr>
</tbody>
</table>

- H1c: An individual's PRCA-24 score in the 'dyadic' dimension negatively correlates with an individual's FFMQ score in the 'describing' dimension.

- H1d: An individual's PRCA-24 score in the 'public' dimension negatively correlates with an individual's FFMQ score in the 'describing' dimension.

- H2a: An individual's PRCA-24 score in the 'group' dimension negatively correlates with an individual's FFMQ score in the 'acting with awareness' dimension.

- H2b: An individual's PRCA-24 score in the 'meeting' dimension negatively correlates with an individual's FFMQ score in the 'acting with awareness' dimension.

- H2c: An individual's PRCA-24 score in the 'dyadic' dimension negatively correlates with an individual's FFMQ score in the 'acting with awareness' dimension.

- H2d: An individual's PRCA-24 score in the 'public' dimension negatively correlates with an individual's FFMQ score in the 'acting with awareness' dimension.

- H3a: An individual's PRCA-24 score in the 'group' dimension negatively correlates with an individual's FFMQ score in the 'nonjudging' dimension.

- H3b: An individual's PRCA-24 score in the 'meeting' dimension negatively correlates with an individual's FFMQ score in the 'nonjudging' dimension.

- H3c: An individual's PRCA-24 score in the 'dyadic' dimension negatively correlates with an individual's FFMQ score in the 'nonjudging' dimension.

- H3d: An individual's PRCA-24 score in the 'public' dimension negatively correlates with an individual's FFMQ score in the 'nonjudging' dimension.

- H4a: An individual's PRCA-24 score in the 'group' dimension negatively correlates with an individual's FFMQ score in the 'nonreactivity' dimension.
H4b: An individual's PRCA-24 score in the 'meeting' dimension negatively correlates with an individual's FFMQ score in the 'nonreactivity' dimension.

H4c: An individual's PRCA-24 score in the 'dyadic' dimension negatively correlates with an individual's FFMQ score in the 'nonreactivity' dimension.

H4d: An individual's PRCA-24 score in the 'public' dimension negatively correlates with an individual's FFMQ score in the 'nonreactivity' dimension.

H5a: An individual's PRCA-24 score in the 'group' dimension negatively correlates with an individual's FFMQ score in the 'observe' dimension.

H5b: An individual's PRCA-24 score in the 'meeting' dimension negatively correlates with an individual's FFMQ score in the 'observe' dimension.

H5c: An individual's PRCA-24 score in the 'dyadic' dimension negatively correlates with an individual's FFMQ score in the 'observe' dimension.

H5d: An individual's PRCA-24 score in the 'public' dimension negatively correlates with an individual's FFMQ score in the 'observe' dimension.

In addition, principal components analyses of the FFMQ and PRCA will also be undertaken.
CHAPTER 2

METHOD

This section specifies the participants and procedures for the study as well as scales and measures that were employed and finally the analyses used to test hypotheses and research questions. The questionnaires used for this study may be found in Appendix A.

PARTICIPANTS

Participants consisted of 221 respondents comprised mainly of undergraduate students at a large public southwestern university. The sample was comprised of 67% females, 29% males, and 4% did not answer. The sample’s ethnic background was 56% Caucasians, 14% Asian/Pacific Islanders, 12% Hispanic, 10% Other/Multi-Racial, 1% Black/African-American, 2% declined to respond, and 5% simply did not answer the question. The average age was 21.68 (SD = 4.90) ranging from 18 to 54. The sample’s education level was comprised of 3% responding 12th grade or less, 20% responding graduated high school or equivalent, 19.0% responding Associate’s Degree, 2% responding Bachelor’s Degree, 51% responding some college, no degree, and 5% did not answer.

PROCEDURE

Students were asked to volunteer for a self-report survey regarding mindfulness and communication apprehensions. The department’s research participation website offered extra credit for participation. The study was posted on the website with a link to the survey. After clicking the link, participants were taken to SurveyGizmo and given a consent form for their electronic “signature”. Only after participants had clicked “I Agree” could they proceed and be given the survey.

MEASUREMENT

The section contains brief descriptions for the measures of mindfulness and communication anxiety used to assess participants in the current study.
Mindfulness

Baer et al.’s (2006) Five-Facet Mindfulness Questionnaire was used to measure participants’ level of mindfulness. It was created when the researchers conducted an exploratory factor analysis where 613 students who completed five previous, independently developed mindfulness questionnaires: the Freiburg Mindfulness Inventory (FMI; Buchheld, Grossman, & Walach, 2001), the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), the Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004), the Cognitive and Affective Mindfulness Scale (CAMS; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007), and the Mindfulness Questionnaire (MQ; Chadwick, Hember, Mead, Lilley, & Dagnan, 2005). This allowed the different instruments to combine to form factors and provided an empirical integration of these different attempts to operationalize and understand mindfulness (Baer et al., 2008). The result of factor analyses of these five questionnaires resulted in a combined item pool that resulted in a 39-item questionnaire measuring mindfulness in five subscales (Baer et al., 2006; Baer, Samuel, & Lykins, 2011). All 39 items are close-ended items that are scaled on a 5-point Likert-type response continuum.

Baer et al. (2006) found five distinct factors: observing (noticing or attending to internal and external experience), describing (labeling internal experiences with words), acting with awareness (paying attention to the internal state currently being experienced at the moment), nonjudging of inner experience (taking a nonevaluative stances towards thoughts and feelings), and nonreactivity to inner experience (allowing thoughts and feelings to come and go, without getting caught up or carried away in them). Selecting items with the highest loadings on their respective factor and low loadings on all other factors created the scales for each factor. Baer et al. (2008) found that the total mindfulness score for the FFMQ had a Cronbach’s alpha coefficient of 0.93. The internal consistencies of the subscale were 0.83 for observing, 0.95 for describing, 0.90 for acting with awareness, 0.89 for non-judging of inner experience, and finally, 0.83 for nonreactivity to inner experience.

Recent studies of the FFMQ (Baer et al., 2006; Baer et al., 2008; Carmody & Baer, 2008) have shown that the five facets have adequate to very good internal consistency in several samples, including students, nonmeditating community members, and experienced meditators. Most alpha coefficients have been more than .80, except for the nonreactivity
scale in student samples, where alpha has been somewhat lower (.67-.72) (Baer et al., 2011). The five dimensions are moderately correlated with each other, and with a few exceptions are correlated in the expected directions with a wide variety of constructs that should be related to mindfulness, such as emotional intelligence, thought suppression, and experiential avoidance (Baer et al., 2006).

In this study, a principal components analysis was conducted on the Five Facet Mindfulness Questionnaire. In a five-factor factor solution, every question in the 39-item assessment loaded on to its relevant factor appropriately, replicating past factor analyses of previous studies (see Appendix B). In the principal components analysis, the 5-factor solution accounted for 49.12% of the variance. The overall Cronbach’s alpha coefficient of the questionnaire was .88. The Cronbach’s alpha coefficient for each dimension was .73 for observing, .89 for describing, .86 for Acting with Awareness, .87 for nonjudging, and .67 for nonreactivity. Our principal components analysis reproduced similar results as previous studies and therefore, the a priori five-dimension factor structure was utilized.

Mindfulness as a theoretical construct is still in the early to middle stages, having been operationalized in the research literature about a decade ago but it has shown considerable predictive validity. However, mindfulness has shown significant correlations with psychological well-being in previous studies (e.g. Bränström, et al., 2010). Presently, the FFMQ represents mindfulness as it is currently conceptualized in research literature (Bränström et al., 2010). Researchers have found significant correlations between self-reported levels of mindfulness as measured with the FFMQ and emotional intelligence (Baer et al., 2004; Baer et al., 2006), neuroticism (Baer et al., 2006), psychopathology (Baer et al., 2006), psychological well-being (Bränström et al., 2010), and other phenomena.

**Communication Apprehension**

The PRCA-24 is a self-report assessment that contains 24 items (5-point Likert Scales) based on four communication contexts most relevant to communication apprehension: public speaking, speaking in small groups, speaking in meetings, and speaking in dyads (Bodie, 2010; McCroskey, 1982). It has been used quite extensively in the communication literature: in the past 30 years, it has been cited or used in over 280 scholarly articles. The six-item public speaking subscale generally produces reliability scores in the
range of .80 to .85. Levine & McCroskey (1990) has demonstrated construct, concurrent, discriminant, and predictive validity for the scale and the PRCA-24’s content validity was confirmed by McCroskey, Beatty, Kearney, and Plax (1985).

This study’s principal components analysis was able to replicate the results of past studies’ factor analysis. While the initial principal components analysis revealed a high eigen value for the first dimension (all 24 items loaded on one communication apprehension dimension), the alpha coefficients for the original four dimensions were reasonably high, with a .88 Cronbach’s Alpha coefficient for ‘Speaking in Groups’, .89 coefficient for ‘Speaking in Meetings’, .85 coefficient for ‘Speaking in Dyads’, and .88 for ‘Public Speaking.’ The overall Cronbach’s Alpha coefficient for the PRCA-24 was .95. Overall, in the principal components analysis, the 4-factor solution accounted for 64.31% of the variance. While factor loading weighed quite heavily into one factor, the a priori factor loading for the 24-item measure was employed to retain its original factor structure. In addition, the Cronbach’s Alpha coefficients were reasonably high for the individual dimensions as well as the overall measure.

The PRCA-24 has demonstrated significant correlations between communication apprehension and other phenomena, including and public speaking attitude (Feingold, 1983), self-reported levels of self-confidence (Manning & Ray, 1993), career thoughts (Meyer-Griffith, Reardon, & Hartley, 2009), and cross-cultural communication apprehension (Osman, Nayan, Mansor, Maesin, & Shafie, 2010; Pribyl, Keaten, Sakamoto, & Koshikawa, 1998; Pryor, Butler, & Boehringer, 2005) to name a few. It has been the instrument of choice in scholars’ endeavor to measure communication apprehension.

**Statistical Analysis**

This study utilized correlation coefficients measure to test the relationships between each dimension in the FFMQ and each dimension in the PRCA-24. Alpha was set at .05 one tailed for all tests. Power was in excess of .99 for medium and large effects. Principal components analysis was conducted on both measures. As reported previously, the overall Cronbach’s Alpha coefficient for the PRCA-24 was .95 and the overall Cronbach’s alpha coefficient of the FFMQ was .88. Effect sizes were reported based on Cohen’s (1988) definitions of small, medium, and large effect sizes (c.f. Cohen, 1988, p. 115).
CHAPTER 3

RESULTS

All hypotheses will be tested using a one-tailed zero-order correlation and as an overview, the zero-order correlation matrix is reported in Table 2.

Table 2. Correlation Matrix of FFMQ and PRCA-24 Variables

<table>
<thead>
<tr>
<th></th>
<th>PRCA Group</th>
<th>PRCA Meetings</th>
<th>PRCA Dyadic</th>
<th>PRCA Speech</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFMQ Observe</td>
<td>-.167*</td>
<td>-.202**</td>
<td>-.177**</td>
<td>-.116</td>
</tr>
<tr>
<td></td>
<td>.021</td>
<td>.005</td>
<td>.014</td>
<td>.112</td>
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<td></td>
<td>191</td>
<td>188</td>
<td>190</td>
<td>190</td>
</tr>
<tr>
<td>FFMQ Describe</td>
<td>-.431**</td>
<td>-.485**</td>
<td>-.564**</td>
<td>-.413**</td>
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<tr>
<td>FFMQ Acting</td>
<td>.249**</td>
<td>.333**</td>
<td>.313**</td>
<td>.288**</td>
</tr>
<tr>
<td>With Awareness</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>192</td>
<td>188</td>
<td>191</td>
<td>190</td>
</tr>
<tr>
<td>FFMQ Nonjudging</td>
<td>.348**</td>
<td>.431**</td>
<td>.369**</td>
<td>.342**</td>
</tr>
<tr>
<td></td>
<td>.001</td>
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<tr>
<td></td>
<td>197</td>
<td>193</td>
<td>196</td>
<td>195</td>
</tr>
<tr>
<td>FFMQ Nonreactivity</td>
<td>-.200**</td>
<td>-.214**</td>
<td>-.219**</td>
<td>-.245**</td>
</tr>
<tr>
<td></td>
<td>.005</td>
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<td>.002</td>
<td>.001</td>
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<tr>
<td></td>
<td>192</td>
<td>189</td>
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</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

RESEARCH QUESTION 1

RQ1 asked whether there is a relationship between an individual’s self-reported level of mindfulness and their self-reported level of communication apprehension. This research question was confirmed. Correlational analyses revealed a significant, large-sized effect, negative relationship between the overall FFMQ score and the overall PRCA-24 score ($r=-.57$, $r^2=.33$, $p < .01$).
**HYPOTHESIS 1A**

H1a, which predicted that an individual’s PRCA-24 score in the ‘group’ dimension negatively correlates with an individuals’ FFMQ score in the ‘describing’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Describe’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r = -.43, r^2 = .18, p < .01$).

**HYPOTHESIS 1B**

H1b, which predicted that an individual’s PRCA-24 score in the ‘meeting’ dimension negatively correlates with an individuals’ FFMQ score in the ‘describing’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Describe’ dimension and the PRCA-24’s ‘Meeting Communication Apprehension’ dimension ($r = -.49, r^2 = .24, p < .01$).

**HYPOTHESIS 1C**

H1c, which predicted that an individual’s PRCA-24 score in the ‘dyadic’ dimension negatively correlates with an individuals’ FFMQ score in the ‘describing’ dimension, was supported. Correlational analyses revealed a significant, large-sized effect, negative relationship between FFMQ’s ‘Describe’ dimension and the PRCA-24’s ‘Dyadic Communication Apprehension’ dimension ($r = -.56, r^2 = .31, p < .01$).

**HYPOTHESIS 1D**

H1d, which predicted that an individual’s PRCA-24 score in the ‘public speech’ dimension negatively correlates with an individuals’ FFMQ score in the ‘describing’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Describe’ dimension and the PRCA-24’s ‘Public Speech Communication Apprehension’ dimension ($r = -.41, r^2 = .17, p < .01$).

**HYPOTHESIS 2A**

H2a, which predicted that an individual’s PRCA-24 score in the ‘group’ dimension negatively correlates with an individuals’ FFMQ score in the ‘acting with awareness’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect,
negative relationship between FFMQ’s ‘Acting with Awareness’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r = -.25, r^2 = .31, p < .01$).

**Hypothesis 2b**

$H_{2b}$, which predicted that an individual’s PRCA-24 score in the ‘meeting’ dimension negatively correlates with an individual’s FFMQ score in the ‘acting with awareness’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Acting with Awareness’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r = -.33, r^2 = .11, p < .01$).

**Hypothesis 2c**

$H_{2c}$, which predicted that an individual’s PRCA-24 score in the ‘dyadic’ dimension negatively correlates with an individual’s FFMQ score in the ‘acting with awareness’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Acting with Awareness’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r = -.31, r^2 = .10, p < .01$).

**Hypothesis 2d**

$H_{2d}$, which predicted that an individual’s PRCA-24 score in the ‘public speech’ dimension negatively correlates with an individual’s FFMQ score in the ‘acting with awareness’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Acting with Awareness’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r = -.33, r^2 = .11, p < .01$).

**Hypothesis 3a**

$H_{3a}$, which predicted that an individual’s PRCA-24 score in the ‘group’ dimension negatively correlates with an individual’s FFMQ score in the ‘nonjudging’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Nonjudging’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r = -.35, r^2 = .12, p < .01$).
HYPOTHESIS 3B

H₃b, which predicted that an individual’s PRCA-24 score in the ‘meeting’ dimension negatively correlates with an individuals’ FFMQ score in the ‘nonjudging’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Nonjudging’ dimension and the PRCA-24’s ‘Meeting Communication Apprehension’ dimension ($r= -.43, r^2 = .19, p < .01$).

HYPOTHESIS 3C

H₃c, which predicted that an individual’s PRCA-24 score in the ‘dyadic’ dimension negatively correlates with an individuals’ FFMQ score in the ‘nonjudging’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Nonjudging’ dimension and the PRCA-24’s ‘Dyadic Communication Apprehension’ dimension ($r= -.37, r^2 = .19, p < .01$).

HYPOTHESIS 3D

H₃d, which predicted that an individual’s PRCA-24 score in the ‘public speech’ dimension negatively correlates with an individuals’ FFMQ score in the ‘nonjudging’ dimension, was supported. Correlational analyses revealed a significant, medium-sized effect, negative relationship between FFMQ’s ‘Nonjudging’ dimension and the PRCA-24’s ‘Public Speech Communication Apprehension’ dimension ($r= -.34, r^2 = .12, p < .01$).

HYPOTHESIS 4A

H₄a, which predicted that an individual’s PRCA-24 score in the ‘group’ dimension negatively correlates with an individuals’ FFMQ score in the ‘nonreactivity’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect, negative relationship between FFMQ’s ‘Nonreactivity’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r= -.20, r^2 = .04, p < .10$).

HYPOTHESIS 4B

H₄b, which predicted that an individual’s PRCA-24 score in the ‘meeting’ dimension negatively correlates with an individuals’ FFMQ score in the ‘nonreactivity’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect, negative
relationship between FFMQ’s ‘Nonreactivity’ dimension and the PRCA-24’s ‘Meeting Communication Apprehension’ dimension ($r = -.20$, $r^2 = .04$, $p < .05$).

**Hypothesis 4c**

$H_{4c}$, which predicted that an individual’s PRCA-24 score in the ‘dyadic’ dimension negatively correlates with an individuals’ FFMQ score in the ‘nonreactivity’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect, negative relationship between FFMQ’s ‘Nonreactivity’ dimension and the PRCA-24’s ‘Dyadic Communication Apprehension’ dimension ($r = -.22$, $r^2 = .05$, $p < .05$).

**Hypothesis 4d**

$H_{4d}$, which predicted that an individual’s PRCA-24 score in the ‘public speech’ dimension negatively correlates with an individuals’ FFMQ score in the ‘nonreactivity’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect, negative relationship between FFMQ’s ‘Nonreactivity’ dimension and the PRCA-24’s ‘Public Speech Communication Apprehension’ dimension ($r = -.25$, $r^2 = .06$, $p < .05$).

**Hypothesis 5a**

$H_{5a}$, which predicted that an individual’s PRCA-24 score in the ‘group’ dimension negatively correlates with an individuals’ FFMQ score in the ‘observe’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect, negative relationship between FFMQ’s ‘Observe’ dimension and the PRCA-24’s ‘Group Communication Apprehension’ dimension ($r = -.17$, $r^2 = .03$, $p < .05$).

**Hypothesis 5b**

$H_{5b}$, which predicted that an individual’s PRCA-24 score in the ‘meeting’ dimension negatively correlates with an individuals’ FFMQ score in the ‘observe’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect, negative relationship between FFMQ’s ‘Observe’ dimension and the PRCA-24’s ‘Meeting Communication Apprehension’ dimension ($r = -.20$, $r^2 = .04$, $p < .10$).
**Hypothesis 5c**

$H_{5c}$, which predicted that an individual’s PRCA-24 score in the ‘dyadic’ dimension negatively correlates with an individuals’ FFMQ score in the ‘observe’ dimension, was supported. Correlational analyses revealed a significant, small-sized effect, negative relationship between FFMQ’s ‘Observe’ dimension and the PRCA-24’s ‘Dyadic Communication Apprehension’ dimension ($r=-.18, r^2=.03, p < .05$).

**Hypothesis 5d**

$H_{5d}$, which predicted that an individual’s PRCA-24 score in the ‘public speech’ dimension negatively correlates with an individuals’ FFMQ score in the ‘observe’ dimension, was not supported. Correlational analyses revealed a non-significant, small-sized effect, negative relationship between FFMQ’s ‘Observe’ dimension and the PRCA-24’s ‘Public Speech Communication Apprehension’ dimension ($r=-.12, r^2=.01, p > .10$).
CHAPTER 4

DISCUSSION

This study compared self-reported levels of communication apprehension and self-reported levels of mindfulness to determine if a relationship exists. There has been numerous studies examining communication apprehension’s impact on and relationship with a variety of phenomena. In addition, there have also been a number of studies examining mindfulness’ impact on and relationship with a variety of phenomena. However, this study is the first to examine these two constructs’ relationship. Several intriguing findings were uncovered that can help guide further research and foster understanding of the two concepts.

OVERALL MINDFULNESS AND COMMUNICATION APPREHENSION

The most significant finding obtained from this study was that self-reported levels of mindfulness, as measured by the FFMQ, significantly and negatively correlated with self-reported levels of communication apprehension. Several possibilities exist to explain why self-reported levels of mindfulness in this study negatively correlated with self-reported levels of communication apprehension. Increased levels of mindfulness might lead to a decrease in the experience, intensity, and frequency of negative emotions as well as an increased tolerance to negatively valenced phenomena (Arch & Craske, 2006). Mindfulness, as specified by the authors of the FFMQ, is generally defined as a state of bringing complete attention to internal emotions, thoughts and experience occurring in the present moment in a nonjudgmental and accepting manner (Brown & Ryan, 2003; Kabat-Zinn, 1990; Linehan, 1993; Marlatt & Kristeller, 1999). Higher levels of mindfulness might correlate with lowered levels of emotional volatility in response to negatively valenced phenomena as correlate with a lowered level of fear of real or anticipated communication. High levels of mindfulness tend to lead to an increased ability to regulate emotions (Arch & Craske, 2006). In contrast, high levels of communication apprehension are positively associated with high levels of self-judgment, self-consciousness, and self-preoccupation (Andersen & Coussoule, 1980).
The finding that self-reported levels of mindfulness negatively correlate with self-reported levels of communication apprehension runs contrary to a long lineage of research on self-focused attention. Numerous articles, studies, and findings conclude that self-focused attention has a negatively associated self-esteem, well-being, and positive affect. Rumination is a type of self-focused attention that occurs when emotion is repetitively experienced in an attempt to focus on, understand, and solve internal problems (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Mor & Winquist, 2002; Papageorgiou & Wells, 2003; Pyszczynski & Greenberg, 1987; Trapnell & Campbell, 1999; Watkins, 2008). Individuals who engage in rumination are often depressed, anxious, and cognitively and emotionally immobilized (Ward, Lyubormirsky, Sousa, & Nolen-Hoeksema, 2003). Rumination in adults predicted increases in self-reported depressive symptoms (Butler & Nolen-Hoeksema, 1994; Hong, 2007; O’Connor, O’Connor, & Marshall, 2007; Sarin, Abela, & Auerbach, 2005; Segerstrom, Tsao, Alden, & Craske, 2000).

Several meta-analyses have examined self-focus and its negative effects on individuals. Mor and Winquist (2002), in their meta-analysis analyzing self-focused attention, found that self-focus was associated with negative affect including depression and social anxiety. Aldao, Nolen-Hoeksema, & Schweizer (2010), in their hefty meta-analysis of the relationship between emotion-regulation strategies and the symptoms of four psychopathologies, found positive medium to large effect sizes for rumination and depression, anxiety, eating, and substance abuse.

The literature on rumination and its negative effects is quite exhaustive and detailed. In addition, what explains the disparity between this study’s findings and past research on rumination? The answer might be that there are different types of self-focused attention. Mor and Winquist (2002) also concluded that self-focused attention is not a unitary construct – it is multifaceted in nature and there are crucial differences between rumination and nonruminative self-focus. They state that a major finding of their meta-analysis is that, in certain contexts, self-focus was not associated with negative affect – focusing on negative self-aspects of oneself is associated with an increase in negative affect and focusing on positive self-aspects is related to a decrease in negative affect.

One type of self-focused attention that has been associated with a decrease in negative affect is known as ‘metacognitive insight’ and might be able to explain why higher
levels of self-reported mindfulness were significantly associated with lower levels of communication apprehension. Metacognitive insight, as previously stated, is defined as the ability to recognize that internal experiences, emotions, and thoughts are transient, insubstantial mental events rather than threatening and accurate representations of reality that should be altered in some form or fashion (Bishop et al., 2004; Chambers, Gullone, & Allen, 2009; Mason & Hargreaves, 2001; Masuda, Hayes, Sackett, & Twohig, 2003; Safran & Segal, 1990; Teasdale, 1999; Teasdale, Segal, & Williams, 1995). This type of self-focused attention emphasizes letting both positive emotions enter and exit awareness with total cognizance but without any sort of struggle or effort to focus on or avoid certain thoughts, feelings, and emotions.

This type of attention is fundamentally different than scholars’ definition of rumination and depressive self-focusing styles where an individual focuses solely on his or her own negative thoughts, feelings, and emotions. Several researchers have concluded that higher levels of insight were significantly associated with lower depression and anxiety symptoms and higher levels of self-esteem and well-being (Lyke, 2009; Silvia & Phillips, 2011). These findings and conclusions are different that what has been found in previous research on self-focused attention and communication apprehension. Higher levels of ‘metacognitive insight’ might mean an increased ability to handle potentially negative affect-laden situations.

Another possibility is that higher levels of mindfulness might correlate with higher levels of ‘emotional intelligence’ (Mayer, Salovey, & Caruso, 2004). Emotional Intelligence the ability to perceive, understand, manage, and harness emotions effectively in an adaptive manner (Mayer, Salovey, & Caruso, 2008). Scholarly researchers have found that higher levels of mindfulness are associated with a more adaptive emotional functioning (i.e., emotional intelligence) (Baer, et al., 2004; Brown & Ryan, 2003; Schutte & Malouff, 2011). Mindfulness may actually encourage the development of emotional regulation (Brown et al., 2007; Koole, 2009; Schutte & Malouff, 2011) and as such, may help temper negative emotions and experiences, including those associated with communication apprehension. Schutte and Malouff (2011) found that higher self-reported levels of mindfulness were associated with higher self-reported levels of trait emotional intelligence as well as higher self-reported levels of positive affect. These two possible strategies of dealing with
negatively valenced phenomena might be the reason why self-reported levels of mindfulness negatively correlate with self-reported levels of communication apprehension.

**Describing and Communication Apprehension**

Another significant finding to arise from this study was the consistent, medium-sized negative relationship between the Five-Facet Mindfulness’ ‘Describe’ dimension and each of the Personal Report of Communication Apprehension’s (24-Item version) four dimensions. The authors of the Five-Facet Mindfulness Questionnaire define the ‘Describing’ dimension as “labeling internal experiences with words” (Baer et al., 2008, p. 330). There are several possibilities for this association.

As Schutte and Malouff (2011) write, models of Emotional Intelligence include abilities and competencies that draw on emotion in adaptive ways (i.e., perceiving, understanding, managing, and harnessing emotions effectively in others, and, especially relevant to mindfulness, in the self). Drawing on emotion requires recognizing emotional cues. Understanding emotion involves applying knowledge of the complexities and subtleties of emotional experience (Schutte & Malouff, 2011). Perhaps the ability to draw on and understand emotions might also mean the ability to describe emotions. This might explain why the strongest correlations between the FFMQ Mindfulness and PRCA-24 scores lay in the FFMQ ‘Describe’ dimension – this is the shortest, most direct link to Emotional Intelligence, as described in the previous section.

**Observing and Communication Apprehension**

Another interesting finding in this study was that the weakest correlations were found in the ‘Observe’ dimension of the FFMQ. In fact, from the only research question and twenty significant relationships posited in this study, only one relationship was found to be non-significant… the ‘Speech’ dimension of the PRCA-24 and the ‘Observe’ dimension of the FFMQ. In addition, while the other three dimensions in the PRCA-24 significantly correlated with the ‘Observe’ dimension, they were the weakest relationships found in the study. Baer et al. (2008) report similar concerns with the ‘Observe’ facet of the FFMQ. Out of the five dimensions of the FFMQ, a hierarchical confirmatory factor analysis found that only four were clear indicators of the overall mindfulness construct… the ‘observe’ dimension did not fit this model.
In fact, the authors write that the ‘observe’ dimension was moderately and positively correlated with several maladaptive constructs, including dissociation, absentmindedness, psychological symptoms, and thought suppression (Baer et al., 2008, p. 331). Previous scholarly literature has suggested that self-focused attention can actually be maladaptive and that in communication settings, this type of attention can actually hinder a communicator’s effectiveness (Andersen & Coussoule, 1980; Baer et al., 2008). Previous research has reported that individuals high in communication apprehension tend to be overly aware about their own communication behavior to the point that they direct their attention inwardly toward themselves rather and obsess about their own anxiety and introversion (Andersen & Coussoule, 1980; Andersen & Singleton, 1978; Spiegel & Matchotka, 1974). This type of attention has been associated with negative emotion and is common in many psychological disorders (Harvey, Watkins, Mansell, & Shafran, 2004; Mor & Winquist, 2002). This body of literature concerning the negative effects of too much self-focused attention is especially concerning, given that many researchers have written that ‘observing’ is a central tenet of mindfulness (c.f. Kabat-Zinn, 1990). There might, however, be a plausible explanation as to why the ‘Observe’ dimension of the FFMQ has garnered such weak effect sizes.

The type of self-observation found in communication apprehension might be fundamentally different from mindfulness’ inward observation. Baer et al. (2008) write that the type of observation that mindfulness entails involves close observation of internal stimuli with an accepting, nonjudging, and nonreactive stance, even if those stimuli are unpleasant. They suggest the ‘observe’ dimension might be maladaptive to the majority of respondents because most people are not experienced meditators or in the skills that meditation provides. This study involved no formal meditation training, no definition of mindfulness or description about any of the concepts found within mindfulness. Therefore, it might be possible that the majority of respondents did not know what observation meant in the context of mindfulness and instead answered the questions based on their own experience in observing their thoughts and emotions in communication situations.

**Implications for Measurement**

Another important finding for this study concerns the measurement tools individually. Both measures received validation both in the dimension structure and the predictive validity
of one predicting the other. The PRCA-24 measure of communication apprehension has been around for nearly thirty years and has consistently displayed high Cronbach’s Alpha coefficient estimates as well as four distinct factor loadings. The FFMQ measure of mindfulness, while still quite young at six years old, also showed high Cronbach’s Alpha coefficient estimates. In addition, the five distinct factor loadings replicated past studies involving the FFMQ. In short, evidence is mounting that these measures actually measure what they state they measure. However, as will be discussed in the Future Studies section, more research and work, especially concerning mindfulness as well as mindfulness’ relationship with communication apprehension, needs to be done.

**LIMITATIONS**

First, this study featured the prominent use of the FFMQ and PRCA-24, two measures that solely utilize self-reports. There is a plethora of academic literature that has raised concerns over the use of self-reports to measure phenomena. Individuals can harbor strong public presentation bias related to self-enhancement as well as other ego protective motives (John & Robins, 1994; Paunonen & O’Neill, 2010). Researchers have argued that self-reports are often skewed in a social desirably direction, either consciously as an attempt at impression management, or unconsciously as a result of unwitting self-deception. In addition, there is a possibility that the main problem that compromises the construct validity of self-reports, socially desirable responding (Paunonen & O’Neill, 2010), might have occurred in this study.

Second, respondents participated in this study by filling out online forms. This is still a relatively new medium that could be fraught with unexpected limitations, drawbacks, and other unforeseen circumstances. While this study was aimed mainly at college students at a large, southwestern public university, no method of verifying respondents’ enrollment in the university was utilized. In addition, any individual with a computer and Internet access could access the survey from anywhere in the world. Again, this might have had unexpected consequences on the measurement results: cultural and language barriers could have skewed the results.
**FUTURE STUDIES**

This study was the first step, albeit a small one, in exposing and explaining the relationship between communication apprehension and mindfulness. Future studies need to continue this process as well as begin to identify the parts of mindfulness that are the most effective in helping to alleviate communication apprehension as well as other social anxieties. In addition, further research needs to start drawing distinction between different types of self-focused attention and to ultimately debate whether or not mindfulness and its type of self-focused attention can actually help to lower negative psychopathologies like depression and anxiety which in turn can lead to communication apprehension and anxiety.

Self-reported levels of communication apprehension were shown to negatively correlate with self-reported levels of mindfulness in this study. The next step would be then to host an intervention, like an eight-week Mindfulness-Based Stress Reduction seminar, and have participants rate their communication apprehension and mindfulness levels pre-, para-, and post-test to see if there are significant changes in either of these two constructs. Further examination needs to be conducted to examine self-reported levels of communication apprehension’s negative correlation with self-reported levels of mindfulness. Researchers need to identify the primary mechanisms in communication apprehension and mindfulness in order to discover what exactly is occurring between these two phenomena.

In addition, the next steps to finding out more about mindfulness and communication apprehension also lay in the burgeoning new field of neuroscience. Mindfulness has already begun to be mapped in the brain (c.f. Frewen et al., 2010; Hölzel et al., 2011; Siegel, 2007) and future studies of communication apprehension need to utilize these new methodologies.

**CONCLUSION**

While the communication apprehension construct has been around for decades, the mindfulness construct is fairly new. Mindfulness holds the possibility and potential to help explain communication apprehension as well as possibly provide directions in reducing the level of communication apprehension that individuals experience. Further insight into communication apprehension can be gained by way of assessing and examining mindfulness. This study was one small step in gaining insight into these various subjects.
REFERENCES


APPENDIX A

QUESTIONNAIRES
PERSONAL REPORT OF COMMUNICATION APPREHENSION (PRCA-24)

Directions: This instrument is composed of twenty-four statements concerning feelings about communicating with other people. Please indicate the degree to which each statement applies to you by marking whether you strongly agree (1-SA), agree (2-A), undecided (3-U), disagree (4-D), or strongly disagree (5-SD).

Work quickly; record your first impression.

1. I dislike participating in-group discussions.
2. Generally, I am comfortable while participating in-group discussions.
3. I am tense and nervous while participating in-group discussions.
4. I like to get involved in-group discussions.
5. Engaging in a group discussion with new people makes me tense and nervous.
6. I am calm and relaxed while participating in-group discussions.
7. Generally, I am nervous when I have to participate in a meeting.
8. Usually I am calm and relaxed while participating in meetings.
9. I am very calm and relaxed when I am called upon to express an opinion at a meeting.
10. I am afraid to express myself at meetings.
11. Communicating at meetings usually makes me uncomfortable.
12. I am very relaxed when answering questions at a meeting.
13. While participating in a conversation with a new acquaintance, I feel very nervous.
14. I have no fear of speaking up in conversations.
15. Ordinarily I am very tense and nervous in conversations.
16. Ordinarily I am very calm and relaxed in conversations.
17. While conversing with a new acquaintance, I feel very relaxed.
18. I'm afraid to speak up in conversations.
19. I have no fear of giving a speech.
20. Certain parts of my body feel very tense and rigid while giving a speech.
21. I feel relaxed while giving a speech.
22. My thoughts become confused and jumbled when I am giving a speech.
23. I face the prospect of giving a speech with confidence.
24. While giving a speech, I get so nervous I forget facts I really know.

**FIVE FACET MINDFULNESS QUESTIONNAIRE**

Directions: Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1 = never or very rarely true
2 = rarely true
3 = sometimes true
4 = often true
5 = very often or always true

1. When I’m walking, I deliberately notice the sensations of my body moving.
2. I’m good at finding words to describe my feelings.
3. I criticize myself for having irrational or inappropriate emotions.
4. I perceive my feelings and emotions without having to react to them.
5. When I do things, my mind wanders off and I’m easily distracted.
6. When I take a shower or bath, I stay alert to the sensations of water on my body.
7. I can easily put my beliefs, opinions, and expectations into words.
8. I don’t pay attention to what I’m doing because I’m daydreaming, worrying, or otherwise distracted.
9. I watch my feelings without getting lost in them.
10. I tell myself I shouldn’t be feeling the way I’m feeling.
11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.
12. It’s hard for me to find the words to describe what I’m thinking.
13. I am easily distracted.
14. I believe some of my thoughts are abnormal or bad and I shouldn’t think that way.
15. I pay attention to sensations, such as the wind in my hair or sun on my face.
16. I have trouble thinking of the right words to express how I feel about things.
17. I make judgments about whether my thoughts are good or bad.
18. I find it difficult to stay focused on what’s happening in the present.
19. When I have distressing thoughts or images, I “step back” and am aware of the thought or image without getting taken over by it.
20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.
21. In difficult situations, I can pause without immediately reacting.
22. When I have a sensation in my body, it’s difficult for me to describe it because I can’t find the right words.
23. It seems I am “running on automatic” without much awareness of what I’m doing.
24. When I have distressing thoughts or images, I feel calm soon after.
25. I tell myself that I shouldn’t be thinking the way I’m thinking.
26. I notice the smells and aromas of things.
27. Even when I’m feeling terribly upset, I can find a way to put it into words.
28. I rush through activities without being really attentive to them.
29. When I have distressing thoughts or images I am able just to notice them without reacting.
30. I think some of my emotions are bad or inappropriate and I shouldn’t feel them.
31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.
32. My natural tendency is to put my experiences into words.
33. When I have distressing thoughts or images, I just notice them and let them go.
34. I do jobs or tasks automatically without being aware of what I’m doing.
35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.
36. I pay attention to how my emotions affect my thoughts and behavior.
37. I can usually describe how I feel at the moment in considerable detail.
38. I find myself doing things without paying attention.
39. I disapprove of myself when I have irrational ideas.

**Scoring Information:**

**Observe items:**
1, 6, 11, 15, 20, 26, 31, 36

**Describe items:**
2, 7, 12R, 16R, 22R, 27, 32, 37
Act with Awareness items:

Nonjudge items:

Nonreact items:
4, 9, 19, 21, 24, 29, 33

APPENDIX B

FACTOR ANALYSES
Table 3. PRCA-24 Principal Components Analysis

<table>
<thead>
<tr>
<th>Statement</th>
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<tr>
<td>I dislike participating in group discussions</td>
<td>-.778</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generally, I am comfortable while participating in group discussions</td>
<td>.696</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am tense and nervous while participating in group discussions</td>
<td>-.647</td>
<td>.389</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to get involved in group discussions</td>
<td>.685</td>
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<tr>
<td>Engaging in a group discussion with new people makes me tense and nervous</td>
<td>-.447</td>
<td>.552</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am calm and relaxed while participating in group discussions</td>
<td>.759</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generally, I am nervous when I have to participate in a meeting</td>
<td>-.509</td>
<td>.398</td>
<td>.345</td>
<td></td>
</tr>
<tr>
<td>Usually I am calm and relaxed while participating in meetings</td>
<td>.685</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I am very calm and relaxed when I am called upon to express an opinion at a meeting</td>
<td>.502</td>
<td>-.494</td>
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<tr>
<td>I am afraid to express myself at meetings</td>
<td>-.508</td>
<td>.339</td>
<td>.423</td>
<td></td>
</tr>
<tr>
<td>Communicating at meetings usually makes me uncomfortable</td>
<td>-.499</td>
<td>.367</td>
<td>.436</td>
<td></td>
</tr>
<tr>
<td>I am very relaxed when answering questions at a meeting</td>
<td>.524</td>
<td>-.372</td>
<td>-.332</td>
<td></td>
</tr>
<tr>
<td>While participating in a conversation with a new acquaintance, I feel very nervous</td>
<td>.793</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have no fear of speaking up in conversations</td>
<td>.377</td>
<td>-.607</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ordinarily I am very tense and nervous in conversations</td>
<td>-.322</td>
<td>.628</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ordinarily I am very calm and relaxed in conversations</td>
<td></td>
<td>-.697</td>
<td></td>
<td></td>
</tr>
<tr>
<td>While conversing with a new acquaintance, I feel very relaxed</td>
<td>-.415</td>
<td></td>
<td>-.807</td>
<td></td>
</tr>
<tr>
<td>I'm afraid to speak up in conversations</td>
<td></td>
<td></td>
<td></td>
<td>.703</td>
</tr>
<tr>
<td>I have no fear of giving a speech</td>
<td></td>
<td>-.753</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certain parts of my body feel very tense and rigid while giving a speech</td>
<td></td>
<td></td>
<td>.693</td>
<td></td>
</tr>
<tr>
<td>I feel relaxed while giving a speech</td>
<td></td>
<td></td>
<td>-.768</td>
<td></td>
</tr>
<tr>
<td>My thoughts become confused and jumbled when I am giving a speech</td>
<td></td>
<td></td>
<td>.768</td>
<td></td>
</tr>
<tr>
<td>I face the prospect of giving a speech with confidence</td>
<td></td>
<td></td>
<td>-.698</td>
<td></td>
</tr>
<tr>
<td>While giving a speech, I get so nervous I forget facts I really know</td>
<td></td>
<td></td>
<td></td>
<td>.739</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.
Table 4. FFMQ Principal Components Analysis

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I'm walking, I deliberately notice the sensations of my body moving</td>
<td>.685</td>
<td></td>
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<tr>
<td>I'm good at finding words to describe my feelings</td>
<td></td>
<td></td>
<td>.814</td>
<td></td>
<td></td>
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<tr>
<td>I criticize myself for having irrational or inappropriate emotions</td>
<td>.740</td>
<td>.329</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I perceive my feelings and emotions without having to react to them</td>
<td></td>
<td></td>
<td></td>
<td>.716</td>
<td></td>
</tr>
<tr>
<td>When I do things, my mind wanders off and I'm easily distracted</td>
<td>.721</td>
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</tr>
<tr>
<td>When I take a shower or bath, I stay alert to the sensations of water on</td>
<td>.722</td>
<td></td>
<td></td>
<td>.634</td>
<td></td>
</tr>
<tr>
<td>my body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can easily put my beliefs, opinions, and expectations into words</td>
<td></td>
<td>-.353</td>
<td>.711</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don't pay attention to what I'm doing because I'm daydreaming, worrying,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or otherwise distracted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I watch my feelings without getting lost in them</td>
<td></td>
<td>.521</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tell myself I shouldn't be feeling the way I'm feeling</td>
<td>.693</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice how foods and drinks affect my thoughts, bodily sensations, and</td>
<td></td>
<td></td>
<td>.369</td>
<td></td>
<td></td>
</tr>
<tr>
<td>emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It's hard for me to find the words to describe what I'm thinking</td>
<td>-.743</td>
<td>.369</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am easily distracted</td>
<td>.714</td>
<td>.728</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe some of my thoughts are abnormal or bad and I shouldn't think</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>that way</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I pay attention to sensations, such as the wind in my hair or sun on my</td>
<td>.732</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>face</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have trouble thinking of the right words to express how I feel about</td>
<td>-.748</td>
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<td></td>
<td></td>
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<tr>
<td>things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I make judgments about whether my thoughts are good or bad</td>
<td>.572</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I find it difficult to stay focused on what's happening in the present</td>
<td></td>
<td>.574</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>When I have distressing thoughts or images, I &quot;step back and am</td>
<td></td>
<td></td>
<td>.581</td>
<td></td>
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</tr>
<tr>
<td>aware of the thought or image without getting taken over by it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I pay attention to sounds, such as clocks ticking, birds chirping, or</td>
<td>.596</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>cars passing</td>
<td></td>
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<td></td>
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<tr>
<td>In difficult situations, I can pause without immediately reacting</td>
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<tr>
<td>When I have a sensation in my body, it's difficult for me to describe it</td>
<td></td>
<td>-.630</td>
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<tr>
<td>because I can't find the right words</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>It seems I am &quot;running on automatic without much awareness of what</td>
<td>.312</td>
<td>.593</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I'm doing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have distressing thoughts or images, I feel calm soon after</td>
<td></td>
<td></td>
<td>.355</td>
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</tr>
<tr>
<td>I tell myself that I shouldn't be thinking the way I'm thinking</td>
<td>.761</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice the smells and aromas of things</td>
<td></td>
<td></td>
<td>.564</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Even when I'm feeling terribly upset, I can find a way to put it into</td>
<td>.669</td>
<td></td>
<td></td>
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<tr>
<td>words</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I rush through activities without being really attentive to them</td>
<td>.659</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have distressing thoughts or images I am able just to notice</td>
<td></td>
<td></td>
<td>.612</td>
<td></td>
<td></td>
</tr>
<tr>
<td>them without reacting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think some of my emotions are bad or inappropriate and I shouldn't</td>
<td>.692</td>
<td></td>
<td></td>
<td>.649</td>
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</tr>
<tr>
<td>feel them</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I notice visual elements in art or nature, such as colors, shapes,</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>textures, or patterns of light and shadow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My natural tendency is to put my experiences into words</td>
<td>.527</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have distressing thoughts or images, I just notice them and let</td>
<td></td>
<td></td>
<td>.590</td>
<td></td>
<td></td>
</tr>
<tr>
<td>them go</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do jobs or tasks automatically without being aware of what I'm doing</td>
<td>-.324</td>
<td>.564</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I have distressing thoughts or images, I judge myself as good or</td>
<td>.642</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bad, depending what the thought/image is about</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I pay attention to how my emotions affect my thoughts and behavior</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I can usually describe how I feel at the moment in considerable detail</td>
<td>.735</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find myself doing things without paying attention</td>
<td>.727</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I disapprove of myself when I have irrational ideas</td>
<td>.707</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
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