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REFINEMENT OF THE ATTITUDES TOWARD ANGER MANAGEMENT SCALE

by

David Jerome Boudreaux

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

August 2016
ABSTRACT

REFINEMENT OF THE ATTITUDES TOWARD ANGER MANAGEMENT SCALE

by David Jerome Boudreaux

August 2016

Identifying and addressing potential problems with anger before they result in adverse consequences could be beneficial in improving quality of life and minimizing the disruptive effects of anger on one’s social environment. Excessive anger or anger which is expressed in maladaptive ways present particular challenges for college students due to their developmental stage, stressors, and environmental demands. Unfortunately, too few college students utilize available mental health resources. Individuals with problem anger are influenced by unique factors that affect help seeking decisions. A better understanding of these factors could facilitate outreach and improve service utilization.

This study continued the development of the Attitudes Toward Anger Management Scale (ATAMS), a brief self-report measure designed to assess attitudes toward anger management services. Confirmatory factor analysis was utilized with a sample of undergraduate volunteers (N = 326) to validate the two-factor structure of the ATAMS. Convergent validity of the ATAMS was supported through finding bivariate correlations with measures of similar constructs. Evidence of 3-4 week test-retest reliability suggested adequate short-term stability of scores. Support for criterion validity was provided by demonstrating that the ATAMS predicts self-rated intentions to engage in anger management.
REFINEMENT OF THE ATTITUDES TOWARD
ANGER MANAGEMENT SCALE

by

David Jerome Boudreaux

A Dissertation
Submitted to the Graduate School
and the Department of Psychology
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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CHAPTER I
INTRODUCTION

Problem Anger

Problem anger has been defined as “anger [that] is excessive in frequency and duration and is disproportionate to the event or person who triggered it” (Kassinove & Tafrate, 2002, p. 1). Problem anger has been shown to contribute to increased injuries, suicide, homicide, and mortality (Centers for Disease Control, 2006; Harburg, Julius, Kaciroti, Gleiberman, and Schork, 2003), as well as reduced social support, coping deficits, interpersonal difficulties, and a variety of physical and mental health problems (Chida & Steptoe, 2009; Dahlen & Martin, 2005; Wolf & Foshee, 2003). Psychiatrists and psychologists surveyed by Lachmund, DiGiuseppe, and Fuller (2005) reported encountering anger as a presenting problem in treatment at roughly the same frequency as Generalized Anxiety Disorder. As Generalized Anxiety Disorder is encountered in roughly 3% of adults in the United States (In the Clinic: Generalized Anxiety Disorder, 2013), this is significant.

YouGov was commissioned by the Mental Health Foundation and surveyed 1,974 individuals from the United Kingdom, ages 18 and over, about their attitudes and understanding of anger. The findings from the Mental Health Foundation’s 2008 survey report, Boiling Point: Problem Anger and What We Can Do About It, are quite revealing where problem anger and its implications are concerned. General practitioners who encounter individuals reporting problem anger reported having few options to help such individuals and little confidence in the options of which they were aware. Over half of the sample reported that the experience of anger is increasing in society as a whole.
Nearly one third of those surveyed reported having a significant other struggling with anger, and 10% reported having problems controlling their own anger. Yet, among those who reported having difficulty controlling their anger, only 13% reported seeking help. Almost 60% indicated that they did not know where to obtain help for their problem anger (Mental Health Foundation, 2008).

Anger is a basic human emotion (Plutchik, 2002), characterized as “a common human response,” which has been observed in both Eastern and Western cultures and is included in both past and current theories of emotion (Kassinove & Tafrate, 2002, p. 1). Spielberger and colleagues (1983) posit two primary ways of experiencing anger, state anger and trait anger. State anger is anger experienced as “an emotional state at a particular time,” and trait anger is “anger proneness as a personality trait.” State anger is a “psychobiological state or condition, consisting of angry feelings that may vary in intensity, from mild irritation or annoyance to fury and rage, with associated activation of the autonomic nervous system.” Trait anger is “defined in terms of individual differences in the frequency that state anger is experienced over time” (Spielberger & Reheiser, 2009, p. 281).

Dysfunctional anger is a heightened propensity to experience angry feelings more frequently and intensely than ones’ peers (i.e., elevated trait anger) and a tendency to express anger in maladaptive ways (e.g., aggressive angry outbursts or anger suppression). Kassinove and Tafrate (2002) explained that an anger disorder includes both ways in which anger can be experienced; “Anger [that] is excessive in frequency and duration [i.e., abnormally high trait anger], and is disproportionate to the event or person who triggered it [i.e., abnormally high state anger]” (p. 1).
Correlates of Anger

A number of adverse correlates of elevated trait anger exist, including several social/interpersonal, behavioral, physiological/medical, emotional, and cognitive factors.

Anger is often a social emotion in that most episodes of anger involve other people. Thus, it is no surprise that social/interpersonal correlates would be associated with trait anger. Individuals with higher levels of trait anger “tend to express their anger in more dysfunctional, often intimidating and abrasive ways, leading them to experience more frequent and severe anger-related consequences” (Deffenbacher, Lynch, Oetting, & Kemper, 1996, p. 149). Because individuals with an elevated experience of anger tend to express that anger around those whom they regularly come into contact (Averill, 1982), they are more likely to experience problems in significant interpersonal relationships and to have experienced an end to many of their interpersonal and possibly supportive relationships. Others often describe individuals with higher levels of anger as opinionated, confrontational, and abrasive (Deffenbacher, 1993). This can cause difficulties in both employment and academic pursuits (Deffenbacher et al., 1996).

Researchers found relationships between the excessive experience of anger and instances of “interrupted, inhibited, and altogether avoided” primary emotional experiences, which “typically include fear, shame, and sadness” (Rochman & Diamond, 2008, p. 96). Newman, Fuqua, Gray, and Simpson (2006) found a positive relationship between anger and depression. Additionally, patients diagnosed with depression have shown increased anger and hostility when compared to patients without a diagnosis of depression (Fava & Rosenbaum, 1998; Riley, Treiber, & Woods, 1989; Sayar et al., 2000). Increased anger has also been correlated with bipolar disorder (Benazzi, 2003;
Perlis et al., 2004), post-traumatic stress disorder (Jakupcak, 2007; Orth, Cahill, Foa, & Maercker, 2008) and various forms of anxiety. These include social anxiety (Erwin, Heimberg, Schneier, & Liebowitz, 2003), panic disorder (Baker, Holloway, Thomas, Thomas, & Owens, 2004; Fava et al., 1993), generalized anxiety disorder (Erdem, Çelik, Yetkin, & Özgen, 2008), and obsessive-compulsive disorder (Whiteside & Abramowitz, 2005).

The behavioral correlates of high trait anger include property damage (Hazaleus & Deffenbacher, 1986), violence (Kay, Wolkenfeld, & Murrill, 1988; Slep & O’Leary, 2001; Unverzagt & Schill, 1989), self-harm (Defenbacher, 1993), assault (Maiuro, Cahn, Vitaliano, Wagner, & Zegree, 1988; Novaco, 1994), risky driving (Defenbacher, Lynch, Oetting, & Yingling, 2001), and alcohol abuse (DiGiuseppe & Tafrate, 2007). Although dysfunctional anger is related to aggression and does motivate some forms of aggressive behavior (Wilkowski & Robinson, 2010), it is not synonymous with aggression. Anger is not the cause of all acts of aggression, and most experiences of anger do not result in aggressive behavior.

In addition to the many adverse correlates of trait anger, the two anger expression styles identified by Spielberger (1988) and assessed with the State-Trait Anger Expression Inventory-2 (STAXI-2) have a number of negative health outcomes (Keinan, Ben-Zur, Zilka, & Carel, 1992; Siegman, 1993) and other undesirable consequences (Dahlen, Defenbacher, & Lynch, 1998; Defenbacher, Lynch, Oetting, Kemper, 1996). Anger-in is a measure of suppressed anger (i.e., anger which is held in and not expressed outwardly), and anger-out is a measure of the individual’s tendency to express his or her anger externally, physically or verbally. Examples of adverse correlates include reckless
driving, tension, negative feelings about oneself, and verbal disputes (Dahlen Deffenbacher, & Lynch, 1998; Dahlen & Martin, 2005); however, some of the most interesting findings concern the social/interpersonal and physiological/medical correlates of these anger expression styles.

In a sample of African American male adolescents, Johnson and Greene (1991) found that boys scoring higher on anger-in showed lower perceived social support, reduced self-esteem, a lower number of individuals in their support network, higher difficulty discussing problems with significant others, and less availability of supportive individuals than individuals scoring lower on anger-in. Thus, the boys who tended to suppress their angry feelings ended up having less effective social support networks. Using a predominately-Caucasian college student sample, Palfai and Hart (1997) also found an inverse relationship between anger-in and social support and that this finding was present even when taking socially desirable responding into account. Dahlen and Martin (2005) replicated Palfai and Hart’s (1997) study with a racially diverse college student sample and also found that anger-in was inversely related to social support while controlling for social desirability. Moreover, this relationship was independent of respondent race. Somewhat surprisingly, anger-out did not demonstrate a similar relationship with perceived social support (Dahlen & Martin, 2005; Lane & Hobfoll, 1992; Palfai & Hart, 1997). Anger suppression may cause an individual to disengage or withdraw from social support (Palfai & Hart, 1997). Due to higher levels of anger suppression being related to more negative emotions about oneself (Dahlen et al., 1998), a desire to engage in a social support network or confidence in one’s ability to socially engage may be significantly reduced (Dahlen & Martin, 2005).
The adverse physiological/medical correlates of anger expression have involved both anger-in and anger-out. Researchers found positive relationships between anger-in and daily functioning with regard to pain, pain related behaviors, and pain assessment, and found a negative relationship between anger-in and pain tolerance (Gelkopf, 1997; Kerns, Rosenberg, & Jacob, 1994). Kerns and colleagues (1994) also found that anger-in predicted the intensity of pain better than depression, anger intensity, and pain history. The physiological/medical correlates of trait anger include hypertension (Crane, 1981; Harburg, Blakelock, & Roeper, 1979), coronary heart disease (Friedman & Rosenman, 1974; Matthews, Glass, Rosenman, & Bortner, 1977; Spielberger & London, 1982; Spielberger, 1988), high cholesterol (Player, King, Mainous, & Geesey, 2007), and increased rates of certain forms of cancer (DiGiuseppe & Tafrate, 2007).

Much of the work to identify the previously mentioned correlates of trait anger and anger expression took place in the 1980s to the early 2000s. Since then, the focus has shifted to consider the role of anger in specific contexts. For example, researchers have started investigating the correlates of anger among individuals entering substance abuse treatment (Barrett, Mills, Teesson, & Ewer, 2013), dealing with unresolved anger and sadness (Rochman & Diamond, 2008), women diagnosed with eating disorders (Aruguete, Edman, & Yates, 2012), and institutionalized male delinquents (Ramanathan & Swaminathan, 2012). The list of recent research with a focus on negative correlates of anger with regard to highly specific contexts and populations goes on. The trend of investigating such specific areas of interest may be an indication that the negative correlates of anger with regard to the general population, for the most part, are established.
Evidence-Based Treatments for Dysfunctional Anger

Evidence-based treatments for dysfunctional anger are available; however, significant barriers to their use remain. These include inadequate dissemination and training, the lack of diagnostic categories for which problem anger is the essential feature, and widespread misconceptions among the public regarding the benefits of cathartic expression. When asking the layperson how to deal with excessive anger effectively, one is likely to receive responses such as “Punch a pillow or scream into that pillow.” Cathartic approaches remain popular in spite of considerable evidence that they are counterproductive. The rationale for such approaches originates from the idea that the cathartic expression of anger is akin to releasing a pressure valve on an overheating boiler. However, research on the reduction of problem anger to date has not shown such methods to be effective in the reduction of anger. In fact, it appears that the use of cathartic methods may encourage engagement in aggressive acts (Bushman, Phillips, & Baumeister, 2001; Del Vecchio & O’Leary, 2004). Not one of the following meta-analyses reviewed contained a single study supporting the efficacy of cathartic treatments for problem anger.

There is considerable evidence to support the efficacy of brief cognitive-behavioral therapies for treating clients with dysfunctional anger (Beck & Fernandez, 1998; Dahlen & Deffenbacher, 2001; Del Vecchio & O’Leary, 2004; Edmondson & Conger, 1996; Mental Health Foundation, 2008; Sukhodolsky, Kassinove, & Gorman, 2004; Tafrate, 1995). These interventions typically involve relaxation coping skills, cognitive restructuring, behavioral coping or social skills training, or some combination of these approaches.
Tafrate (1995) reported an effect size of 1.00 for cognitive-behavioral anger management interventions, although only nine studies were included. Edmondson and Conger (1996) investigated 18 studies using cognitive, cognitive relaxation, social skills, and relaxation techniques. In this body of research, effect sizes for these techniques were .64 to .80. A subsequent meta-analysis by Beck and Fernandez (1998) included 50 studies as well as unpublished results, reviewed studies with clinical populations, and provided weighted effect sizes by sample size. These authors reported a weighted effect size of 0.70 for cognitive-behavioral anger management interventions. Beck and Fernandez concluded, “...the average subject in the cognitive behavioral treatment condition fared better that 76% of those not receiving treatment” (p. 67). The success rate of participants in cognitive-behavioral treatment conditions was 67% compared with 33% for those in control conditions. Another strength of Beck and Fernandez’s (1998) meta-analysis was that the participants of the studies included abusive parents or spouses, violent and/or resistant juvenile offenders, inmates of detention facilities, and aggressive children, showing the general applicability of cognitive-behavioral treatments for dysfunctional anger. Further, these authors investigated studies using both behavioral observations and self-report measures to obtain their findings, and found comparable effect sizes for both data collection methods.

DiGiuseppe and Tafrate (2003) conducted a meta-analysis of 92 treatment interventions using 1,841 participants. These authors concluded that subjects who underwent treatment for their anger problems improved more than 76% of those subjects not receiving treatment. In addition, looking at pre and post-test scores for subjects who underwent treatment for their anger, an 83% improvement was found. The overall effect
size found was $d = 0.71$ suggesting moderate results for treatment of problem anger. DiGiuseppe and Tafrate (2003) stated that this meta-analysis was different from those previously conducted in that “effect sizes were aggregated according to dependent variable categories used for each intervention” (p. 79). In other words, differing dependent variables measured produced significantly different results. Specifically, “anger treatments produced moderate to large improvements on anger self-reports, measures of aggressive behaviors, measures of positive non-angry behaviors, attitudes and cognitions, type A behaviors, and physiological measures” (p. 79). These researchers found the largest effect size in the reduction of aggressive behavior.

DiGiuseppe and Tafrate (2003) stated that their study was the first to discover that manualized treatment for anger and integrity checks in treatment resulted in higher effect sizes. This may be an artifact of the research settings versus that of regular clinical practice and call for further research to determine if a true discrepancy actually exists. The authors also stated that their meta-analysis is the first to separate figures for between group studies and within group studies. The two research methods were highly correlated with regard to the positive results of anger management, but the authors called for further research to determine if within group studies will always produce larger effect sizes than between group studies. Therefore, the authors recommended that further meta-analyses of anger treatment refrain from including both research methods in the same meta-analysis.

DiGiuseppe and Tafrate (2003) indicated that treatment for anger not only reduced the experience of anger, but also increased positive coping behaviors. These authors called for further research to determine the source of these increases in positive
behaviors. For example, anger reduction may free people up to engage in positive behaviors they have already acquired without the interference produced by anger arousal. An alternative might be that the anger management treatment itself teaches new behaviors, problem solving skills, and/or positive alternative thinking. As DiGiuseppe and Tafrate noted, this has important implications in guiding treatment because it may inform whether practitioners should focus on reducing anger or increasing positive behaviors. The authors also made note that there is little research on the cognitive mediation of anger and called for more investigation with regard to measures of attitude and cognitions related to anger. They also indicated that treatment for anger had little effect on individual’s level of depression or anxiety suggesting that treatment for anger does not necessarily reduce general distress that an individual is experiencing. In addition to low effect sizes on measures of depression and anxiety, they found low effect sizes for improvement in interpersonal relationships and self-esteem. The authors suggested that, when beginning anger management, improvement on the quality of interpersonal relationships might be an appropriate focus and that the relationship found with self-esteem may be because individuals with problem anger do not identify themselves as having low self-esteem.

DiGiuseppe and Tafrate’s (2003) meta-analyses of anger treatments only included cognitive behavioral, cognitive, and behavioral interventions. It was indicated that no client-centered, gestalt, family systems, or psychodynamic research on anger interventions were available. The authors suggested that, simply because studies have not used these other orientations in psychometrically sound quantitative research, the assumption that they are ineffective for the treatment of anger could be incorrect. The
authors called for research using approaches founded in these other theoretical orientations in order to determine potential effectiveness and value. In addition to other theoretical orientations, DiGiuseppe and Tafrate (2003) also stated that empirically supported treatments for anger focused primarily on treating those clients in the action-stage of treatment (Prochaska & DiClemente, 1986). Since many clients being treated for anger are more likely to be in the precontemplative stage of change (DiGiuseppe, Tafrate, & Eckhardt, 1994), it has yet to be determined if there are more effective strategies for treating the majority of anger management clients.

In order to focus on anger exclusively, Del Vecchio and O’Leary (2004) conducted a meta-analysis excluding studies primarily focused on aggression or hostility. These authors criticized previous meta-analyses for multiple factors, which could detract from their findings with respect to the treatment of anger. One such criticism was including studies using measures of hostility and aggression as determinants of inclusion. The 23 studies included in Del Vecchio and O’Leary’s meta-analysis (2004) used non-institutionalized participants who were determined to have significant levels of anger as measured by a psychometrically established instrument (i.e., DAS; Deffenbacher, Oetting, & Lynch, 1994; NAS; Novaco, 1994; STAXI; Spielberger, 1988) created exclusively for the assessment of anger. The authors criticized Beck and Fernandez (1998) and Edmonson and Conger (1996) for including measures of aggression, hostility, and/or assertiveness as measures of the anger construct. These authors suggested that, as such, effect sizes derived from the earlier meta-analyses are not indicative of changes in anger alone.
Del Vecchio and O’Leary (2004) also criticized Beck and Fernandez (1998) and Tafrate (1995) for including participants from highly diverse populations (i.e., child-abusing parents, inpatients, inmates, and children), and stated that such groups may warrant individual analysis when looking at treatment outcomes for various interventions. Del Vecchio and O’Leary (2004) only included those studies using adult outpatients as participants. Edmondson and Conger (1996) and Tafrate (1995) only included published studies in their analyses. Del Vecchio and O’Leary (2004) cited research (Glass, McGaw, & Smith, 1981) indicating that the exclusive use of published studies in a meta-analysis can inflate effect sizes. Therefore, Del Vecchio and O’Leary (2004) included both published and unpublished studies in their meta-analysis. Further, previous meta-analyses (Edmondson & Conger, 1996; Tafrate, 1995) were also criticized for not differentiating between treatment characteristics (i.e., individual vs. group sessions, session length, number of sessions) when calculating effect sizes.

Del Vecchio and O’Leary (2004) used moderator analyses to determine whether there were differential effect sizes due to type of control condition (i.e., minimal treatment vs. no treatment), author, publication status, sample type, and session type and length. These authors criticized Beck and Fernandez (1998) for including within-group studies along with between group studies in a single meta-analysis. They indicated that this could also inflate the effect size determined by the meta-analysis (Rosenthal, 1994). All studies used for Del Vecchio and O’Leary’s meta-analysis (2004) were between-group designs containing at least one experimental group and a control group. Due to the exclusion criteria used by Del Vecchio and O’Leary (2004), only a third of the studies
used in their meta-analysis were in any of the previous meta-analyses conducted on anger and its treatment.

The mean weighted effect sizes for the studies analyzed by Del Vecchio and O’Leary (2004) ranged from 0.61 to 0.90. Cognitive-behavioral (CBT), cognitive (CT), relaxation (RT), and other (O) (e.g., process group counseling, social skills training) treatment methods for anger showed effect sizes associated with success rates of 65 to 70%. Analysis of the differential effects of various treatment types on various presentations of anger showed that CT and CBT had large to moderate effect sizes in the treatment of driving anger, 2.11 and 1.07 respectively. Therapies in the “O” category were shown to be the most beneficial in assisting individuals with problems controlling their overall experience of anger (d = 0.69), and CBT was shown to be beneficial in treating those with problems controlling their anger expression (i.e., anger outbursts) (d = 0.60). CT appeared to be most beneficial in the treatment of anger suppression. Relaxation treatment methods showed the lowest overall benefit with measures of trait anger (d = .016) but the highest benefit on measures of state anger with a large mean weighted effect size of 1.20. All four treatment methods showed significant success in treating trait anger (d = 0.65-0.79), with participants having a 66 to 68% chance of success in treatment for trait anger.

Del Vecchio and O’Leary (2004) cautioned that their findings based on a limited amount of data with “effect sizes derived from less than five studies” at times were a limitation (p. 30). The authors stated that the reason for this limitation was that relatively few studies had been conducted on anger itself and many treatment studies have focused on outcomes of aggression and hostility, making it difficult to study anger alone.
Additionally, the authors indicated that many of the studies used were from the same research team’s earlier work. Therefore, the authors suggested that the methods used by that team may have influenced their findings, and the authors called for further studies focusing specifically on anger outcomes by other research teams in order to reaffirm or dispute the findings of their meta-analysis. Further, Del Vecchio and O’Leary (2004) stated that the majority of the studies used in their meta-analysis used college students as participants, and because of this, effect sizes may not be generalizable to other populations of interest (e.g., age groups, education levels, or career paths). Not only may college students differ from other populations due to age, education, or career paths, but college students are most likely to have volunteered for treatment. Individuals who typically present for anger management can be resistant due to lack of cognitive and social skills, lack of engagement, and impatience (Novaco, 1994). Court mandated clients or those forced into treatment by a significant other might present and respond to treatment quite differently than college students. The authors called for future research on populations other than college students, including those clients somehow forced into anger management.

In an attempt to assess treatment of angry clients and further establish evidence-based treatment for anger problems, Saini (2009) conducted a meta-analysis inclusive of many researched methods of anger treatment. This meta-analysis included 96 studies and 139 treatment effects. Among those interventions investigated were multicomponent, stress inoculation, skills-based, relaxation-based, psychoeducational, psychodynamic, exposure, cognitive behavior therapy, and cognitive therapy. Saini found significant differences in effect sizes for different treatments used. Briefly, the effect sizes found for
multicomponent (0.93) were larger than effect sizes found for cognitive behavioral therapy (0.60), exposure (0.60), psychoeducational (0.37), relaxation-based (0.67), skills training (0.85), and stress-inoculation (0.58). While Saini found psychodynamic therapy to have the largest effect size (1.40), far more research was used for determining the effect size of cognitive behavioral methods (42 studies) than psychodynamic methods (two studies). Also of interest was the removal of two of the effect sizes from cognitive behavior studies due to being extremely high (> 3.00).

In addition, various outcomes for anger and the influence of moderator variables (e.g., session length, number of sessions, manual use, treatment format, publication status) were a focus of this meta-analysis as factors that could influence various effect sizes gathered in the studies selected for analysis. Other factors of interest were different treatment modalities used, various populations studied (i.e., children versus adults, and patients with schizophrenia, combat veterans, educators, aggressive drivers, batterers of significant others, incarcerated offenders, mental health patients, abusive parents, and individuals with intellectual disabilities versus college students volunteering for treatment), and the selection process of studies included. Selection processes included published and unpublished studies, multiple databases searched, and key words used to search anger related studies). Further, Saini (2009), like Del Vecchio and O’Leary (2004), stated that anger is distinct from violence, aggression, and hostility and requires separate analysis. Saini (2009) reported an overall weighted standardized mean difference across all treatments of 0.76 (95% confidence interval [CI], 0.67–0.85, $Q = 403.13$, df 138, $p < .001$, $I^2 = 65.76$).
Saini (2009) found that effect sizes were consistent at four to eight weeks, 12 to 16 weeks, and one year from treatment; however, the author found these results almost exclusively with undergraduate college students and may not generalize to other populations. Saini found the effect sizes of multicomponent therapies to be consistent with the findings of Tafrate (1995) who reported effect an effect size of 1.00. Saini (2009) stated that including various treatment components proves to be beneficial and warrants further study. Specifically, additional research to determine the optimal components, magnitude of inclusion, and order of inclusion is likely to be helpful.

Consistent with the findings of DiGiuseppe and Tafrate (2003), studies that incorporated manualized treatment and fidelity checklists showed significantly higher effect sizes than those that did not. Saini also found that, generally, eight sessions appears to be an adequate number of sessions in treating problem anger due to evidence of diminishing returns with further sessions, which appears caused by increasing attrition with the addition of sessions (Glancy & Saini, 2005).

While the treatment research on anger management is encouraging, Deffenbacher (2006) raised concerns about ecological validity. From the perspective of the practitioner providing anger-management services, one of the primary limitations of the extant research is that most treatment studies were conducted with self-referred clients or clinical analogue participants (i.e., college students scoring high on trait anger who perceived themselves as having problems with anger for which they desired assistance). As a result, it is not uncommon for clinicians to find themselves devoting considerable time preparing clients for treatment (e.g., raising awareness, enhancing motivation,
building a sound therapeutic alliance) and modifying treatment protocols to suit clients who are lower functioning or ambivalent about treatment.

In spite of the clinical significance of dysfunctional anger, the frequency with which clinicians encounter angry clients in treatment, and the availability of evidence-based treatments for individuals with problem anger, many clinicians have received little training in working with angry clients and are less comfortable working with angry clients versus clients presenting with depression or anxiety (DiGiuseppe & Tafrate, 2007). Perhaps it is no surprise, then, that 30-40% of clients treated for problem anger terminate prematurely, with as many as 50% not returning after their initial session (Brown, O’Leary, & Feldbau, 1997; Feazell, Mayers, & Deschner, 1984). Investigation of attitudes, readiness, motivation, and treatment seeking for anger management may help us learn how to reach and retain those clients suffering from the adverse consequences of problem anger.

Readiness for Change

Researchers have emphasized the importance of a strong therapeutic alliance and adequate client readiness to participate in treatment as being essential to the success of anger management interventions (Deffenbacher, 1999; DiGiuseppe, 1995; DiGiuseppe & Tafrate, 2007; Howells & Day, 2003; Tafrate & Kassinove, 2003). DiGiuseppe (1995) identified several attitudes or beliefs that clients entering anger management may generate with respect to an agreement on treatment goals. These are feeling anger is justified and appropriate, blaming others or taking little personal responsibility, condemning others, believing in the benefit of anger as a cathartic release, believing that anger is an effective tool in achieving goals, and believing that the therapist does not
agree that fault lies with another. Given the coercion of many clients into treatment by others not presenting for treatment of their own volition, the intrinsic versus extrinsic motivation of such clients is relevant (Howells & Day, 2003.)

According to the transtheoretical model of change (Prochaska, Norcross, & DiClemente, 1995), many angry individuals may be at a stage in which they are unaware of or unwilling to acknowledge that a problem with their experience and expression of anger exists. Deffenbacher (1999) suggested that the therapeutic alliance is integral not only to aid an individual in admitting that his or her anger is a problem, but also in accomplishing those tasks which are a necessary part of cognitive behavioral treatment for anger. Part of establishing the therapeutic alliance with a client dealing with problem anger may require the therapist to communicate empathy and understanding of the client’s perspective as being the aggravated party (Deffenbacher, 1999). Deffenbacher was careful to clarify that this does not require that the therapist agree with the client’s opinions or behaviors but that the therapist communicates an understanding of the client’s perspective. Since anger reduction may not be a goal with which a client can initially appreciate or justify, “building rapport and trust, exploring and understanding anger, and increasing motivation” will likely need to be addressed first (p. 300). Finally, the means, specific interventions, and strategies for addressing problem anger will likely require the client to have been educated about and then asked if he or she is willing to engage in those interventions. Without such an agreement, the therapeutic alliance, and therefore, anger management itself, will likely not be successful (Deffenbacher, 1999). Further, Deffenbacher (1999) stated that, if the therapist does not identify the stage of change (Prochaska, Norcross, & DiClemente, 1995) that a problem anger client is currently
experiencing and adjust the working alliance accordingly, the factors that cause attrition will likely surface.

Barriers to Engagement in Anger Management Services

For the purpose of the proposed study, barriers to treatment are those internal or external forces keeping an individual from engaging in contact with a mental health professional and entering and completing treatment with that professional. Research has focused on potential barriers to treatment for general mental health services. Among these barriers are the perceived stigma associated with mental health services (McFarling, 2011). These are listed as “difficulty scheduling appointment, possibly harming career, too embarrassing, being viewed as weak, mental health care seems ineffective, [coworkers] having less confidence in him or her, [supervisors] might treat [an individual] differently or blame him or her, and not wanting mental health care to appear on [his or her permanent] record” (p. 32).

Another potential barrier to mental health treatment listed in the literature is poverty (Santiago, Kaltman, & Miranda, 2013). Specifically, those factors related to poverty include cost and lack of insurance (Snowden & Thomas, 2000), competing obligations (Hines-Martin, 2003), personal means of transportation, finances, childcare, a lack of knowing treatment options exist, and family or community disapproval or negative reports from friends and family (Davis, 2008). Others are work schedules, public transportation options (Krupnick & Melnikoff, 2012), fear of being misjudged or treated poorly because of ethnic background (LaVeist, Diala, & Jarrete, 2000), fear of losing custody of one’s children (Copeland & Snyder, 2011), and concern over immigration status (Kaltman, Hurtado de Mendoza, Gonzales, & Serrano, 2013). More
are an endorsement by one’s peers that individuals should be self-reliant and expect mental problems to work out without outside intervention (Steele, Dewa, & Lee, 2007), the primary language of the client versus that of the therapist, culturally congruent therapists available (McCabe, 2002), and a lack of referral by primary care providers (McKay et al., 2004). Despite the large amount of research available on barriers to general mental health services, there is only a small amount of research available about the potential barriers to anger management services.

Individuals in need of anger management services may face unique barriers in addition to those described above. According to Deffenbacher (1999), “Many individuals with anger problems are often at a precontemplative stage of change (Prochaska, Norcross, & DiClemente, 1995), in that they neither ‘own’ anger as a personal problem nor seek reduction of it, no matter how others may see their anger” (p. 299). Such individuals may see their anger as identity or role consistent. In such cases, individuals do not perceive anger as a problem but as part of his or her role or identity. Individuals may view therapy aimed at reducing anger as an attempt to one’s core identity, and they may reject the therapy. For other individuals experiencing problem anger, the individuals experiencing it may not recognize its presence. Such individuals have no insight into the manner in which their anger has affected their lives or the lives of others around them. Deffenbacher (1999) also referred to individuals who “are deficient in flexible emotional-behavioral scripts with which to respond” (p. 299). These individuals respond with anger because they are unaware a more adaptive or functional response is available. However, perhaps the most common disconnect between a person’s realization that their anger is a problem is that in which the individual completely externalizes the cause of his or her
anger. The individual sees his or her anger as justified in some manner (Deffenbacher, 1999).

Kassinove and Tafrate (2002) indicated that clients presenting for anger management services are often there at the behest of others (e.g., friends, family members, colleagues, employers) and may be ambivalent about the need for such services. Such clients may submit to treatment but with a fair amount of reservation. Insight into their own issues with anger may be low to nonexistent, and they may not be motivated to spend money or time much less engage in the work of treatment. Ambivalence about change and the costs of anger may well be present. In addition to the therapeutic alliance, the client’s expectations of a therapeutic intervention may be a factor influencing that client’s engagement in the therapeutic intervention (Dearing, Barrick, Dermen, & Walitzer, 2005).

Researchers have suggested that societal influences may predispose men to maladaptive anger management strategies rather than adaptive anger management strategies (McDermott, Schwartz, & Trevathan-Minnis, 2012). Newman, Gray, and Fuqua (1999) showed that men are socialized to externalize their behaviors in outward displays of emotion, and McDermott and colleagues (2012) postulated that this gives men a sense that such outward displays are not only acceptable but that some men may feel entitled to them. Men who identify with a traditional concept of masculinity may be particularly prone to negative strategies for managing their anger (McDermott et al., 2012). Many men do not accept traditional gender roles that lead to maladaptive displays of anger management, and such men adapt feminist and egalitarian beliefs (Levant, Richmond, Cook, House, & Aupont, 2007). Alternatively, some men have an entitled
sense of their maladaptive displays of anger due to adherence to traditional gender roles. In these cases, it makes sense that such adherence would be a significant barrier to engagement in anger management services with a professional mental health practitioner.

Dysfunctional Anger among College Students

Research has shown college students can have moderate to high levels of anger, which could indicate that their psychological well-being is compromised (Hamdan-Mansour, Dardas, Nawafleh, & Abu-Asba, 2012). For the college student population, anger may mediate the relationship between emotion regulation and symptoms of social anxiety and depression (Asberg, 2013). One possible reason why college students appear to be particularly susceptible to the heightened experience of anger is that they are likely to be engaged in new developmental tasks involving the establishment of relationships on a large and unfamiliar scale. College students are likely becoming acquainted with many new individuals including possible friends, romantic partners, professional colleagues, and professors. They may not have sufficiently developed the communication skills to enable them to navigate the initiation of these various relationships successfully, and the experience of embarrassment or rejection due to a lack of social skills may result in an increase in the experience of anger (Edmondson, Conger, & Conger, 2007). College often brings students in contact with a level of diversity they may not have previously experienced—not only in the sense of diverse people but also new ideas that may conflict with students’ worldviews. College students without the necessary communication or social skills to navigate these new situations may experience a pattern of negative reactivity to establishing and navigating social relationships in general, and this pattern
may establish itself and continue past the college years with problem anger and its consequences as a result.

In addition, actual and/or perceived rejection by others may lead to isolation, hostility, aggression, and other problem coping styles, all of which could have negative effects in the college environment and later in life. It has been found that, due to changes in demographic, social, family, and economic factors (Kitzrow, 2003), college and university students are vulnerable for multiple mental health concerns such as substance abuse, depression, and hostility (Hamdan-Mansour, 2009; Kitzrow, 2003). Additionally, researchers have found that one in three dating relationships occurring during college has at least one incident of dating violence (Jackson, 1999; Lewis & Fremouw, 2001). Intervention during the college years may not only prove invaluable in preventing such problems during college, but also well into later life.

The implications of problem anger in the college student population can have a ‘snowballing’ effect in that those individuals found to have problem anger are more likely to react inappropriately in social situations, which can cause an anger response from other students who are themselves also at risk for high anger experiences (Edmondson, Conger, & Conger, 2007). Edmondson and colleagues used the example of one student expressing to another student that certain research experiments are stupid to which the other student responds, “I think these experiments are kind of interesting” (p. 589). In a situation where one or both students are prone to problem anger expression, a conflict can result from even a minor difference of opinion.

Further, college students may respond negatively to assertive statements, which can be a part of anger management as a tool for more effective communication. A
statement meant as an initial attempt in communication and problem solving, such as “I feel angry,” was met with more antagonism, more anger, and less empathy than “I feel upset” (Kubany, Richard, Bauer, & Muraoka, 1992). For college students’ prone to inappropriate anger expression, such small differences can be the difference between effective communication and relationship development and dysfunctional anger outbursts. College students found to have higher levels of trait anger may be more sensitive to affective cues. Therefore, such individuals may react negatively to such subtle cues regardless of the intent to express these cues or not. Relatively mild situations may result in high anger and hostility (Edmondson et al., 2007).

Anger management may help alleviate distress and reduce the reflective social nature of problem anger among college students; however, the potential benefits of anger management are limited by the difficulty of getting students to engage in it. A college student prone to a negative interpretation of an interaction may find the very suggestion that they get help for their anger offensive and reject the notion altogether. In addition, the way in which anger management provider engages such students can be critical to adherence and retention in the helping process; however, research findings have implicated the importance of university student’s level of life satisfaction by showing a positive relationship between life satisfaction and control over anger. Furthermore, the role of the student’s family members as models for coping with problem anger may be a protective factor for those students who identify families with good coping skills in relation to anger (Hamdan-Mansour et al., 2012). With such positive factors in mind, it seems critical that ways in approaching and helping college students prone to negative anger consequences be further researched and developed. In additional need of
exploration are methods of encouraging such individuals to seek help and engage anger management services of their own accord.

Predictors of Help Seeking

Research has found that women are more likely to seek help than men for various health-related problems (Addis & Mahalik, 2003). This includes psychiatric and counseling help (Courtenay, 2000; Sharpe & Heppner, 1991; Vessey & Howard, 1993). Nam et al. (2010) conducted a meta-analysis of studies focused on attitudes toward help seeking and an individual’s gender was a strong predictor of attitudes toward help seeking; however, it is unknown whether gender will predict help seeking for anger management. Further, it is unknown whether gender will affect help seeking with regard to a range of options on a continuum of anger management engagement. For instance, men may be more prone to try to address anger issues by researching solutions on the internet or by watching a television documentary on anger management and women may be more likely to try to address their anger issues with a trained professional anger management specialist. To date, no known studies have been conducted to determine such factors. Past engagement in mental health services has a positive relationship with mental health service utilization (Pescosolido & Boyer, 1999; Shirom & Shperling, 1996). Specifically, past contact with a psychologist predicts more positive help seeking attitudes (Fischer and Farina, 1995), increased intention to seek out psychological treatment (Deane, Skogstad, & Williams, 1999), and help seeking behavior (Solberg, Ritsma, Davis, Tata, & Jolly, 1994). In addition, past research (Skogstad et al., 2006) has shown a reduction in the impact of others’ opinions for individuals who have engaged in prior psychological services.
Research has established the stigma of mental illness and psychological therapy as a potential barrier to engagement in help seeking for psychological services (Farina, Holland, & Ring, 1966; Phillips, 1963; Sibicky & Dovidio, 1986). In the study conducted by, for their sample of older adults, Westerhof et al. (2008) concluded that stigma associated with seeking professional psychological help was of little concern and help seeking propensity for their population was rather high. They found that this population’s general perception of psychological help was not negative. Rather, the problem was with individuals in this population “recognizing and admitting one’s own need for professional help” (p. 320).

Furthermore, Westerhof et al. (2008) found that a barrier to seeking psychological help for their population was low psychological openness. Emotional openness and fear of emotional experience and expression may be a barrier to help seeking for psychological services (Komiya, Good, & Sherrod, 2000). A construct that may be inclusive of both psychological openness and emotional openness, Psychological Mindedness, could be related to treatment seeking for anger and one’s awareness of the degree to which one’s anger is problematic.

Psychological Mindedness

Psychological mindedness is “a person’s interest and ability to be in touch with and reflect on his or her psychological states and processes” (Nykliček & Denollet, 2009, p. 32). It was originally defined by Appelbaum (1973) as “a person’s ability to see relationships among thoughts, feelings, and actions, with the goal of learning the meanings and causes of his [or her] experience and behavior” (p. 36). Researchers have suggested that the insight of connecting one’s personal problems with one’s internal
mental processes (McCallum & Piper, 1990) and a desire to know why others do what they do as well as a capacity and desire for personal behavioral change (Conte, Buckley, Picard, & Karasu, 1995) are additional components of psychological mindedness. The concept of psychological mindedness was first considered as a prerequisite of a client’s ability to engage and make gains from dynamic psychotherapy (Nykliček & Denollet, 2009); however, it has more recently been considered as relevant to individual’s ability to benefit from other forms of psychotherapy, including Dialectical Behavior Therapy and cognitive behavior therapy (Björgvinsson & Hart, 2006).

Due to numerous problems with previous scales developed to measure psychological mindedness, Nykliček and Denollet (2009) developed the Balanced Index of Psychological Mindedness (BIPM) to be a psychometrically sound instrument assessing a contemporary understanding of the construct. Previous scales developed to assess psychological mindedness (e.g., the 22-item Psychological Mindedness Scale, Gough, 1975; the 45-item Psychological Mindedness Scale, Conte et al., 1996) were criticized by the authors of the BIPM for questionable content validity, low internal consistency, low test-retest reliability, low factorial validity, and excessive length. Nykliček and Denollet (2009) developed the BIPM to yield a factor structure representative of the theoretical core facets of psychological mindedness supported by the literature on the construct, “interest in attending to one’s psychological phenomena” and “ability for insight into these phenomena” (p. 40). They used measures of the related concepts of self-consciousness, reflection and rumination, alexithymia, and perceived emotional intelligence to validate the BIPM. The authors found large effect sizes using correlations between both the subscales of the BIPM and the overall score of the BIPM.
with established scales of these related concepts. The authors indicated that the BIPM was not suited to assess an individual’s understanding of the psychological phenomena of another person, but instead to assess an individual’s own level of affective psychological mindedness.

Considering the transtheoretical model of change (Prochaska, Norcross, & DiClemente, 1995), many angry individuals may be at a stage in which they are unaware of or unwilling to acknowledge that a problem with their experience and expression of anger exists. Therefore, a measure of psychological mindedness may be predictive of a client’s willingness to consider anger management in that he or she may not possess either the insight into or willingness to engage in his or her affective experience of anger. Additionally, Deffenbacher’s (1999) indication of a client’s motivation to engage and willingness to consider the justification of his or her feelings being integral to the therapeutic alliance and the resultant success of anger management also suggests that a measure of psychological mindedness may be useful in determining an individual’s likelihood of engagement in anger management.

Help Seeking for Professional Mental Health Services

The impact of mental health problems for individuals in their college years has been well-documented (Chang, 2007; Hayes, 1997; Lucas & Berkel, 2005). Therefore, the amount and types of engagement in mental health services for this population is of immediate interest (Gallagher, 2007; Kessler et al., 2005). Identifying and treating students in need is a growing focus of research and has easily identifiable potential benefits (Eisenberg, Golberstein, & Gollust, 2007). There are many factors contributing to the mental well-being of college students, a few of which are financial concerns,
academics, and problem substance use (Angst, 1996, Weitzman, 2004). However, college students with mental health concerns may be reluctant to address them with mental health professionals (Stefl & Prosperi, 1985; Vogel, Gentile & Kaplan, 2008; Vogel, Wade, & Hackler, 2008). Schomoerus, Matschinger, and Angermeyer (2009) found that, despite general awareness of available mental health services increasing, students are not taking advantage of such services. Nam, Choi, Lee, Lee, Kim, and Lee (2013) suggested, “Some difficulties with using mental health services and factors that affect help seeking behavior may exist” (p. 37). Traditionally, researchers have used attitudes towards seeking help to study help seeking and individual’s proclivity to engaging in mental health services (Cramer, 1999).

Many factors contributing to individuals’ attitudes toward help seeking have been proposed and tested; however, there have been many discrepancies in the findings about these factors (Nam et al., 2013). Greater intensity of psychological distress has been shown to contribute to positive evaluations of help seeking (Carlton & Deane, 2000; Goodman, Sewell, & Jampol, 1984), and support from significant others in attending treatment has been shown to contribute to a more positive evaluation of help seeking (Friedson, 1961; Rickwook & Braithwaite, 1994). At the same time, the intensity of distress and degree of social support have also been found to have no significant relationship to attitudes towards seeking help (Kelly & Achter, 1995; Vogel & Wester, 2003; Vogel et al., 2005). Also, if an individual anticipates a better result from psychological services, he or she may be more likely to engage in help seeking (Shaffer, Vogel, & Wei, 2006; Vogel et al., 2005; Vogel, Gentile et al., 2008; Vogel, Wade et al., 2008; Vogel & Wester, 2003).
There have also been various factors identified that have been found to deter an individual’s engagement in help seeking behavior. One such factor is the avoidance of the negative judgment or social stigmatization (Deane & Chamberlain, 1994). Another is to elude the negative emotions anticipated with engagement in help seeking (Komiya et al., 2000). Related is the desire to abstain from the discussion of information the individual finds uncomfortable to reveal to others (Cramer, 1999; Kelly & Achter, 1995; Vogel & Wester, 2003). Also included in the list of established deterrents to help seeking behavior are the costs an individual expects to encounter (Vogel & Wester, 2003) and fear associated with engagement in treatment (Kushner & Sher, 1989). Additionally, Cepeda-Benito & Short (1998) found that individuals who are apt to hide their negative personal information from others have negative attitudes towards help seeking than those individuals open to sharing negative personal information. Other researchers found contradictory results suggesting that individuals more likely to conceal personal negative information had more positive attitudes towards seeking help (Kelly & Achter, 1995; Vogel & Wester, 2003).

In an attempt to resolve the contradictory findings on the factors involved in promoting or deterring help seeking, Nam et al. (2013) conducted a meta-analysis of 19 previous studies. This involved nine factors previously found to contribute to the positive or negative attitudes toward help seeking, “anticipated benefits, anticipated risks, depression, distress, self-concealment, self-disclosure, social support, public stigma, and self-stigma” (p. 39). Self-stigma and anticipated benefits had effect sizes with absolute values \( r > .40 \). Those factors having effect sizes \( .20 < \left| r \right| < .40 \) were self-disclosure, anticipated risks, and public-stigma. Self-concealment, depression, and social support
had effect sizes with \( r < .20 \). The only factor not found to have a significant correlation with help seeking attitudes was psychological distress. Anticipated benefits, self-disclosure, and social support had positive relationships with help seeking attitudes. Stigma, anticipated risks, self-concealment, and depression had negative relationships with help seeking attitudes.

In line with Lewin’s (1951) field theory, Nam et al. (2013) determined those factors having positive relationships with help seeking attitudes to be approach dynamics and those factors having negative relationships with help seeking attitudes to be avoidance dynamics. Anticipated benefits had the strongest effect of all the approach dynamics. Also, self-disclosure was found to have a strong relationship with positive attitudes towards help seeking, indicating that those individuals more prone to discuss personal information and concerns were more inclined to share such information with a mental health practitioner. Self-stigma was found to have the strongest effect of all the avoidance dynamics. In such cases, engagement in mental health services is seen as a threat to self-esteem. After self-stigma, anticipated risks was the highest of the avoidance dynamics, indicating that individuals who saw engagement in mental health services as more of a risk than a benefit would be less prone to seek out such services. Consistent with past research about depression (i.e., Stefl & Prosperi’s “Service Gap” Phenomenon, 1985), and the finding that less than one third of individuals diagnosed with clinical depression seek mental health services (Carson & Butcher, 1992), depression was an avoidance dynamic.
Established Measures of Help Seeking

Fischer and Turner’s 29-item Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS; 1970) has been the most accepted measure of attitudes towards help seeking. The original ATSPPHS contained four subscales: recognition of one’s need for professional help, tolerance of stigma associated with psychotherapy, interpersonal openness about one’s problems, and confidence in the psychological professional’s ability to assist. In 1995, due to some dated wording issues and factor loading concerns, Fischer and Farina shortened and updated the scale creating the 14-item Attitudes Toward Seeking Professional Psychological Help Scale – Short Form (ATSPPHS-SF). This updated scale contained two subscales: recognition of personal need for professional help and confidence in the professional’s ability to help. This two-factor structure was the result of retaining those items from the original ATSPPHS with the largest item total score correlations found by Fischer and Turner (1970) and conducting a factor analysis of these retained items. The first factor retained ten items from the original scale, which originally were included in the Recognition of Need for Psychotherapeutic Help and Confidence in Mental health Practitioner factors of the ATSPPHS. The authors intended this 10-item factor of the ATSPPHS-SF to be one-dimensional assessment of treatment attitudes. Item responses are scaled similarly to the ATSPPHS (0 = “Disagree” to 3 = “Agree”). Higher total scores on the ATSPPHS indicate more positive attitudes towards treatment with the lowest score possible being zero and the highest being 30. The psychometric properties of the updated scale were superior to the original ATSPPHS as confirmed by three separate studies (Fischer & Farina, 1995; Komiya et al., 2000; Vogel et al., 2005).
Other scales have been developed to be similar measures of the attitude toward help seeking construct (e.g., The New Inventory of Attitudes Toward Seeking Mental Health Services, IASMHS, Mackenzie, Knox, Gekoski, & Macaulay, 2004; and the Belief and Evaluations About Counseling Scale, BEACS, Choi, 2008). Although, none have been as well established and psychometrically tested as the ATSPPH and the ATSPPH-SF (Nam et al., 2013). Coefficient alphas of the total score of the ATSPPH have been found to be .83 (Fisher & Turner, 1979), .87 (Cepeda-Benito & Short, 1998), and .73 (Al-Darmaki, 2003). Coefficient alphas of the total score of the ATSPPH-SF have been found to be .84 (Komiya et al. 2000), .84 (Shaffer et al., 2006), and .84 (Shea & Yeah, 2008). Fischer and Farina (1995) found a correlation of .87 between the total scores of the ATSPPH and the ATSPPH-SF.

Help Seeking Measures for Anger Management

There have been some efforts to develop measures to identify if an individual is experiencing the adverse consequences of problem anger (Deffenbacher, Oetting, Lynch, & Morris, 1996) and assess an individual’s readiness for anger management (Williamson, Day, Howells, Bubner, & Jauncey, 2003). However, to date, we are unaware that any measure of help seeking for anger management has been developed similarly to those measures most commonly used to assess help seeking for general psychological problems (i.e., the ATSPPH and the ATSPPH-SF). Individuals experiencing excessive anger may have little insight into the fact that their anger is problematic as it may be causing them little to no personal distress (Deffenbacher, 1999). Considering this, assessing help seeking for anger management may be somewhat different compared to help seeking for general psychological problems.
In an attempt to develop a scale that would assess help seeking for anger management, the Attitudes Toward Anger Management Scale (ATAMS) was created as a measure of an individual’s positive or negative evaluation of anger management services (Boudreaux et al., 2014). The authors of the ATSPPH and the ATSPPH-SF used attitudes about constructs relevant to help seeking for general psychological problems. Similarly, we hoped that help seeking for anger management could be assessed by assessing attitudes about those factors unique to help seeking for anger management. The creation of the ATAMS was based on Cellucci and colleagues’ (2006) measure of help seeking for alcohol problems. The authors of the ATAMS used the ATSPPHS (Fischer & Turner, 1970) and the Self-Stigma of Seeking Help Scale (Vogel, Wade, & Haake, 2006) to inform the process of generating items specific to the attitudes toward anger management construct. A graduate student research team familiar with the anger management literature reviewed possible items of the ATAMS for their specificity and applicability to the construct. The research team investigated fifty initial items, and retained forty of these items for exploratory factor analysis (EFA) with a college student sample. The items of the ATAMS were scaled from 0 (“Disagree”) to 3 (“Agree”), modeled after the ATSPPHS. Four hundred and fifteen (294 women and 121 men) undergraduates from a mid-sized Southeastern university were used for the EFA and initial validation of the ATAMS. This process yielded a 13-item self-report measure of attitudes toward seeking psychological help for anger-related issues. Two factors were retained which accounted for 61.24% of the cumulative variance. The items of Factor 1 seemed to assess an individual’s belief in the efficacy of anger management as a successful treatment for problem anger. This factor was labeled Belief in Treatment.
The items of Factor 2 seemed to assess an individual’s willingness to seek help outside of his or her own social circle. This factor was labeled Receptiveness.

Comparisons between the ATAMS and established measures of help seeking and stigma were used to provide initial support for construct validity. Positive correlations were found between scores on both subscales of the ATAMS and scores on the ATSPPHS-SF, and negative correlations were found between scores on both subscales of the ATAMS and scores on the SSOSH. Per research conducted by Miller and Johnson (2008), the importance one places on addressing problem anger, one’s perceived ability to engage in anger management, and one’s commitment to addressing anger management were used to address participants’ possible motivation for engaging in anger management. Initial support for criterion validity was obtained by showing that scores on the ATAMS predicted participants’ responses to these three concepts related to motivation for anger management independent of respondent gender and trait anger.

Participants also rated their intention to seek anger management services within the next year. We hoped that by investigating the intention to seek help of a high anger subset of the sample that scores on the ATAMS would predict intention to seek anger management services. The high anger subset was determined by using only those respondents who scored above the sample median on the Trait Anger scale of the STAXI-2; however, using the question of intent to seek anger management services within the next year did not yield any significant level of intent to seek services. In other words, even those participants whose scores placed them in a high anger subset showed little to no intention of seeking anger management services, so the ATAMS could not be used to
determine whether individuals with anger issues would indeed seek anger management services within the next year.

In the case of a potential client for anger management having no insight into his or her anger, a scale aimed at capturing his or her evaluation of anger management in general could be useful. If an individual with problem anger is unaware that his or her anger is maladaptive and has a score on the ATAMS showing a positive outlook on anger management, a therapist may be able use that positive outlook to help engender motivation towards therapy. That therapist can aim to help that individual gain insight that his or her anger is problematic. Such insight may be instilled by showing that individual an objective measure of the consequences of his or her anger, such as the Anger Consequences Questionnaire (ACQ; Deffenbacher, Oetting, Lynch, & Morris, 1996). Should individuals without insight into their own anger problems score negatively on their outlook on the general effectiveness of anger management, building insight and motivation may need to start with showing that individual the statistics revealing the established effectiveness of anger management.

The Present Study

The present study continued the development of the ATAMS started by Boudreaux and colleagues (2014). As an initial step, four items were added with the goal of increasing the reliability of the Receptiveness scale. These new items, along with the original 13 items, were then subjected to confirmatory factor analysis in an attempt to confirm the previously reported two-factor structure with a new sample. This was done in the hope of producing a psychometrically improved version of the ATAMS.
In an effort to avoid the problems with variability in the dependent variable experienced in the initial validation study of the ATAMS, multiple dependent variables covering various types of engagement in the management of anger were presented to participants. In effect, the intention was to create a continuum of engagement in anger management, control, and understanding to provide greater variability on these measures. On one side of the continuum was a measure of intent to recommend anger management to a friend or attend a lecture focused on education about problem anger, its effects, and possible options for its management. On the opposite side of the continuum was engagement in weekly individual or group therapy sessions for a period of eight weeks using cognitive behavioral methods to reduce the experience of anger problems. Within the continuum, questions ranged from assessing whether an individual would attend anger management should they find out they score high on anger problems on an established objective measure of their anger; also, whether or not they may attend one session focused on reducing problem anger or a five week class on managing anger. Similarly, participants were questioned as to their willingness to engage in some level of anger management should they be approached by a significant other with the message that there is a problem with their anger. Also included were questions focusing on the participant’s assessment of the odds of success of such anger management interventions.

Nam and colleagues (2013) suggested that future research address not only individuals’ attitudes toward help seeking but also their actual help seeking behavior. Therefore, as a gage of participants’ engagement in the process of managing their own anger, an opportunity was posed in our survey asking participants to supply their email
address in the case that they score in the “high risk for problem anger” range on established measures of this construct. The statement read:

There is a chance that your survey data will show that you are at risk for the consequences of problem anger and/or you believe you have an issue with problem anger. If you would like to be contacted with the time and place for a free one hour presentation on problem anger, its effects, and possible options for controlling problem anger, please provide your email address here:__________.

The hypotheses for the present study included:

H1: A two-factor structure for the ATAMS similar to that reported by Boudreaux and colleagues (2014) will be confirmed.

H2: The two factors of the ATAMS will each be positively correlated with attitudes toward general psychological help seeking as measured by the Attitudes Toward Seeking Professional Psychological Help Scale – Short Form (ATSPPH-SF, Fischer & Farina, 1995).

H3: The two factors of the ATAMS will each be negatively correlated with stigma related to general psychological help seeking as measured by the Self-Stigma of Seeking Help Scale (SSOSH, Vogel, Wade, & Haake, 2006).

H4: The two factors of the ATAMS will each be positively correlated with psychological mindedness as measured by the Balanced Index of Psychological Mindedness (BIPM, Nyklíček & Denollet, 2009).

H5: The two factors of the ATAMS will each predict self-rated intentions to seek anger management services. Varying levels of engagement in addressing one’s anger
will be used to assess individual’s responses on a continuum of engagement options as follows:

H5a: The two factors of the ATAMS will each predict intent to read a brochure on problem anger, independent of respondent gender.

H5b: The two factors of the ATAMS will each predict intent to investigate anger management on the Internet, independent of respondent gender.

H5c: The two factors of the ATAMS will each predict intent to watch a television documentary on anger management, independent of respondent gender.

H5d: The two factors of the ATAMS will each predict intent to read a self-help book about anger management, independent of respondent gender.

H5e: The two factors of the ATAMS will each predict intent to attend a one hour presentation focused on education about problem anger, its effects, and possible options for controlling it, independent of respondent gender.

H5f: The two factors of the ATAMS will each predict intent to attend one individual one hour interview with an anger management specialist, independent of respondent gender.

H5g: The two factors of the ATAMS will each predict intent to attend five two-hour-long anger management classes over the course of five weeks, independent of respondent gender.
H5h: The two factors of the ATAMS will each predict intent to attend eight weekly group counseling sessions focused on anger management, independent of respondent gender.

H5i: The two factors of the ATAMS will each predict intent to attend between six and ten individual weekly counseling sessions focused on anger management over a six to ten week period, independent of respondent gender.

H5j: The two factors of the ATAMS will each predict intent to attend three months of weekly counseling sessions focused on an anger management protocol with an individual therapist, independent of respondent gender.

H5k: The two factors of the ATAMS will each predict intent to consult a family doctor about possible medications for problem anger, independent of respondent gender.

H6: The two factors of the ATAMS will each show adequate test-retest reliability between a three to four week interval.
CHAPTER II

METHODOLOGY

Participants

The sample for the study included 326 undergraduate volunteers from the University of Southern Mississippi. This number met recommendations in the literature that, despite potential low factor loading, a sample size of 300 will prove adequate for confirmatory factor analysis (Stevens, 2002). According to GPOWER (Faul & Erdfelder, 1992) analysis, the confirmatory factor analysis required more participants than any other analysis done for this study. Therefore, the sample size of 326 was adequate for all analyses conducted for this study.

Instruments

Demographic Questionnaire

A brief demographic questionnaire was included to assess respondent gender, age, and race (see Appendix A). Respondents were also asked whether they had received professional psychological services previously and to rate the degree to which they perceive their anger as problematic.

Attitudes Toward Anger Management Scale (ATAMS)

Boudreaux and colleagues (2014) developed the 13-item ATAMS to capture attitudes and intentions toward anger management. The Attitudes Toward Seeking Professional Psychological Help Scale (Fischer & Turner, 1970) and the Self-Stigma of Seeking Help Scale (SSOSH; Vogel, Wade, & Haake, 2006) were consulted during the item generation phase of the ATAMS; however, item wording focused on attitudes and intentions towards anger management specifically rather than general psychological help or help seeking intentions. In this way, the ATAMS was developed much like a measure
of help seeking for alcohol problems by Cellucci and colleagues (2006). Consistent with the Attitudes Toward Seeking Professional Psychological Help Scale – Short Form (ATSPPHS-SF; Fischer & Farina, 1995), response options for the 13 Likert-type items range from 0 (“Disagree”) to 3 (“Agree”). Boudreaux and colleagues (2014) used principal components analysis to reduce an initial pool of 40 items to the 13-item ATAMS. Two correlated factors \( r = .25 \) were identified: Belief in Treatment (9 items, \( \alpha = .93 \)) and Receptiveness (4 items, \( \alpha = .73 \)). Initial evidence of construct validity was provided in the form of theoretically-consistent relationships among the two subscales and measures of similar constructs, including the ATSPPHS-SF and SSOSH. Moreover, initial evidence of criterion validity was obtained through hierarchical multiple regressions of the ATAMS subscales on participants’ reported motivation to engage in anger management.

In order to improve the reliability of the Receptiveness scale, four items considered for the original ATAMS development and validation (Boudreaux et al., 2014) were added to this scale prior to attempting to confirm the factor structure of the ATAMS. These items were, “I do not have much confidence in anger management programs,” “Anger management takes time and money, so it isn’t for someone like me,” “Individuals who can handle their own problems with anger without having to talk to others are stronger,” and “Attending anger management should be a last resort.” This decision was made due to analyses of the data of our previous research showing that adding these items to the Receptiveness scale increased the reliability to .82 for that sample. Since the previous reliability score of the Receptiveness scale was .73, it was
hoped that adding these four items to the scale would result in a more psychometrically sound measure overall.

Continuum of Anger Management Questionnaire (CAMQ)

Eleven questions were developed for this study to assess participants’ intent to engage in managing problem anger on a continuum of interventions ranging from little investment from the individual to a great deal of investment from the individual. In an attempt to include the ways in which an individual may deal with problem anger, the items of this questionnaire were developed by reviewing the literature relative to the treatment and experience of problem anger. Members of an anger-focused graduate level research team generated and reviewed items. The team discarded several items due to redundancy and lack of fit, and the research team added other items in an effort to include all possible aspects of coping with, managing, or investigating problem anger. The final version of the questionnaire contains 11 Likert-type items assessing the chance a respondent would be likely to engage in the condition of the item, (1 = “very unlikely” to 5 = “very likely”) and one open-ended item. For example, an item read “Investigate anger management on the Internet,” and the respondent chose a response ranging from one to five, very little to very much. Each item of the questionnaire was intended to be analyzed individually in relation to each scale of the ATAMS. Additionally, the directions of this questionnaire informed the individual that, should their responses to a measure of anger show they are at risk for problematic consequences of that anger, all options listed in the questionnaire are free and readily accessible. In an attempt to gauge actual engagement in help seeking behavior for anger management, an open-ended item asked participants to provide their email address if they would like to be contacted about
attending a free one hour presentation on problem anger, its effects, and possible options for controlling it. The presentation contained information on the adaptive and maladaptive experiences of anger, tools to manage maladaptive anger, and information in identifying maladaptive anger in others. An outline of the presentation on problem anger is available for review in Appendix C of this document.

**Attitudes Toward Seeking Professional Psychological Help Scale – Short Form (ATSPPH-SF)**

Developed by Fischer and Farina (1995), the ATSPPH-SF has been described as “the most relevant and widely used contemporary assessment of mental health treatment attitudes.” (Elhai, Schweinle, & Anderson, 2008, p. 321). It includes 14 Likert-type items to which participants indicate their agreement 0 = “Disagree” to 3 = ”Agree.” Scores from 0 to 30 are possible, with larger scores reflecting more positive attitudes toward treatment. Alpha coefficients between .82 and .84 have been reported, supporting internal consistency (Constantine, 2002; Fischer & Farina, 1995; Komiya et al., 2000), and test-retest reliabilities of .86 and .84 for 5 days and, respectively, suggest that scores are fairly stable (Fischer & Farina, 1995). Regarding validity, Elhai and colleagues (2008) provided evidence of convergent validity by showing that the ATSPPH-SF correlated with the Stigma Scale for Receiving Psychological Help (SSRPH, Komiya et al., 2000). Moreover, the ATSPPH-SF discriminated between individuals who have previously received professional mental health care and those who have not (Constantine, 2002; Elhai et al., 2008; Fischer & Farina, 1995; Komiya et al., 2000), providing evidence of criterion validity.
**Self-Stigma of Seeking Help Scale (SSOSH)**

Its authors developed the SSOSH to measure “the perception that seeking help from a psychologist or other mental health professional would threaten one’s self-regard, satisfaction with oneself, self-confidence, and overall worth as a person” (Vogel, Wade, & Haake, 2006, p. 326). It consists of 10 Likert-type items, ranging from 1 = (“strongly disagree”) to 5 = (“strongly agree”), higher total scores suggest more negative attitudes toward help seeking. The SSOSH appears to be internally consistent (α = .91), and support for construct and criterion validity have been reported in college samples (Vogel et al., 2006). Correlations between the SSOSH total score and scores on the DES (Disclosure Expectations Scale, Vogel & Wester, 2003) Anticipated Risks and Anticipated Benefits scales and the Social Stigma for Seeking Psychological Help scale (Komiya et al., 2000) were used to show construct validity. Correlations between the SSOSH and scores on the ATSPPHS and the Intentions to Seek Counseling Inventory scales (Cash, Begley, McCown, & Weise, 1975) showed evidence of criterion validity (Vogel et al., 2006).

**Balanced Index of Psychological Mindedness (BIPM)**

The 14-item BIPM (Nykliček & Denollet, 2009) consists of two 7-item subscales, Interest and Insight. The authors defined psychological mindedness as “a person’s interest and ability to be in touch with and reflect on his or her psychological states and processes” (p. 32). The Interest factor assesses “interest in one’s internal psychological states and processes, as reflected by a positive attitude towards one’s feelings and other internal phenomena” (p. 35). The Insight factor assesses “the ability to actually be in touch with one’s internal phenomena and reflect on them, resulting in
insight into those phenomena” (p. 35). Items are answered on 5-point Likert scales with “0 = not true, 1 = a little bit true, 2 = somewhat true, 3 = fairly true, and 4 = very much true” (p. 35). The Interest and Insight subscales and total BIPM scale were found to have good internal consistency (αs = .85, .76, and .85, respectively). Six to seven week test-retest reliability coefficients were found to be .63 for Interest, .71 for Insight, and .75 for the BIPM total scale. Convergent Validity was found for both subscales of the BIPM with the total score of the Psychological Mindedness Scale (Conte, Ratto, & Karasu, 1996), (r = .59, R^2 = .35, with Interest; r = .53, R^2 = .28, with Insight). The total score of the BIPM was used in the current study in an attempt to help further establish the construct validity of the ATAMS.

All measures used in this study are presented in Appendix A of this document.

Procedure

Participants were recruited using the Department of Psychology’s research system, Sona Systems, Ltd. (http://usm.sona-systems.com/). Students who signed up were taken to an online consent form (see Appendix B), and all instruments (see Appendix A) were hosted on Qualtrics. Thus, all instruments were administered online. After obtaining informed consent, participants were directed to the ATAMS item set, the Anger Management Continuum Questionnaire, the demographic questionnaire, and then all remaining measures in random order to minimize potential order effects. To protect data integrity from careless responding, two procedures were implemented. First, as recommended by Meade and Craig (2012), two directed response items were added to the instruments to identify careless responding and better understand the validity of participants’ responses. These items were formatted to blend into the questionnaires into
which they were added. Each item instructed participants to answer it in a specific way (e.g., “Answer ‘agree’ to this question”). Participants who failed both items were eliminated from the sample; the data for participants who failed one but not both items were examined to determine whether they should be retained. Second, as recommended by Huang, Curran, Keeney, Poposki, and DeShon (2012), response time was examined. Specifically, we set the survey up in Qualtrics so that the amount of time required to complete the survey was reported for each respondent. An average time variable was then created and used to identify participants whose average time fell at or below the 5th percentile of the sample (i.e., those who completed the survey in less time than 95% of the sample). Their data was then examined to determine whether they should be retained. It was estimated that the average amount of time required for participants to complete the study would be approximately 30 minutes.

As a measure of actual engagement, participants were provided the opportunity to type their email address to be contacted in the case that their survey data showed potential risk for the problem consequences of anger. For those students who provided their email address, an email was sent as an invite to a presentation on problem anger provided by members of the Anger and Traffic Psychology Lab of The University of Southern Mississippi.

Analyses

Data analysis proceeded in four sequential stages.

Stage 1: Data Clean-Up and Preliminary Analyses

The raw data file was examined for errors, and cases missing more than 25% of their data were deleted. Study variables were then formed, and the frequency distribution
of each variable was examined. Means and standard deviations were calculated for all
variables of interest, and internal consistencies were computed via coefficient alpha to
verify that scales are assessing unitary constructs.

Stage 2: Confirmatory Factor Analysis of the Expanded Attitudes Toward Anger
Management Scale

Confirmatory factor analysis (CFA) was conducted on three different models of
the ATAMS. Initially, the two factor 13-item model as established by the original
development and validation of the ATAMS (Boudreaux et al., 2014) was analyzed (see
Figure 1). Then, a model with the 13 items from the original model of the ATAMS plus
four additional items to improve the reliability of the Receptiveness scale was analyzed.
This two factor 17-item structure was the Belief in Treatment factor consisting of the
eight items and the Receptiveness factor of the original five items established in the
original development and validation of the ATAMS (Boudreaux et al., 2014) along with
the additional four items added to the Receptiveness scale in an effort to increase
reliability (see Figure 2). Finally, in order to confirm the original two factor structure, a
single factor 17-item model of the ATAMS was analyzed (see Figure 3).

Stage 3: Construct Validity

The convergent validity of the revised ATAMS, as confirmed in Stage 2 was
examined through bivariate correlations with measures of similar constructs (i.e.,
Attitudes Toward Seeking Professional Psychological Help Scale-Short Form and Self-
Stigma of Seeking Help Scale). Each of these scales was expected to be related to the
factors of the ATAMS as described in H2 and H3.
Additionally, the two scales of the ATAMS were examined through bivariate correlations with a measure of general Psychological mindedness (i.e., Balanced Index of Psychological Mindedness; BIPM, Nyklíček & Denollet, 2009). This scale was expected to be related to the scales of the ATAMS as described in H4.

Stage 4: Criterion Validity

As a preliminary test of criterion validity, the sample was used to determine whether the ATAMS predicted self-rated intentions to engage in each of the options listed in the items of the anger management continuum questionnaire, (i.e., H5). Canonical Correlations were used where the scales of the ATAMS were correlated with self-rated intentions to engage in the various options aimed at understanding and/or managing one’s anger listed in each item of the Continuum of Anger Management Questionnaire.

Stage 5: Test-Retest Reliability

In order to establish test-retest reliability, the ATAMS was administered to a group of 45 undergraduate students at a three-to-four-week interval. Relationships between the first and second administrations of the ATAMS were analyzed in order to determine the temporal consistency of the measure (H6).
CHAPTER III

RESULTS

Data Screening

Prior to conducting the statistical analyses, the data file was screened for outliers, normality, and missing data. An initial pool of 445 participants was reduced by removing 27 cases missing more than 25% of the data. Ten cases were removed due to missing at least one of the directed response items used to identify careless responders (i.e., “Please answer ‘Agree’ for this item”). Sixty three cases were removed for responding incorrectly to both of the two directed response items. Six cases were removed for answering all items in the survey with the same response option, and 10 cases were removed for completing the survey too quickly (i.e., faster than 95% of the sample). Cases in which one but not both of the directed response items was answered incorrectly and those in which the survey was completed too quickly were inspected visually. For all these cases, the data appeared to be invalid (i.e., answering in patterns such as 1, 2, 3, 1, 2, 3, 1, 2, 3 or 1, 1, 2, 2, 2, 3, 3 throughout the survey) and were therefore removed.

After initial data screening, 326 participants remained for analyses: 253 (77.6%) female, 72 (22.1%) male, and one (0.3%) missing data point with regard to gender. Racial/ethnic background identified by participants was as follows: 180 (55.2%) White/Caucasian, 109 (33.4%) Black/African American, 14 (4.3%) American Indian/Alaskan Native, 8 (2.5%) Hispanic or Latino (of any race), 6 (1.8%) Asian, 1 (0.3%) Native Hawaiian/Other Pacific Islander, and 8 (2.5%) Other. Seven participants identifying as “Other” entered: Creole, Mixed Race, Mixed, Italian/Pacific Islander, African American/American Indian, Black and White, and Asian American. The
remaining participant identifying as “Other” chose not to enter identifying text. Year in college identified by participants was as follows: 113 (34.7%) freshman, 75 (23.0%) sophomore, 70 (21.5%) junior, 61 (18.7%) senior, and 7 (2.1%) graduate student or other.

Of the 326 cases used for analyses, none had missing data on any variable. Table 1 contains the range of scores, means, standard deviations, and alpha coefficients for all variables about which hypotheses were made.

Table 1

*Range of Scores, Means, Standard Deviations, and Alpha Coefficients (N = 326)*

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase I</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAMS – Belief in Treatment</td>
<td>4</td>
<td>27</td>
<td>23.50</td>
<td>4.00</td>
<td>.86</td>
</tr>
<tr>
<td>ATAMS – Receptiveness</td>
<td>3</td>
<td>24</td>
<td>15.48</td>
<td>4.15</td>
<td>.75</td>
</tr>
<tr>
<td>CAMQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATSPPH-SF</td>
<td>11</td>
<td>55</td>
<td>36.61</td>
<td>8.93</td>
<td>.87</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>30</td>
<td>19.11</td>
<td>4.90</td>
<td>.75</td>
</tr>
<tr>
<td>SSOSH</td>
<td>9</td>
<td>43</td>
<td>21.86</td>
<td>6.14</td>
<td>.86</td>
</tr>
<tr>
<td>BIPM</td>
<td>0</td>
<td>40</td>
<td>20.43</td>
<td>7.24</td>
<td>.70</td>
</tr>
<tr>
<td><strong>Phase II</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAMS – Belief in Treatment</td>
<td>18</td>
<td>27</td>
<td>24.44</td>
<td>2.52</td>
<td>.73</td>
</tr>
</tbody>
</table>
Table 1 (continued).

<table>
<thead>
<tr>
<th>Phase II</th>
<th>Minimum</th>
<th>Maximum</th>
<th>$M$</th>
<th>$SD$</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATAMS – Receptiveness</td>
<td>8</td>
<td>24</td>
<td>16.02</td>
<td>4.81</td>
<td>.86</td>
</tr>
</tbody>
</table>

Note. ATAMS = Attitudes Towards Anger Management Scale; CAMQ = Continuum of Anger Management Questionnaire; ATSPPH-SF = Attitudes Towards Seeking Professional Psychological Help – Short Form; SSOSH = Self-Stigma of Seeking Help Scale; BIPM = Balanced Index of Psychological Mindedness

Confirmatory Factor Analysis

Three models of the ATAMS were investigated using confirmatory factor analyses (CFAs). The initial CFA was conducted on the two factor model of the 13-item version of the ATAMS reported by Boudreaux et al. (2014) in the initial development and validation of the ATAMS (see Figure 1). The second CFA was conducted to test the two factor model of the 17-item version of the ATAMS (see Figure 2). This version was modified from the original 13-item version for the current study by adding four additional items to the second factor in an attempt to improve the reliability of that factor over the previous 13-item version of the ATAMS. The third CFA tested a one factor model of the 17-item version of the scale in order to determine the utility of breaking the overall scale into two factors as established by the initial exploratory factor analysis of the scale (see Figure 3). These analyses were conducted using IBM® SPSS® Amos 22.0.0 (Build 1384) .NET CLR Version 4.0.30319.34209 using the covariance matrix as the matrix of analysis. To identify the model and set the scale, one factor pattern coefficient per factor was fixed to unity, for all models.
Figure 1. 13-item Two Factor Version of the ATAMS.
Figure 2. 17-item Two Factor Version of the ATAMS.
While the Chi-square is often reported as a goodness of fit statistic (Jackson, Gillaspy, & Purc-Stephenson, 2009), researchers have indicated that sample size can affect the Chi-square statistic (Fan, Thompson, & Wang, 1999; Stevens, 1996). This is because a large enough sample can result in a statistically significant Chi-square due to increment degrees of misfit that have little practical significance (Bentler & Bonnett, 1980; Byrne & Stewart, 2006). The Chi-square statistic reported here is based upon a scaling of the maximum-likelihood (ML) fit function. As indicated by the literature (Jackson et al., 2009), more than one fit index was used to determine multiple aspects of model fit. In the current study, the Root Mean Square of Approximation (RMSEA), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI) were used as additional
means of comparing model goodness of fit. For RMSEA, researchers have indicated that values equal to or less than .06 (Hu & Bentler, 1999) or even up to .08 (Browne & Cudek, 1993) indicate a reasonable fit of the model to the data. With regard to TLI and CFI, .90 or greater has been recommended to assess reasonable fit (Bentler & Bonnett, 1980); however, more recently researches have suggested that the cutoff be .95 (Hu & Bentler, 1999) or even .97 (Schermelleh-Engel, Moosebrugger, & Müller, 2003).

The fit statistics for the three models tested are presented in the first three rows of Table 2. The fit was good for both the 13-item and the 17-item two factor models with both models demonstrating RMSEA values at or below .06 and TLI or CFI values at or above the .90 values. Whereas, the single factor 17-item model did not demonstrate a reasonable fit to the data. Lack of fit for the one factor model was expected due to prior research (Boudreaux et al., 2014) indicating two distinct factors within the ATAMS.

Table 2

*Confirmatory Factor Analyses Fit Statistics (N = 326)*

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi-square</th>
<th>df</th>
<th>RMSEA</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-item</td>
<td>123.53</td>
<td>64</td>
<td>.05</td>
<td>.94</td>
<td>.95</td>
</tr>
<tr>
<td>17-item 2 Factor</td>
<td>252.51</td>
<td>118</td>
<td>.06</td>
<td>.89</td>
<td>.91</td>
</tr>
<tr>
<td>17-item 1 Factor</td>
<td>526.28</td>
<td>119</td>
<td>.10</td>
<td>.68</td>
<td>.72</td>
</tr>
</tbody>
</table>
Table 2 (continued).

Note. \( df \) = Degrees of Freedom; RMSEA = Root Mean Square Error of Approximation; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index

Inspection of the modification indices did not reveal significant problems with any of the items in either the 13-item or the two factor 17-item model of the ATAMS. The original reason for adding the four additional items to the Receptiveness scale of the ATAMS was to improve the reliability. Using the data from the current study, the four-item version of the Receptiveness scale (\( \alpha = .66 \)) displayed lower reliability than the eight-item version (\( \alpha = .75 \)). The gain in overall reliability of the scale indicates that the two factor 17-item version of the ATAMS is the preferred model. This confirmed our hypothesis that a two-factor structure of the ATAMS would be confirmed (H1). The 13-item version showed better fit statistics and offers a more parsimonious solution to assessing the construct of interest; however, the ATAMS is still in the early stages of development. Retaining the 17-item version of the scale at this time will provide more data when studying and standardizing the ATAMS with future populations of interest. The 17-item version of the ATAMS was used in all subsequent analyses reported here.

Bivariate Correlations

Bivariate correlations between the two scales of the 17-item version of the ATAMS and measures of similar constructs were computed for the full sample in order to evaluate the construct validity of the measure (see Table 3). As predicted (H2), scores on both scales of the ATAMS were positively correlated with attitudes toward general psychological help seeking, as measured by the ATSPPHS-SF. In addition, scores on both scales of the ATAMS were negatively correlated with stigma related to general psychological help seeking (H3), assessed with the SSOSH. Specifically, higher scores
on Belief in Treatment indicated a more positive attitude towards general psychological help seeking, and lower scores on Belief in Treatment indicated a more negative attitude towards general psychological services. In addition, higher scores on the Receptiveness scale indicated a more positive perception of how those receiving psychological services are perceived by others, and lower scores on Receptiveness indicated a more negative perception of how those receiving psychological services are perceived by others.

Finally, the prediction that scores on the two scales of the ATAMS would be positively correlated with scores on a measure of psychological mindedness (H4), assessed with the BIPM, resulted in a lack of significant relationships indicating that this hypothesis was not supported.

Table 3

*Intercorrelations Among all Variables (N = 326)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ATAMS -Belief</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ATAMS -Receptiveness</td>
<td>.32*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ATSPPH-SF</td>
<td>.44*</td>
<td>.59*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SSOSH</td>
<td>-.46*</td>
<td>-.44*</td>
<td>-.50*</td>
<td></td>
</tr>
<tr>
<td>5. BIPM</td>
<td>.05</td>
<td>-.06</td>
<td>.18*</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note. ATAMS = Attitudes Towards Anger Management Scale; ATSPPH-SF = Attitudes Towards Seeking Professional Psychological Help – Short Form; SSOSH = Self-Stigma of Seeking Help Scale; BIPM = Balanced Index of Psychological Mindedness

*p < .01
Canonical Correlations

Canonical correlations were run to analyze the relationship between the two scales of the ATAMS (i.e., Belief in Treatment and Receptiveness) and the 11 questions of the CAMQ. The predictor variable set included the two scales of the ATAMS, and the criterion variable set contained the 11 questions of the CAMQ. The same number of participants used in the CFAs ($N = 326$) was used in the canonical analyses. The full model was significant, with a Wilk’s Lambda of .713, $F(22, 626.00) = 5.249$, $p < .001$. As the Wilk’s Lambda refers to the variance that cannot be accounted for by the canonical variables in the model, it is common for researchers to use a Wilk’s Lambda statistic to calculate a measure of effect size. “(1-Wilk’s Lambda) represents the amount of variance shared by canonical variables and is able to be interpreted in a similar way as $R^2$ during regression analysis.” (Cetin, Ilhan, & Yilmaz, 2014, p. 151). The “1-Wilk’s Lambda” value for this canonical analysis was .287. Thus, the amount of shared variance between the ATAMS and the CAMQ was nearly 29%, which could be interpreted as a small to medium effect size.

Two canonical functions were derived from the canonical correlation analysis between the ATAMS and the CAMQ. The canonical correlation value for the first canonical function was .52879, indicating that the amount of shared variance between the data sets in the first function was 27.96% [convergence = (.52879)$^2$ = .2796]. This indicates the amount of convergence between Belief in Treatment and questions in the CAMQ secondary construct data sets. The next canonical root was not significant at the $p < .05$ level. It has been suggested that only those canonical functions determined to be statistically significant should be interpreted (Tabachnick & Fidell, 2007). Despite all
questions in the CAMQ having statistical significance \( p < .005 \), those factors in set one with practically significant canonical loadings were CAMQ 10 (“Attend three months of weekly counseling sessions focused on an anger management protocol with an individual therapist,” .380) and CAMQ 6 (“Attend one individual one hour interview with an anger management specialist,” .457; see Figure 4).

![Figure 4](image_url)

**Figure 4.** Standardized Canonical Coefficients and Canonical Correlation Value for the First Canonical Function concerning the Correlation between the Factors of the ATAMS and the Questions of the CAMQ.

The standardized canonical coefficients indicate that the continuum of engagement variables in the first canonical root, CAMQ item 6 and CAMQ item 10 were
most highly weighted. Of all the questions listed in the CAMQ, only item 10 yielded a practically significant result with regard to the predictive capacity of the Belief in Treatment factor of the ATAMS. When referencing canonical correlations, standardized canonical coefficients can be utilized similarly to factor loadings of factor analyses (Cetin et al., 2014). The benchmark for determining practical significance followed recommendations by Sherry and Henson (2005) that factor loadings approaching or greater than .45 can be considered for practical significance. Specifically, scores on Belief in Treatment were positively correlated with scores on CAMQ item 6, ($r = .41, p < .001$). Individuals indicating higher belief in anger management treatment may be more likely to attend one individual one hour interview with an anger management specialist (H5f). Belief in Treatment did show ability to predict self-rated intentions with regard to engagement in anger management treatment (H5).

Test-Retest Reliability

Of the 326 participants who completed Phase One of the current study after data screening, only 45 participants opted to complete Phase Two. After completing Phase One (i.e., the first administration of the two factor 17-item version of the ATAMS), participants who indicated that they wished to complete Phase Two (i.e., the second administration of the two factor 17-item version of the ATAMS) were notified of their ability to access Phase Two after a period of three weeks. Once informed, participants had a one week window in which to complete Phase Two of the study. Phase Two consisted of retaking the ATAMS. Pearson correlations were calculated between the scores from the two phases. The results are presented in Table 4. A correlation of .71 indicates moderately strong test-retest reliability for the Belief in Treatment scale, and a
correlation of .83 indicates strong test-retest reliability for the Receptiveness scale. This supported the hypothesis that the two scales of the ATAMS would demonstrate adequate test-retest reliability over a three to four week period (H6).

Table 4

*Three to Four-Week Test-Retest Correlations of the Two Scales of the ATAMS (N = 326)*

<table>
<thead>
<tr>
<th>Factor 1 – Belief in Treatment</th>
<th>.71*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 2 – Receptiveness</td>
<td>.83*</td>
</tr>
</tbody>
</table>

*p < .001

Means Comparison

An independent-samples t-test was conducted to compare intent to engage in anger management by using scores on the ATAMS for those participants who offered their email address to be notified about a free, one hour presentation on anger, anger management, and methods of addressing problem anger and those participants who did not provide their email address. There was a significant difference in the Belief in Treatment scores for those participants who offered their email address (M = 24.87, SD = 2.54) and those participants who did not offer their email address (M = 23.28, SD = 4.15); t(324) = 2.49, p = .013. There was not a significant difference in the Receptiveness scores of the ATAMS for those participants who offered their email address (M = 16.31, SD = 4.52) and those participants who did not offer their email address (M = 15.35, SD = 4.08); t(324) = 1.45, p = .149. The effect size for differences in the means of Belief in Treatment scores of the ATAMS was very small ($r^2 = .019$). Therefore, the scores on the ATAMS were of little use in predicting whether a participant was likely to offer their
email address. It was hoped that a similar analysis could be conducted for those participants who actually attended the presentation; however, as no participants attended the presentation after having been notified by email, no such analysis could be conducted.
CHAPTER IV
DISCUSSION

This study involved the continued development of a brief self-report measure to assess help seeking attitudes and intentions specific to seeking help for anger-related issues, the Attitudes Toward Anger Management Scale (ATAMS), began by Boudreaux and colleagues (2014). After adding four items to the Receptiveness scale in an effort to increase its internal consistency, confirmatory factor analysis (CFA) was used to compare the previously reported two-factor structure with two alternative models. Both the original 13-item ATAMS and the revised 17-item ATAMS were confirmed. Although the original 13-item version had slightly better fit statistics, the internal consistency of the Receptiveness scale improved from .66 to .75 with the addition of the four items. Thus, the two-factor model based on the revised 17-item version of the ATAMS was retained. Further support for construct validity was obtained via comparisons with measures of stigma and help seeking. Specifically, scores on the two ATAMS scales were related to attitudes toward general (i.e., non-anger-specific) help seeking and stigma, as expected. On the other hand, the prediction that the ATAMS scales would be related to an established measure of psychological mindedness was not supported. Support for criterion validity of the ATAMS was provided by showing that it predicted scores on self-rated intentions to engage in multiple forms of anger management. Finally, the prediction that scores on the ATAMS would display adequate test-retest reliability was supported over a 3- to 4-week interval.

Not only has it been demonstrated that individuals are hesitant to seek help for psychological problems (Cepeda-Benito & Short, 1998; Westen & Morrison, 2001), but
this hesitancy has been shown to be significant for individuals experiencing dysfunctional anger. With regard to problem anger, the literature has called for greater attention to attitudes toward help seeking, treatment motivation, and assessing client readiness for change (DiGiuseppe & Tafrate, 2007; Howells & Day, 2003). Therefore, the ATAMS was developed to be used as a tool to investigate potential barriers for individuals who could benefit from professional anger management services. In the initial development and validation of the ATAMS, Boudreaux and colleagues (2014) used principal component analysis to verify two scales: Belief in Treatment and Receptiveness. Belief in Treatment focuses on assessing respondents’ belief in the efficacy of anger management as a successful treatment for problem anger. Higher scores indicate more positive beliefs (i.e., Respondents regard anger management programs as being more beneficial and as more likely to lead to positive change). Thus, low scores on this scale may be useful for identifying individuals whose negative attitudes may adversely affect their service utilization. The Receptiveness scale assesses respondents’ willingness to seek help outside of their own effort or social circle. Because the items on this scale are reverse scored, lower scores indicate greater inclination to solve anger problems alone or with the help of a significant other (i.e., respondents believe that attaining aid from a professional is unnecessary and may even show weakness on their part). Low scores on this scale may help to identify individuals who are reluctant to seek services due to concerns about how they would be perceived by others, or how they would view themselves if they could not resolve their own problems.

The present study was conducted as the next step in the development of the ATAMS and had three primary goals. First, after adding four items to the Receptiveness
scale in an effort to increase its internal consistency (i.e., Boudreaux et al. 2014) obtained an alpha coefficient of .66 on this scale, indicating a need for improvement), CFA was used to confirm the factor structure of the ATAMS. Second, scores on the revised ATAMS were compared with multiple dependent variables reflecting various levels of engagement with anger management, control, and understanding in order to provide a more comprehensive assessment of the construct validity of the ATAMS. Finally, a subset of the sample completed the ATAMS twice to provide data on test-retest reliability.

To further establish the psychometric strength of the ATAMS, three alternative models were investigated using CFA. The two-factor model based on Boudreaux and colleagues’ original 13-item version of the ATAMS was shown to demonstrate a good fit to the data. This indicated that the ATAMS measured the intended construct consistent with the intended nature of the construct. In this case, the scales of the ATAMS measure respondents’ attitudes toward anger management services as would be expected in comparison to how respondents would respond if there were no relationship between the scales of the ATAMS and how participants responded to the items on the scale. Despite the initial model of the ATAMS showing a good fit to the data, a two-factor model based on the revised 17-item version the scale was also confirmed. This model differed from the original through the addition of four items to the Receptiveness scale. These four items were part of the initial item pool developed by Boudreaux and colleagues (2014). Using the initial development and validation data, it was discovered that the reliability of the Receptiveness scale was improved by including these four items. This 17-item version of the ATAMS not only demonstrated good fit statistics when investigated using
CFA but improved the internal consistency of the Receptiveness scale. Both of these models outperformed a single-factor model based on the revised 17-item ATAMS. At this point, the two-factor model based on the revised 17-item version of the ATAMS is recommended.

The revised ATAMS was then compared with established measures of help seeking, stigma, and psychological mindedness. As with the initial development and validation on the 13-item version of the scale (Boudreaux et al., 2014), evidence of the construct validity of the 17-item version was provided in the form of convergent relationships with similar but broader constructs. Scores on Belief in Treatment and Receptiveness were positively related to those on the Attitudes Towards Seeking Professional Psychological Help – Short Form (ATSPPH-SF), a measure of general help seeking. Additionally, scores on both scales of the ATAMS were inversely related to scores on the Self-Stigma of Seeking Help Scale. The inverse relationship was a function of higher scores on the ATAMS indicating a more positive disposition towards anger management and higher scores on the SSOSH indicating a more negative disposition toward engagement in psychological services with regard to stigma. Despite using a different sample and being temporally removed by almost two years from Boudreaux and colleagues’ (2014) study, these findings were consistent and provided additional evidence that the ATAMS is indeed assessing constructs similar to measures of stigma and attitudes toward general psychological help seeking. Also consistent with earlier findings, correlations suggested that the ATAMS is assessing something distinct from general measures of stigma and help seeking. Therefore, the utility of a measure of these
help seeking constructs as they relate to anger management specifically is further supported by the current study.

Comparing scores on the ATAMS to an established measure of psychological mindedness (BIPM) showed no relationship; however, a positive relationship was found between a measure of general psychological help seeking (ATPPHS-SF) and psychological mindedness. Again, this suggests that the ATAMS is assessing a construct that differs in some important ways from attitudes toward help seeking for general psychological services. Our prediction that attitudes toward anger management would be related to psychological mindedness was based on the expectation that an individual who was open to anger management would show a greater willingness to reflect upon and engage their emotional and cognitive experience. Considering the literature suggests that problem anger may not be perceived as distressing by the individual experiencing it (Howells & Day, 2003), it may not be surprising that no significant relationship was found between attitudes towards engagement in the management of anger problems and an openness towards and ability to reflect on internal psychological states and processes (Nykliček & Denollet, 2009). In other words, in the absence of any perceived anger problem, why would there be an internal investigation or assessment of one’s ability to consider that problem? Perhaps, a relationship between attitudes toward anger management and psychological mindedness would only be present among individuals experiencing problem anger who recognized it as problematic. That is, some level of insight into the nature of one’s anger might be required. This would certainly be consistent with the literature showing that many angry clients lack insight and that effective anger management often involves techniques aimed at increasing emotional and
cognitive awareness (Beck & Fernandez, 1998; Dahlen & Deffenbacher, 2001; Del Vecchio & O’Leary, 2004; Edmondson & Conger, 1996; Mental Health Foundation, 2008; Sukhodolsky, Kassinove, & Gorman, 2004; Tafrate, 1995). Future research to clarify whether there is a relationship between the level of anger someone is experiencing and the level of psychological mindedness present could be useful here. Perhaps individuals without problem anger are prone to be more psychologically mindedness or vice versa. Administering measures of these constructs to a high anger population may help to explain the lack of a relationship we found in this study.

Another possible explanation for the lack of a relationship between the ATAMS and the BIPM measure of psychological mindedness may involve the age of the participants in this sample or perhaps an interaction between their life experience and levels of executive functioning. College students, in general, may be somewhat less inclined toward inward inspection of cognitive and emotional experience. Thus, the level and/or meaning of psychological mindedness might differ between college age samples and adults older than traditional college age.

In the initial development of the ATAMS by Boudreaux and colleagues (2014), an attempt was made to assess its criterion validity by investigating the relationship between scores on the ATAMS and respondents’ intent to seek anger management services within the following year. This was attempted using one 5-point Likert item, resulting in extreme range restriction. Despite not only analyzing the sample as a whole but also a subset of those individuals who scored in the upper quartile of the Trait Anger subscale of the STAXI-2, there was almost no variability in answers with individuals almost unanimously showing no intention to seek such services. Therefore, the current
study used eleven 5-point Likert items querying intent to engage ranging across a continuum of possible anger management strategies. Although all eleven items showed statistically significant ability of Belief in Treatment to predict engagement, only scores on two of these eleven items were found to be high enough to be considered practically significant. Specifically, higher scores on Belief in Treatment indicated a greater self-rated intention to (1) attend an individual one hour interview with an anger management specialist and (2) attend three months of weekly counseling sessions focused on an anger management protocol with an individual therapist.

With regard to the reason that these two specific items showed relationships strong enough to be considered and the other nine items did not, there was no practically discernable difference between the variability of scores. The results may have been due to the two practically significant items being worded as directly related to working with an anger management professional. The items of the Belief in Treatment scale are primarily worded in the same context. Most of the items of the CAMQ not showing practical significance are related to investigating anger on one’s own or outside the context of working with an anger management professional. With two items of the CAMQ showing practical significance, the predictive validity of the ATAMS with regard to self-rated intent to engage in at least some forms of professional anger management services was supported.

In recognition that reported intent to seek treatment does not always translate into actual treatment seeking, an analogue was created where participants in the present study were asked if they would like to be notified about a free one hour presentation on anger, anger management, and the means of addressing anger problems. A means comparison
of scores on the scales of the ATAMS between those who supplied their email and those who did not showed minimal differences with those offering their email scoring only slightly higher (~5%) on total scale scores and Belief in Treatment scores of the ATAMS. With the addition of this question, we sought to determine whether scores on the ATAMS might predict something closer to actual engagement in anger management. Despite 45 (13.8%) participants expressing interest in attending such a presentation by providing their email address so they could be contacted with an invitation, none attended the presentation after being notified by email one week prior to the presentation. Including all participants in the study, 50 (15.3%) reported “some” problem with anger, and four reported that anger was “very much” a problem (.01%); however, none of these participants chose to attend the presentation. This is consistent with findings in the literature that individuals experiencing high levels of anger are disinclined to seek help for that anger (Deffenbacher, 1999; Mental Health Foundation, 2008).

In speculating about how the ATAMS might someday be used following more extensive validation with a variety of clinical and nonclinical samples, it seems that it might prove useful in predicting individuals’ reception of professional anger management services once engaged rather than solely as a measure of one’s willingness to seek anger management services. Considering that the reality of professional anger management is that practitioners are serving clients who are most likely referred by others (Kassinove & Tafrate, 2002), a scale assessing potential resistance and items pinpointing barriers to treatment could have significant utility.

At this stage in development, the focus has been primarily on the factor structure of the ATAMS, and what the psychometrics properties of those factors appear to be;
however, the use of the total scale score along with what may be useful as subscale scores will need to be further researched. By standardizing the ATAMS, it is hoped that clinicians will be able to use the scale to assess a client’s need for motivational techniques, intensity of care, and various modalities of therapy where anger management is concerned. Specifically, the Belief in Treatment and Receptiveness scales may inform a practitioner of a client’s perceived barriers with regard to the effectiveness of the interventions being used or the client’s desire to engage their problems without professional help. By indicating what is likely the most prominent barrier to effective treatment for anger problems, the clinician can decide whether psychoeducation, motivational approaches, or cognitive behavioral techniques are best to avoid early attrition and lack of compliance.

A portion of the sample used in the current study agreed to complete the ATAMS a second time between three and four weeks after the initial administration. Because the scale was administered to college students completing the surveys via an online portal, participants stating an interest in completing an additional phase of the study (assessed by those participants providing a personal email address) were notified three weeks after completing the initial phase. Participants were informed in the email that the second phase needed to be completed in a one week period. Because the participants were college students, a population who may not check their email daily, it was considered prudent to offer a one week window for completion. As predicted, the scales of the ATAMS displayed good test-retest reliability, a correlation of .71 for Belief in Treatment and a correlation of .83 for Receptiveness.
Limitations

The sample used in the present study was predominately female and was drawn from a pool of college undergraduates enrolled in psychology courses and participating in exchange for research credit in these courses. With nearly eighty percent of the participants being female, the degree to which the present findings apply to men remains unclear and will need additional research. The opinions of these students toward professional psychological services, including anger management, may have been more favorable than one would expect to find among college students in general. In other words, the data reflected a primarily positive outlook on anger management, which could be the result of these participants valuing psychological treatment in any modality or form. Therefore, future studies should include samples taken from alternate populations (e.g., those individuals mandated to anger management by the judicial system or employers, those in corrections facilities, or individuals being treated for comorbid psychological conditions).

Another concern in collecting online data from a college undergraduate sample involves the quality of the data. Researchers (Huang et al., 2012; Meade & Craig, 2012) have indicated the need for additional validity checks when conducting online survey research. Despite our best efforts to clean and verify the validity of the data used, including the use of multiple procedures to identify careless responders recommended in the literature, the internal consistencies of some of the measures used were of some concern. Particularly, coefficient alpha was higher for the Belief in Treatment scale in Phase I and higher for the Receptiveness scale in Phase II. Furthermore, alpha coefficients found for both the SSOSH and the BIPM were somewhat lower than alpha
coefficients reported in previous studies (Nyklíček & Denollet, 2009; Vogel et al., 2006). Again, research in alternate populations will be necessary to validate the ATAMS further.

Another limitation is that the items of the ATAMS are face valid with regard to the construct being assessed. Knowing that he or she is providing information about his or her opinion of anger management, a respondent could knowingly manipulate his or her scores to reflect whatever outcome is perceived as being most beneficial regarding the circumstances of that time and place. Of course, this is a limitation shared by the measures used to validate the ATAMS in the current study as well. While the face valid nature of these instruments does not negate their utility, it should be taken into account by researchers and clinicians using them.

Another possible limitation is that the instruments used for validation purposes in this study were developed, validated, and/or standardized with pencil and paper or computer input (in person) and not via online connections. By collecting data online for development and validation, perhaps the ATAMS will avoid similar limitations. Much of the field of Psychology is now using online data collection methods, so instruments developed and validated while accounting for this factor may prove to have greater utility. Furthermore, the data collected via online methods by the current study provides reliability details on all the measures used to validate the ATAMS.

Finally, a primary limitation of the original development and validation of the ATAMS (Boudreaux et al., 2014) was our dependence on a limited number of items to help establish criterion validity for the scale. Specifically, one Likert item was used to assess respondents’ level of intention to engage in anger management within the next year for a high anger subset of our sample. Despite individuals showing high trait anger,
little to no intention to engage in anger management services was reported, making it impossible to determine if scores on the ATAMS predicted intention to engage in anger management services. Although scores on the ATAMS were shown to predict measures of motivation to engage in anger management, prediction of intention to engage in anger management could not be established. To address this in the current study, the 11-item CAMQ was developed with a continuum of possible methods to control one’s problem anger ranging from reading self-help books to attending intensive therapy sessions with an anger management specialist. It was hoped that the 11 items would yield enough variability to gauge the predictive utility of the ATAMS with regard to intent to engage. Progress was made here with the Belief in Treatment scale of the ATAMS being related to all CAMQ items; however, only one of these items yielded what could be considered practically significant relationships. Furthermore, to assess what could be considered actual engagement, participants were offered the chance to attend a free one hour lecture on anger, problem anger, and the methods for addressing problem anger. We hoped that scores on the ATAMS could be used to predict attendance. Unfortunately, none of the study’s participants attended the lecture. With regard to the predictive ability of the ATAMS assessing actual intent to engage and actual engagement in anger management services, our methods have proved limited to date and should be addressed by further research.

Implications and Future Directions

The ATAMS is presented as a brief measure for assessing attitudes toward professional anger management services. Specifically, a practitioner presented with a client experiencing anger problems could use it as a tool to assess a client’s need for
psychoeducation, motivational strategies, insight with regard to views about treatment, or barriers to treatment. The ATAMS may help to indicate specific areas related to barriers to treatment and lead to collaborative decision making between client and therapist about the level of treatment necessary. Research (e.g., Howells & Day, 2003) indicates that individuals experiencing anger problems are prone to early attrition and likely to be noncompliant to treatment. Many practitioners have already accepted the benefit of identifying the stages of change identified by Prochaska, Norcross, and Di Clemente (1995). As a similar therapeutic strategy, understanding where a client fits on a continuum of acceptance of treatment for anger problems with regard to their belief in such treatment and receptiveness of that treatment could be particularly useful with a population inclined to disengage. The ATAMS may prove beneficial not only in separating a client who is skeptical and defensive from one who is accepting and compliant, but also, may indicate to what degree a client will present with perceived barriers and specifically what issues may impede treatment before entering a therapy session.

The additional information about the factor structure of the ATAMS is promising. Using a separate sample from the original development and validation sample, confirmatory factor analysis showed a good fit of the model with items added to improve reliability; however, additional steps in developing the ATAMS are necessary before it can be recommended for use in clinical practice. A logical next step in the continued development of the ATAMS involves research in samples receiving anger management services. This could offer insight into the specific function of the scale. For instance, could the ATAMS be used as a pre- and post-treatment measure to gauge progress? Does
the ATAMS predict how successful different approaches may be with regard to what barriers to treatment are indicated by the scale? Investigation of how scores help clinicians engage clients and make decisions with regard to treatment may help in learning more about the utility of the ATAMS. Second, further reliability and validity research will be necessary to establish norms and cutoff scores. On a much larger scale, the ATAMS should be administered to diverse samples. This would allow for invariance testing determining whether the factor structure confirmed in the present study applies across gender, racial/ethnic group, military/civilian status, and various clinical populations. It would also permit the development of clinically relevant norms. For example, average scores on the ATAMS could be very different for male veterans receiving services in a VA medical center than they would for female outpatients receiving services through a community-based mental health clinic.

Although the present study focused on the continued development and validation of the ATAMS, another intriguing area for future research concerns the CAMQ. The individual questions of the CAMQ were all found to be statistically significant with regard to the predictive ability of the Belief in Treatment scale of the ATAMS, and strong internal consistency between the individual items of the CAMQ was found using the current data. As another measure of how comfortable a client is with anger management and to what extent a client would consider engaging in anger management, the CAMQ could be a useful clinical tool in conjunction with the ATAMS. Adding items focused on specific perceived barriers to anger management could add a valuable dimension to the measure as an overall scale. A logical next step could be running an exploratory factor
analysis on the items of the CAMQ to identify a potential factor structure and then testing that factor structure in a new sample.

Although the current study did not finalize the ATAMS for clinical use, it is hoped that the scale will eventually be used to help those professionals treating anger problems along with the many individuals struggling to control dysfunctional anger. With further development, it may be useful as a measure given prior to treatment to identify potential barriers to successful implementation of anger management. The results of this study indicate that further establishing the ATAMS’ psychometric properties may lead to providing a useful clinical and research tool.
APPENDIX A

MEASURES

Demographic Questionnaire

1. Age: __

2. Gender: ___ Male  ___ Female

3. Racial/Ethnic Background:
   ___ American Indian/Alaskan Native
   ___ Asian
   ___ Black or African American
   ___ Hispanic or Latino (of any race)
   ___ Native Hawaiian/Other Pacific Islander
   ___ White
   ___ Other ____________ (please specify)

4. Year in College:
   ___ Freshman (1st year)
   ___ Sophomore
   ___ Junior
   ___ Senior
   ___ Graduate Student or Other

5. Are you currently receiving professional help managing your anger?
   ___ No
   ___ Yes
6. Have you ever received professional help managing your anger?
   __ No
   __ Yes

7. Are you currently receiving any form of counseling or psychotherapy?
   __ No
   __ Yes

8. Have you ever received any form of counseling or psychotherapy?
   __ No
   __ Yes

9. To what degree do you have a problem with anger?

<table>
<thead>
<tr>
<th>Very Little</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Very Much</th>
<th>5</th>
</tr>
</thead>
</table>

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**Attitudes Toward Seeking Professional Psychological Help Scale – Short Form**

*(ATSPPH-SF)*

**Directions:** Below are some statements people might make about professional psychological help. Rate your level of agreement with each statement by circling the appropriate number.

1. Would obtain professional help if having a mental breakdown.

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

2. Talking about psychological problems is a poor way to solve emotional problems.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Somewhat Agree</th>
<th>Somewhat Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
3. Would find relief in psychotherapy if in emotional crisis.

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

4. A person coping without professional help is admirable.

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

5. Would obtain psychological help if upset for a long time.

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

6. Might want counseling in the future.

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

7. A person with an emotional problem is likely to solve it with professional help.

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

8. Psychotherapy would not have value for me.

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

9. A person should work out his/her problems without counseling.

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

10. Emotional problems resolve by themselves.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Somewhat Agree</th>
<th>Somewhat Disagree</th>
<th>Agree</th>
</tr>
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<td>1</td>
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</table>
Self-Stigma of Seeking Help Scale (SSOSH)

**Directions:** Below are some statements people might make about professional psychological help. Rate your level of agreement with each statement by circling the appropriate number.

1. I would feel inadequate if I went to a therapist for psychological help.
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

2. My self-confidence would NOT be threatened if I sought professional help.
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>3</td>
<td>4</td>
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<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

3. Seeking psychological help would make me feel less intelligent.
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td>3</td>
<td>4</td>
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<tr>
<td>5</td>
<td></td>
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</tbody>
</table>

4. My self-esteem would increase if I talked to a therapist.
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td>3</td>
<td>4</td>
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<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

5. My view of myself would not change just because I made the choice to see a therapist.
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

6. It would make me feel inferior to ask a therapist for help.
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

7. I would feel okay about myself if I made the choice to seek professional help.
8. If I went to a therapist, I would be less satisfied with myself.

9. My self-confidence would remain the same if I sought help for a problem I could not solve.

10. I would feel worse about myself if I could not solve my own problems.

**Balanced Index of Psychological Mindedness (BIPM)**

**Directions:** Below are some statements people might make about their feelings. Rate how true each statement is for you by circling the appropriate number.

1. My negative feelings can teach me a lot about myself.

<table>
<thead>
<tr>
<th>Not True</th>
<th>A Little Bit True</th>
<th>Somewhat True</th>
<th>Fairly True</th>
<th>Very Much True</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

2. I am often not aware of my feelings.

<table>
<thead>
<tr>
<th>Not True</th>
<th>A Little Bit True</th>
<th>Somewhat True</th>
<th>Fairly True</th>
<th>Very Much True</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

3. My feelings show me what I need.

<table>
<thead>
<tr>
<th>Not True</th>
<th>A Little Bit True</th>
<th>Somewhat True</th>
<th>Fairly True</th>
<th>Very Much True</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

4. I don’t know what’s going on inside me.
5. My deeper feeling is a good adviser.

6. I am out of touch with my innermost feelings.

7. I love exploring my “inner” self.

8. I can’t make sense out of my feelings.

9. My attitude and feelings about things fascinate me.

10. I guess I rarely listen to my feelings.

11. I am better off when being in touch with my feelings.

12. Most of the time, I experience little or no emotion.

13. In the end, you’re better off when taking seriously also your negative feelings.

---

**Attitudes Towards Anger Management Scale (ATAMS)**

**Directions:** Below are some statements people might make about anger management. Rate your level of agreement with each statement by circling the appropriate number.

1. An individual should be able to handle his or her personal problems, so anger management is unnecessary.

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

2. If anger is out of control, a person could benefit from an anger management program.

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

3. Anger management takes time and money, so it isn’t for someone like me.

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

4. If it is beneficial, sharing thoughts and feelings with an anger management counselor is OK.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Somewhat Agree</th>
<th>Somewhat Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
5. Given enough time, anger problems will solve themselves.

Disagree Somewhat Agree Somewhat Disagree Agree
1 2 3 4

6. Someone with serious anger problems should attend an anger management program.

Disagree Somewhat Agree Somewhat Disagree Agree
1 2 3 4

7. Talking to a close friend about anger problems is better than attending anger management.

Disagree Somewhat Agree Somewhat Disagree Agree
1 2 3 4

8. If anger problems have lasted over a long period of time, anger management is a good idea.

Disagree Somewhat Agree Somewhat Disagree Agree
1 2 3 4

9. If anger problems are causing harm to self or others, anger management would help to make things better.

Disagree Somewhat Agree Somewhat Disagree Agree
1 2 3 4

10. Individuals who can handle their own problems with anger without having to talk to others are stronger.

Disagree Somewhat Agree Somewhat Disagree Agree
1 2 3 4

11. Attending anger management should be a last resort.
12. If anger management is necessary, a person should go no matter what other people think.

13. Attending anger management should make a person feel better about him or herself.

14. Going to an anger management program would mean that an individual is taking charge of his or her life.

15. I do not have much confidence in anger management programs.

16. People should be able to work out their anger problems on their own.

17. If I ever developed problems with anger, it would be nice to know that anger management programs are available.
Continuum of Anger Management Questionnaire

Directions: If your survey data show you are at risk for the consequences of problem anger and/or you have a reason to believe you have an issue with problem anger and all of the following options were completely free and easily accessible, to what degree would you be likely to:

1. Read a brochure on problem anger.
   
   Very Unlikely  Very Likely
   1  2  3  4  5

2. Investigate anger management on the internet.
   
   Very Unlikely  Very Likely
   1  2  3  4  5

3. Watch a television documentary on anger management.
   
   Very Unlikely  Very Likely
   1  2  3  4  5

   
   Very Unlikely  Very Likely
   1  2  3  4  5

5. Attend a one hour presentation focused on education about problem anger, its effects, and possible options for controlling it.
   
   Very Unlikely  Very Likely
   1  2  3  4  5

6. Attend one individual one hour interview with an anger management specialist.
   
   Very Unlikely  Very Likely
   1  2  3  4  5

7. Attend five two-hour-long anger management classes over the course of five weeks.
8. Attend 8 weekly group counseling sessions focused on anger management.

9. Attend between six to ten individual weekly counseling sessions focused on anger management over a six to ten week period.

10. Attend three months of weekly counseling sessions focused on an anger management protocol with an individual therapist.

11. Consult my family doctor about possible medications for problem anger.

There is a chance that your survey data will show that you are at risk for the consequences of problem anger and/or you believe you have an issue with problem anger.

If you would like to be contacted with the time and place for a free one hour presentation on problem anger, its effects, and possible options for controlling problem anger, please provide your email address here: ___________________

Trait Anger Scale of the State-Trait Anger Expression Inventory-2 (STAXI-2)

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to indicate how you generally feel. There are no right or wrong answers. Do not spend
too much time on any one statement, but give the answer that seems to describe how
you generally feel.

1. I am quick tempered.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

2. I am a hotheaded person.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>3</td>
<td>4</td>
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</table>

3. I have a fiery temper.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>3</td>
<td>4</td>
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</table>

4. I get angry when I'm slowed down by others’ mistakes.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

5. I feel annoyed when I am not given recognition for doing good work.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
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</thead>
<tbody>
<tr>
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</table>

6. I fly off the handle.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td>4</td>
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</table>

7. When I get mad, I say nasty things.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
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<tbody>
<tr>
<td>1</td>
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</table>

8. When I get frustrated, I feel like hitting someone.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
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<tbody>
<tr>
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</table>

9. I feel infuriated when I do a good job and get a poor evaluation.
10. It makes me furious when I am criticized in front of others.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
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</tbody>
</table>
APPENDIX B

CONSENT FORM
UNIVERSITY OF SOUTHERN MISSISSIPPI
AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Consent is hereby given to participate in the study entitled:
Refinement of the Attitudes Toward Seeking Anger Management Scale

Purpose: This study is being conducted to develop a questionnaire for assessing college students’ attitudes toward anger management services.

1. **Description of Study**: Participants will be asked to complete online questionnaires about their experience of angry feelings, attitudes toward anger management, and general help seeking. This study should take approximately 30 minutes and will be worth 0.5 research credits in accordance with department policy.

2. **Benefits**: Although participants will receive no direct benefit from participation in this study, the information provided will enable researchers to better understand student perceptions of anger management services.

3. **Risks**: There are no foreseeable risks to participating in this study. If you feel that completing these questionnaires have resulted in emotional distress, please stop and notify the lead researcher (David Boudreaux at david.boudreaux@eagles.usm.edu). If you should decide at a later date that you would like to discuss your concerns, please contact the research supervisor, Dr. Eric Dahlen (Eric.Dahlen@usm.edu) at (601) 266-4608. Alternatively, you may contact one of several local agencies, such as:

   - University Counseling Center
     200 Kennard Washington Hall
     Phone: (601) 266-4829
   - Community Counseling and Assessment Clinic
     Owings-McQuagge Hall, Room 202
     Phone: (601) 266-4601

   - Pine Belt Mental Healthcare Resources
     Phone: (601) 544-4641

4. **Confidentiality**: The information you provide will be kept strictly confidential, and your name will only be associated with your responses should you provide an email address. You will be given the opportunity to provide your email to be notified of a one hour presentation about problem anger, its consequences, and ways to control it. You can decline this opportunity, in which case all information you provide will remain anonymous. If significant new information relating to this study becomes known which may relate to your willingness to continue to take part in this study, you will be given this information.

5. **Subject’s Assurance**: Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies cannot be predicted), the researchers will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary, and you may withdraw from this study at any time without penalty or prejudice. Questions concerning this research should be directed to David Boudreaux, (david.boudreaux@eagles.usm.edu). This project and this consent
form have been reviewed by the Human Subjects Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-001.

6. Consent to Participate: I consent to participate in this study, and in agreeing to do so, I understand that:
   a. I must be at least 18 years of age,
   b. I am being asked to complete a set of questionnaires, which will take approximately 30 minutes and for which I will receive 0.5 research credits
   c. I will have the opportunity to provide or decline to provide my email address to be contacted about a presentation on problem anger, and
   d. All information I provide will be used for research purposes and will be kept confidential.

I understand that my participation in this research is voluntary. If I decide to participate in the study, I may withdraw my consent and stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.

I have read and understand the information stated, am at least 18 years of age, and I willingly sign this consent form. A copy can be printed by clicking on “file” at the top left and choosing “print” from the menu.

____________________________________
(Subject name printed)

____________________________________          __________
(Subject signature)                                                       Date
APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL FORM

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

INSTITUTIONAL REVIEW BOARD
111 College Drive #5147 | Hattiesburg, MS 39406-0901
Phone: 601.266.5907 | Fax: 601.266.4777 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION
The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 21, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 14050803
PROJECT TITLE: Refinement of the Attitudes Toward Anger Management Scale
PROJECT TYPE: New Project
RESEARCHER(S): David J. Boudreaux
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: NA
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 05/21/2014 to 05/20/2015

Lawrence A. Hosman, Ph.D.
Institutional Review Board
APPENDIX D

PRESENTATION ON PROBLEM ANGER

Anger Management

- What is anger?
  - Emotional
  - Cognitive
  - Behavioral

- How is anger adaptive?
  - Tells us something is wrong
  - May enable us to stand up for what it right
  - Anger is a natural, healthy emotion that serves a purpose!

- When is anger maladaptive?
  - Too much expression
  - Too little expression
  - What does the right amount of anger expression look like?
  - How can we appropriately express anger?

- Tools to manage too much anger expression
  - Relaxation
  - Counting to 10
  - Thinking it through
  - Generating alternative explanations for others’ behavior
    - Taking their perspective
  - Think about how others perceive you when you express anger inappropriately
  - Assertive communication

- Tools to manage too little anger expression
  - Journal
  - Learn to identify anger when it happens
  - Assertive communication
  - Identify fear about anger expression/messages regarding anger expression

- How to identify when anger is a problem for you or a loved one
  - When to seek help
  - Different kinds of help
    - Self-help books
    - Group/class
    - Anger management individual therapy
REFERENCES


doi:10.1080/17523281.2012.725425


doi:10.1159/000073026

doi:10.1037/0033-2909.88.3.588

doi:10.1002/9780470712986.ch7


doi: 10.1093/clipsy.10.1.70


In the Clinic: Generalized Anxiety Disorder. (2013). *Annals of Internal Medicine, 159*(11), 1-12.


doi:10.2466/pr0.1989.65.2.585


doi:10.1002/jclp.20446


doi:10.1521/jscp.2008.27.3.254

doi:10.1037/0022-0167.50.3.351


