MINDFULNESS, SHAME, AND ATTRITION IN A DIALECTICAL BEHAVIOR THERAPY OUTPATIENT SAMPLE

By

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Abstract

Mindfulness, shame, attrition, and suicidality were examined to better understand the presenting concerns and symptoms of clients seeking mental health treatment in a Dialectical Behavior Therapy (DBT) intensive outpatient (IOP) program at a community mental health center. Specifically, this study explored how clients initially presented in terms of mindfulness and shame, as well as what competencies clients gained as a result of attending the IOP program in terms of mindfulness and reduction of shame. As attrition and suicidality are important concerns in therapy, the relationship between mindfulness and client attrition was also explored, as well as mindfulness and previous suicide attempts. The results of the study indicated that mindfulness scores (measured using the Five Facet Mindfulness Questionnaire; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006) did not predict attrition for participants pre-treatment. Graduates of the DBT IOP program showed significant gains in the *observe* mindfulness subscale when comparing pre-test and post-test FFMQ scores, while no significant differences were found for the other four FFMQ subscales. Further, scores of shame (using the State Shame and Guilt Survey; Marschall, Sanftner, & Tangney, 1994) were not significantly different from pre- to post-test for graduates of the program. Lastly, there was a significant difference in pre-test mindfulness scores on the *describe* mindfulness subscale when comparing FFMQ scores of participants reporting a past suicide attempt and those reporting no past suicide attempt, while no significant differences were found on the other four FFMQ subscales. Implications for researchers and clinicians are discussed.

Keywords: mindfulness, shame, attrition, Dialectical Behavior Therapy

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Chapter 1: Introduction

Mindfulness, rooted in Buddhist philosophy, can be briefly defined as a way of paying attention to the present experience in a purposeful and nonjudgmental way (Kabat-Zinn, 1990). It is a state of consciousness involving attending to one's moment-to-moment experience (Brown & Ryan, 2003). Through the practicing of meditation and mindfulness this state of consciousness may be developed, allowing for increased awareness of the present experience and a way to reduce suffering and increase personal well-being (Kabat-Zinn, 2005; Germer, Siegel, & Fulton, 2005). The teaching and practicing of mindfulness has shown a growing interest in the field of psychology, with an exploration of how the practice might be applied to the treatment of psychological disorders (Didonna, 2009). This growing interest has culminated in mindfulness as an important aspect of many theories and approaches to psychological practice.

Integration of mindfulness and psychology can be seen in the development of psychological measures of mindfulness. One such measure is a key focus of the present study. The Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, & Toney, 2006) is a measure of individuals' general tendency to be mindful in daily life. This amalgamation of mindfulness and psychology can also be seen in the development of psychological theories containing a mindfulness component. One such theory that will be a focus in the present study is Marsha Linehan's Dialectical Behavioral Therapy (DBT), a treatment developed for individuals diagnosed with borderline personality disorder (BPD), which contains a core set of mindfulness skills that are crucial to the overall model (Linehan, 1993a, 1993b, 2014). The five mindfulness facets of the FFMQ map quite nicely onto the DBT mindfulness skills, yet this measure has had limited use in measuring the acquisition of mindfulness skills for clients in a DBT program.

In DBT, it is explained that the emotional distress which typically accompanies borderline personality disorder is derived from the experience of secondary emotions, including

shame. Shame is a particularly painful emotion that can have debilitating effects on the individual; this is found to be specifically relevant when working with clients engaging in non-suicidal self-injury or experiencing suicidal ideation, as they have been found to be particularly high in shame-proneness (Rüsch, Corrigan, et al., 2007; Rüsch, Lieb, et al., 2007). Through the practicing of mindfulness, non-judgmental awareness of painful emotions may help to expose the individual to those emotions and, through that exposure, reduce the emotional response and related behaviors (Linehan, 1993a). The experience of shame will also be a focus of the present study to explore how the intensity of shame might change following treatment in a DBT program.

Further, attrition is a great concern in outpatient therapy services, particularly when working with clients diagnosed with BPD (Kernberg, 1975; Skodol, Buckley, & Charles, 1983). Given the potential impact of attrition, as well as the important role of mindfulness in a DBT program, an additional focus of the present study will be the relationship between attrition and mindfulness. Specifically, this study will explore whether a relationship exists between mindfulness and continued participation in therapy in a DBT outpatient program. A similar question will be explored related to past suicide attempts and mindfulness, to explore whether a relationship exists between these two factors. Thus, the primary aims of the present study are to explore the relationships between mindfulness, shame, attrition, and suicidality as related to participation in a DBT intensive outpatient program.

Chapter 2: Literature Review

Mindfulness

Many definitions have been proposed to describe mindfulness, with a common definition being the purposeful and nonjudgmental focus on the present moment (Kabat-Zinn, 1994). A definition by Bishop et al. (2004) expands on this and describes mindfulness as a process of regulating attention and approaching the present experience with an attitude of curiosity, openness, and acceptance. Another definition highlights the focus of mindfulness as openly allowing whatever enters the experience with a stance of kindly curiosity and with an avoidance of automatic judgments or reactivity to the content of whatever enters (Segal, Williams, & Teasdale, 2002). Each of these definitions provides an important additional layer to this practice, and illustrates the complexity of this skill.

This complexity can also be seen in a two-component model of the pathways of mindfulness, proposed by Bishop et al. (2004). This model indicates the first component of mindfulness is the self-regulation of attention and the maintenance on the present moment. The second component of mindfulness consists of adopting an attitude or orientation of curiosity, openness, and acceptance toward the experience of the present moment (Bishop et al., 2004). A third component of mindfulness was proposed by Bruce, Manber, Shapiro, and Constantino (2010), which suggests that mindfulness has intention. They explain that practitioners of mindfulness approach the practice with an intent and find what they seek; for example, those practicing mindfulness to achieve self-regulation are able to achieve this through mindfulness practice (Bruce, Manber, Shapiro, & Constantino, 2010; Chambers, Lo, & Allen, 2008; Farb et al., 2010). This third component suggests that in mindfulness practice, you will find what your goal is for the practice.

While these definitions are important for understanding mindfulness and how it might be beneficial, it might be helpful to understand what mindfulness looks like. The training in mindfulness practice is quite consistent with the abovementioned definitions and descriptions of mindfulness. Participants in mindfulness training are often encouraged to 1) focus on a specific type of stimuli in the present moment (e.g., deep breathing, guided imagery), 2) have a stance of acceptance, willingness, openness, curiosity, and kindness to any observed experience, and 3) refrain from evaluating, judging, changing, or avoiding any observed experience, regardless of how pleasant or unpleasant the experience may be (Baer, Walsh, & Lykins, 2009). The process of mindfulness practice is continually bringing the focus back to the present moment after it has wandered, while maintaining a non-judgmental stance.

The study and practice of mindfulness is associated with both trait and state forms of mindfulness. Trait mindfulness, on the one hand, is described as the tendency to be mindful in daily life, with changes in trait mindfulness occurring gradually over time through meditation practice (Paul, Stanton, Greeson, Smoski, & Wang, 2013; Treadway & Lazar, 2009). State mindfulness, on the other hand, is described as the moment-to-moment awareness of one's experience, or the experience in the present moment when practicing mindfulness (Davis & Hayes, 2011). Mindfulness is a complex topic to study, in that it can be related to either state or trait forms, as well as having a tendency to vary from moment to moment (Treadway & Lazar, 2009).

For example, during a mindfulness meditation of focusing intently on the breath, a person's attention can shift away from the mindfulness practice very quickly, such as remembering something to add to their to-do list, or thinking of an earlier interaction with a friend. This is a common state described as mindlessness, during which habitual, automatic

thought or action occurs in which we are passively reflecting on past events, thinking of future hopes and fears, or simply allowing our minds to wander (Brown & Cordon, 2009). That shift in attention can also occur very quickly in the opposite direction with the sudden awareness that the mind has wandered, and with the regaining of a mindful state by returning focus to the breath. This variability from mindfulness to mindlessness on a moment-to-moment basis can make the understanding and exploration of mindfulness quite challenging.

Despite the complexity of mindfulness, the practice of mindfulness has been explored and found to be associated with many aspects of well-being. Some important facets of well-being associated with state and trait mindfulness include lowered intensity and frequency of negative affect (Brown & Ryan, 2003), reduced stress (Miller, Fletcher, & Kabat-Zinn, 1995), reduced anxiety (Shapiro, Schwartz, & Bonner, 1998), improved affect tolerance (Fulton, 2005), and emotional intelligence (Walsh & Shapiro, 2006). Further, trait mindfulness has been linked to lowered anxiety and negative affect (Brown, Weinstein, & Creswell, 2012), agreeableness and conscientiousness (Thompson & Waltz, 2007), and openness to experience (Baer et al., 2006; Brown & Ryan, 2003). Through these findings, it can be seen that state and trait mindfulness appear to have a positive relationship with personal well-being.

In addition to being associated with benefits for individuals who practice mindfulness, mindfulness practice is also theorized to have considerable value for enhancing the quality of relationships with others. An increase in mindfulness practice has been shown to be associated with an increase in self-reported empathy (Lesh, 1970; Shapiro et al., 1998). Additionally, this has been found to improve the therapeutic relationship, with clinicians who practice mindfulness experiencing an increase in empathy toward clients (Aiken, 2006). The relationship between mindfulness practice and romantic relationships has also been explored, with increased daily

practice of mindfulness predicting higher relationship happiness, lower relationship stress, lower overall stress, and greater stress coping efficacy (Carson, Carson, Gil, & Baucom, 2004). Another study by Barnes, Brown, Krusemark, Campbell, and Rogge (2007) further explored the impact of trait and state mindfulness on relationships. This study found that trait mindfulness predicted lower emotional stress, higher relationship satisfaction, and an improved ability to respond to relationship stress responses; state mindfulness was related to better communication quality during discussions between romantic partners, including lower verbal aggression, lower negativity, less conflict, less withdrawal, and higher support (Barnes, Brown, Krusemark, Campbell, & Rogge, 2007). These findings suggest that mindfulness can have important benefits for both the individual and their interpersonal relationships.

The measurement of mindfulness. The study of mindfulness has been made possible through the development of measures of mindfulness. Most measures of mindfulness use self-report methods, with a goal of understanding the general tendency to be mindful in everyday life, or trait mindfulness (Baer et al., 2009). One such measure is the Five-Facet Mindfulness Questionnaire (FFMQ), developed by Baer, Smith, Hopkins, Krietemeyer, and Toney (2006). This measure was developed through the exploratory factor analysis of five mindfulness questionnaires, specifically the Frieburg Mindfulness Inventory (FMI; Buchheld, Grossman, & Walach, 2001), the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004), the Cognitive and Affective Mindfulness Scale - Revised (CAMS-R; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007), and the Southampton Mindfulness Questionnaire (SMQ; Chadwick, Hember, Mead, Lilley, & Dagnan, 2005, as cited by Baer et al., 2009). The results of this exploratory

factor analysis indicated five dimensions that existed across items of the five mindfulness questionnaires, which will now be described in detail.

The five dimensions of the FFMQ are *observing*, *describing*, *acting with awareness*, *non-judging of inner experience*, and *non-reactivity to inner experience*. As described by Baer, Walsh, and Lykins (2009), the *observing* facet focuses on the noticing or attending to internal and external stimuli; these stimuli might include emotions, thoughts or cognitions, sensations, and other sensory experiences such as sights, smells, and sounds. The *describing* facet is the labeling of observed experiences with words. For example, during a mindfulness exercise, an individual may describe and label feelings as sadness, or the ticking of a clock as a sound. *Acting with awareness* is described as the attending to activities in the present moment. This may be contrasted with acting without awareness or being on automatic pilot. *Non-judging of inner experience* refers to the non-evaluative stance toward the present moment, including any observed thoughts or emotions. Lastly, *non-reactivity to inner experience* is described as the tendency to allow thoughts and feelings to come and go, without getting caught up in them or without avoiding them (Baer et al., 2009). It can be seen that these five facets of mindfulness captured by this measure clearly reflect a combination of definitions posed to describe mindfulness.

The FFMQ has been used to explore mindfulness skills in a number of studies. In a study by Baer et al. (2008), the FFMQ was administered to a sample of experienced meditators and a nonmeditating comparison sample. It was found that scores on four of the facets, excluding acting with awareness, were significantly correlated with mindfulness experience, with meditators scoring higher than nonmeditators (Baer et al., 2008). Another study used the FFMQ to compare pre- and post-test measures of mindfulness for participants who completed an 8-week

mindfulness-based stress reduction group program (Robins, Keng, Ekblad, & Brantley, 2012). The authors found that scores on all five facets of mindfulness showed a significant increase from pre-treatment to post-treatment, suggesting mindfulness skills can be acquired through the mindfulness-based stress reduction program. The findings of this study illustrate that mindfulness practice can cultivate mindfulness skills. Further exploration in the acquisition of mindfulness skills in other theories of psychology is needed.

Dialectical Behavior Therapy

Dialectical behavior therapy (DBT; Linehan, 1993a) is one theory and approach to psychological practice that shows an integration of mindfulness skills in mental health treatment. Mindfulness is one of the core elements in DBT, alongside interpersonal effectiveness, emotion regulation, and distress tolerance. DBT is a treatment manual initially developed for patients who have been diagnosed with borderline personality disorder, with a goal of helping individuals change behavioral, emotional, cognitive, and interpersonal patterns that are associated with problems in living (Linehan, 1993a, 2014). Thus, DBT was developed to help individuals who have difficulty regulating their emotions, who tend to have chaotic lives, and who use problematic and impulsive strategies in coping with emotions, such as suicidality and non-suicidal self-injurious behaviors (NSSI; Ritschel, Cheavens, & Nelson, 2012). As indicated in the DBT manual created by Linehan, a phrase commonly used to describe the ultimate goal of DBT is to help individuals create a life worth living.

Although DBT was originally developed for individuals with borderline personality disorder, it has been modified to treat individuals with various diagnoses. Studies exploring the effectiveness of DBT in the treatment of individuals with other disorders have been conducted, finding it to be effective in the treatment of many disorders or problems in living, including

eating disorders (Hill, Craighead, & Safer, 2011; Safer, Telch, & Agras, 2001; Telch, Agras, & Linehan, 2001), substance abuse (Linehan et al., 1999), bipolar disorder (Goldstein, Axelson, Birmaher, & Brent, 2007; Van Dijk, Jeffrey, & Katz, 2013), and major depressive disorder (Feldman, Harley, Kerrigan, Jacobo, & Fava, 2009). The effectiveness of DBT can be seen to be applicable to a number of different presenting concerns and diagnoses, with additional research needed to continue to explore its usefulness in the treatment of various other mental health concerns. However, these findings suggest the utility in using DBT in the treatment of diagnostically heterogeneous treatment groups.

A central dialectic in DBT is that between acceptance and change. When individuals have severe emotional dysregulation and engage in potentially harmful coping strategies (e.g., NSSI behaviors, suicidal actions), therapists and others engaging with the individual likely have an urge to change the patient's behaviors and emotions (Lynch, Chapman, Rosenthal, Kuo, & Linehan, 2006). However, it has been found that BPD patients who felt invalidated by this change-based approach often missed sessions or dropped out of therapy (Linehan 1993a). A balance between acceptance and change, therefore, is central to DBT practices and allows for validation of the client where they are, as well as encouragement that the client can work to do better.

An important skill in maintaining this balance of acceptance and change, as well as enhancing self-acceptance by the client, is the practice of mindfulness. DBT places a heavy emphasis on mindfulness, describing mindfulness skills as being the core to all subsequent skills (Linehan, 2014). The purpose of mindfulness is not to help individuals learn to distance the self from one's experience, but rather to more fully participate in the experience. It is also not a skill intended to "fix" a problem, and instead is meant to encourage increased mindful living and to

increase use of other skills to more effectively cope with difficulties (Williams & Swales, 2004). In DBT, the ultimate goals of mindfulness skills are to help clients 1) increase their conscious control over attentional processes, 2) achieve "wise mind," or the integration of "emotion mind" and "rational mind," and 3) experience a sense of oneness with themselves, others, and the universe (Lynch et al., 2006). As outlined by Linehan (1993b), the DBT mindfulness curriculum is designed to aid the client in reaching these goals, and consists of "what" skills and "how" skills.

The "what" skills include learning to *observe*, *describe*, and *participate*. The major goal of the "what" skills is to help clients develop a lifestyle of participating with awareness (Linehan, 1993b). The *observe* skill is purposefully placing the full attention on the present moment (Linehan, 2014). When practicing the *observe* skill, the individual does not change the experience; for example, a painful experience is not terminated, just as a pleasurable experience is not prolonged. This skill allows individuals to learn to have awareness of their experience in the moment. The *describe* skill is putting what is observed into words (Linehan, 2014). Applying a label allows for communication of experience to others, as well as a sense of increased understanding of personal experience or interpretations. The *participate* skill is the practice of fully engaging in an activity in the present moment, without judgment (Linehan, 1993b). Placing our attention completely on the task and entering into it wholly, without separating the self from the event, allows for improved presence in our own lives (Linehan, 2014).

The "how" skills are related to the "what" skills, in that they focus on *how* one observes, describes, and participates (Linehan, 1993b). The "how" skills include *nonjudgmentally*, *one-mindfully,* and *effectively*. *Nonjudgmentally* is a skill focused on letting go of evaluations and judgments (Linehan, 2014). As described by Linehan (2014), there are two types of judgments,

1) judgments that discriminate (i.e., analyzing whether two things are the same or different, whether something meets a standard, or whether something fits the facts of reality), and 2) judgments that evaluate (e.g., to judge someone or something as good or bad). Judgments that discriminate are described as being necessary, as they help us to observe reality and consequences. However, evaluations are encouraged to be let go, as they are based on opinions and personal ideas (Linehan, 2014). Evaluations can be quite common, such as having a thought "I am bad" after engaging in NSSI. Using the *nonjudgmentally* skill on this example, the individual would be encouraged to observe the consequences of engaging in NSSI as well as explore ways of changing that behavior, but would not place the label of "bad" on that behavior (Linehan, 1993b).

The second "how" skill is *one-mindfully*, or learning to focus the mind on one thing in the present moment (Linehan, 2014). This is opposed to trying to do two things at once, such as cleaning your apartment and worrying about the next thing on your to-do list. This skill helps individuals learn to focus their attention on one task at a time, and to re-focus on the present when thoughts wander to the past or future. The third skill is *effectively*, and addresses the tendency to be more concerned with being "right" than with doing what is needed in that situation (Linehan, 1993b). This skill helps the individual to focus on the present goals and on doing what will help with achieving those goals, rather than focusing on what is "right" or "fair" (Linehan, 2014). By practicing the *effectively* skill, individuals can achieve their goals, even if it means acquiescing at times. For example, although it may feel good in the moment to yell at an airline worker who made a mistake with your flight, this likely will not help with your goal of getting to your destination.

The core mindfulness skills in DBT, therefore, are intended to help individuals learn to control the focus of their attention, rather than trying to control private experiences (e.g., emotions, thoughts). These skills are intended to help clients learn to accept their experience without necessarily trying to fix, change or suppress the experience (Lynch et al., 2006). This practice of experiencing emotions without judgment is a form of exposure; the individual is able to practice and learn that an emotion is just an emotion, and a thought is just a thought. However, this exposure may require continual practice over time, especially with particularly difficult thoughts or emotions.

Acquisition of DBT mindfulness skills. An important aspect of DBT training is the learning and practicing of the core mindfulness skills. A major question of the present study is if there is a significant difference in mindfulness for individuals following participation in DBT treatment. Studies exploring the acquisition of mindfulness skills through DBT treatment are limited and have shown mixed results, with an apparent lack of research in measuring mindfulness DBT skills using the Five Facet Mindfulness Questionnaire.

One study explored the acquisition of mindfulness skills of individuals with bipolar disorder for participants in a DBT therapy program. This study by Van Dijk, Jeffrey, and Katz (2013) used the mindfulness based self-efficacy scale to measure the effects of mindfulness training. A pre-treatment measure was administered at baseline, and a post-treatment measure was administered at 12-weeks. Participants in the study were randomly assigned to a wait list control group or a treatment group, who participated in a weekly, 90-minute session DBT psychoeducational group. Findings of the study indicated that mindfulness scores significantly improved for individuals in both the intervention and control group, with greater improvements

in mindfulness found for the intervention group. These findings suggest individuals had greater mindful awareness from pre- to post-test.

The acquisition of mindfulness skills in DBT therapy was also explored in a study by Perroud, Nicastro, Jermann, and Huguelet (2012). This study focused on the treatment of individuals with borderline personality disorder. Participants engaged in 4-weeks of intensive DBT treatment, followed by 10 months of standard DBT treatment. Mindfulness skills were assessed throughout their time in the program using the French version of the Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004), which consists of four factors of mindfulness, specifically observing, describing, acting with awareness, and accepting without judgment (Perroud, Nicastro, Jermann, & Huguelet, 2012). After adjusting for potential confounds, the only factor of mindfulness that was found to significantly increase over time was accepting without judgment, with increases in these scores correlating with improvement in BPD symptoms (Perroud et al., 2012). This study indicates that further exploration is needed to explore different factors or facets of mindfulness and their acquisition over time.

A study conducted by Ritschel, Cheavens, and Nelson (2012) explored the question of the acquisition of mindfulness skills, among other questions, in their study conducted at a community mental health center. Using the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), this study looked at pre- and post-test mindfulness scores for a diagnostically heterogeneous sample of clients in a DBT Intensive Outpatient program. The results of this study indicated that mindfulness scores did not significantly increase across weeks 1-4 of participation in the DBT program. One possible reason for this lack of significant findings may have related to the measure, with the authors finding that items may have actually been measuring the absence of mindfulness, rather than the presence of mindfulness, and therefore may not have captured

skill use (Ritschel et al., 2012). The administration of an alternate measure may produce different findings concerning mindfulness skill acquisition during participation in a DBT therapy program. The acquisition of mindfulness skills in DBT treatment is important to further explore and understand, due to the important implications that it could have for clients in treatment.

Suicidal ideation and mindfulness. A solemn concern that is often present when providing services in a DBT therapy program is suicidal ideation, particularly when treating individuals diagnosed with borderline personality disorder. A longitudinal study by Paris and Zweig-Frank (2001) found that approximately 1 in 10 clients with BPD die by suicide. The DBT protocol prioritizes treatment of suicidal behaviors, and studies focusing on DBT have demonstrated reduced suicidal ideation and attempts (Linehan et al., 2006). However, it is unclear what the effect of mindfulness is on suicide-related thoughts and behaviors, and most of the literature on mindfulness and suicidal ideation is conceptual (Shorey et al., 2016; Williams & Swales, 2004). It has been hypothesized that mindfulness could be important in learning to cope with thoughts of suicide, to reduce reactivity and impulsivity, and to interrupt the spiral of suicidal thinking, but there is a lack of research to confirm these suspicions (Shorey et al., 2016; Williams, Duggan, Crane, & Fennell, 2006). Further, the diagnosis of borderline personality disorder has been found to be associated with lower dispositional mindfulness, which may increase vulnerability to factors related to the diagnosis (e.g., emotional dysregulation; Baer et al., 2004; Shorey et al., 2016). Thus, the relationship between mindfulness and suicidal ideation may be important to explore and better understand, due to the potential benefits that this practice could have in increasing resiliency to suicidality.

Shame

Shame is a highly complex emotion. Lewis (2000) describes shame as being a “self-conscious emotion," including embarrassment, pride, and guilt as belonging to this same category of emotions. Specific situations can be predicted to evoke emotions such as sadness or happiness; for example, a person may be expected to experience feelings of happiness when seeing someone or something that they love. However, self-conscious emotions occur in response to events that are specifically important to the individual, and are therefore an unpredictable emotion across individuals (Lewis, 2000). The experience of shame is more difficult to pinpoint to any particular situation, and each person has unique situations or events that might result in this self-conscious emotion.

Furthermore, self-conscious emotions result from interpretations or assumptions that individuals make in response to a situation (Lewis, 2000). So, an identical situation may result in very different experiences and emotions across people, due to differences in attributional processes. For example, perhaps a mistake happens at work in which two people are involved. One person involved may experience shame or embarrassment due to forming the interpretation that they were responsible for the mistake. Another person in the same situation may experience anger or frustration due to interpreting the mistake as the responsibility of someone or something else. Thus, dependent on the interpretations or attributions placed on the situation, different people may experience very different emotions in response to the same stimuli.

Self-conscious emotions are often used interchangeably, despite distinct differences being present between shame, guilt, and embarrassment (Tangney, Miller, Flicker, & Barlow, 1996). The differences between shame and guilt will first be explored as a way to begin to highlight these distinctions. A lay definition of shame is “the painful feeling arising from the

consciousness of something dishonorable, improper, ridiculous, etc., done by oneself or another" (Dictionary.com, 2017). Guilt is defined as "a feeling of responsibility or remorse for some offense, crime, wrong, etc., whether real or imagined" (Dictionary.com, 2017). As illustrated in these definitions, guilt is an emotion that results from negatively viewing the self in connection with a situation, while shame results from negatively evaluating the self (Lewis, 1971). These emotions differ in the sense of the focus of attention; while shame is focused on the self and their reputation, guilt is focused on the person's behavior in a situation (Kim, Thibodeau, & Jorgensen, 2011). Shame and guilt have also been argued to differ in the experience of empathy. Whereas guilt focuses the attention onto the situation and others who may have been harmed, shame is focused entirely on the individual experiencing the emotion (Tangney, 2000). Ultimately, guilt arises when someone views something wrong with what they have done in a situation, while shame is a painful emotion in which an individual views something wrong with the self.

Shame is also differentiated from embarrassment, in which the greatest distinction involves the level of intensity of the emotion (Lewis, 2000). Embarrassment (or to feel embarrassed) is "feeling or showing a state of self-conscious confusion or distress (Merriam-Webster online, 2017). Shame and embarrassment may co-occur; however, embarrassment is much less intense than shame, as well as less intrusive on the individuals' thoughts in comparison to shame. This variance in intensity might be seen in the reaction to these emotions, in which shame can provoke a wish to hide or disappear, and a desire to avoid discussing the situation that prompted feelings of shame; those experiencing embarrassment have a much less intense reaction, including feeling ambivalent, repeatedly making eye contact followed by looking away, and nervously smiling (Lewis, 2000). The experience of shame can have a debilitating effect on the individual.

Shame and borderline personality disorder. The experience of shame has been indicated as a particularly important emotion for individuals diagnosed with borderline personality disorder. Although BPD has been characterized by dysregulation of emotions in general, it has been argued that shame is most strongly linked with chronic suicidality, non-suicidal self-injury, impulsivity, and anger (Linehan, 1993a; Stiglmayr et al., 2005). A study by Rüsch, Lieb, et al. (2007), explored this relationship by comparing women with BPD with a non-psychiatric control group and a control group consisting of individuals with social phobia. The results of the study indicated that women with BPD demonstrated higher levels of shame-proneness on both self-report measures and implicit association measures of shame (Rüsch, Lieb, et al., 2007). Rüsch, Corrigan, et al. (2007) further explored this relationship between shame-proneness and BPD, finding that women with BPD and post-traumatic stress disorder (PTSD) did not show greater shame-proneness on implicit and explicit measures of shame, when compared with women with BPD who did not also have PTSD. The results of these studies suggest that shame-proneness is more specifically related to BPD than these other disorders (i.e., social phobia, PTSD).

The relationship between BPD and shame is also found in the emotion's association with current and future suicidal ideation (Hastings, Northman, & Tangney, 2000) and negative self-concept (Kaplan & Pokorny, 1976). Further, individuals with BPD frequently report shame both about things that trigger NSSI and about their NSSI acts (Kleindienst et al., 2008). As discussed by Brown, Linehan, Comtois, Murray, and Chapman (2009), the role of shame for individuals with BPD could have great implications for therapy, such that those clients who experience intense shame may be reluctant to discuss in therapy the events and behaviors about which they feel ashamed. If this reluctance was present for a client in therapy, it would result in a major

roadblock to working on reducing these behaviors (i.e., NSSI). This implicates shame as a highly important emotion that has particular relevance to the therapeutic context when working with individuals with BPD.

One might then ask, what is the effectiveness of DBT in reducing shame for individuals in therapy? While research on this topic is limited, a pilot study conducted by Rizvi and Linehan (2005) found that shame related to a specific event could be reduced through use of the DBT skill *opposite to emotion action*. This skill requires mindful awareness of the present emotion (*observe*), awareness of the action urges related to the emotion (e.g., hide, withdraw, disappear), and has the individual identify and engage in actions that are opposite to those urges. Participants in this study engaged in an *opposite to emotion action* intervention in combination with exposure therapy, and focused specifically on using this skill in response to situations provoking feelings of shame. The results of this study indicated that while participants' levels of shame were highly variable over the course of the study, clients reported a significant reduction in shame when assessed following the *opposite to emotion action* intervention session (Rizvi & Linehan, 2005). As suggested by the authors, although DBT targets shame in BPD, this is one of many targets; therefore, the effects of DBT on the experience of shame are not yet fully understood (Rizvi & Linehan, 2005). Further, the role of mindfulness in reducing the impact of shame is another area still unexplored. Mindfulness skills might allow the individual experiencing shame to better cope with this painful emotion, through the encouragement of a non-judgmental stance and increased awareness of the present moment. The potentially intense impact of shame suggests that this is a highly important emotion to study and learn how to decrease its intensity.

Attrition

An additional concern in the research and practice of psychotherapy is attrition. Premature termination of mental health treatment has a negative effect on the delivery of mental health services across various settings (Barrett et al., 2008). Early research on attrition has found approximately 50% of clients decide to dropout of therapy by the third session, and approximately 35% of clients end therapy after a single session (Brandt, 1965; Hiler, 1958; Rogers, 1951). Others have estimated dropout of therapy at 47% across settings (Garfield, 1994; Sparks, Daniels, & Johnson, 2003), and more than 65% of clients end therapy before the tenth session (Garfield, 1994). These findings are concerning, with research suggesting a minimum of 11-13 sessions of evidence based interventions are needed for 50-60% of clients to be considered "recovered" (Hansen, Lambert, & Forman, 2002). Attrition can have a negative impact on both clients and therapists, with poorer outcomes for clients (Wierzbicki & Pekarik, 1993) and feelings of demoralization and failure for therapists (Barrett et al., 2008).

While attrition in therapy in general is an important factor, this can be particularly important when treating individuals diagnosed with BPD. Individuals with this diagnosis have been found to have higher rates of attrition than clients with other disorders (Choi-Kain & Gunderson, 2009; Martinez-Raga, Marshall, Keaney, Ball, & Strang, 2002). Rates of dropout in community outpatient DBT services have been found to range from 24-58% (Landes, Chalker, & Comtois, 2016), yet criteria for "dropout" has been found to differ across studies. Factors contributing to the high attrition rates for individuals with this diagnosis relate to the features of BPD, specifically, interpersonal sensitivity, emotional lability, anger, hostility, and impulsivity (Wnuk et al., 2013; Rüsch et al., 2008). A logical next question might be: what factors might reduce attrition?

Specifically related to mindfulness-based treatment, a study conducted by Crane and Williams (2010) explored variables that distinguished those who completed treatment and those who dropped out of a mindfulness-based cognitive therapy. The results of this study indicated that those who dropped out of treatment were significantly younger than those who completed treatment, were less likely to be on antidepressants, had higher levels of depressive rumination, and showed higher levels of cognitive reactivity related to their mood. These findings, particularly in relation to a tendency to ruminate and experience cognitive reactivity to a negative mood induction, ironically suggest that mindfulness practice could be helpful in reducing the rate of attrition.

Related to the abovementioned factors consistently related to attrition, including high impulsivity, anger, anxiety, and high experiential avoidance, mindfulness skills taught in DBT are intended to address those very symptoms. By using the "what" skills (i.e., *observe*, *describe*, and *participate*) and the "how" skills (i.e., *nonjudgmentally*, *one-mindfully*, and *effectively*), individuals would be able to practice sitting with, accepting, and not judging emotions, urges, ruminations, and avoidance. It might be suggested, then, that higher mindfulness scores at the intake of therapy may relate to completion of therapy, while lower mindfulness scores at the beginning of treatment may relate to therapy attrition.

The Present Study

The aim of the present study was to examine the nature and outcomes of clients admitted to the Intensive Outpatient DBT program (IOP) at a non-profit community health organization. Specifically, this study explored how clients initially present in terms of mindfulness and shame, as well as what competencies clients gained as a result of attending IOP in terms of mindfulness and reduction of shame. Related to the crucial role that mindfulness plays in DBT treatment, this

study explored the relationship between mindfulness and attrition of clients in the DBT IOP program. Further, the relationship between mindfulness and past suicide attempts was explored. The research questions and hypotheses are as follows:

1) Does mindfulness play a role in the attrition of clients in the DBT IOP program?

Research Hypothesis: Mean pre-test mindfulness scores will be significantly higher for clients who graduate from the IOP program compared to mean pre-test mindfulness scores for clients who do not graduate from the IOP program.

2) Do individuals who graduate from the DBT IOP program show an increase in mindfulness skills?

Research Hypothesis: The post-test scores of mindfulness will be significantly higher than the pre-test scores of mindfulness for participants who graduate from the DBT IOP program.

3) Do individuals who graduate from the program show a change in scores of shame following participation in the DBT IOP program?

Research Hypothesis: The scores of shame will be significantly lower at post-test when compared to pre-test scores of shame for participants who graduate from the DBT IOP program.

4) Is there a relationship between pre-treatment mindfulness and previous attempts to complete suicide?

Research Hypothesis: The mean scores of mindfulness at pre-test for participants reporting no previous suicide attempts will be significantly higher than mean scores of mindfulness at pre-test for participants reporting previous suicide attempts.

Chapter 3: Method

Participants

Participants of the study were individuals seeking or referred for treatment in the Adult Intensive Outpatient (IOP) Dialectical Behavior Therapy (DBT) program at Bert Nash Community Mental Health Center, a Midwestern non-profit community health organization. The Adult IOP DBT program is specifically for individuals over the age of 18, and all clients between the ages of 18-65 were invited to participate in the study. There were no other exclusionary criteria for participation in the study. Although data was gathered from 95 individuals, the data from 13 individuals was removed due to significant missing data, resulting in data being analyzed from 82 participants. Participants included 34 (41.5%) graduates of the program, with 48 (58.5%) dropping out of the program prior to completion. The average age of participants was 32, with ages ranging from 18-61. Tables 1 and 2 provide additional participant demographic information.

Measures

Surveys were administered to participants in the study using paper-and-pencil. The measures used specifically for the present study included a demographic questionnaire, the Five Facet Mindfulness Questionnaire (Baer et al., 2006), and the State Shame and Guilt Scale (Marschall, Sanftner, & Tangney, 1994). The present study is part of a larger project, so additional measures were included in the survey to allow the researchers to explore additional research questions at a later time. Those measures are the Depression and Anxiety Scale-21 (DASS-21; Lovibond & Lovibond, 1995), the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), How I Act Towards Myself in Difficult Times: A Self-Compassion Scale (Neff, 2003), the Snyder Hope Scale (SHS; Snyder et al., 1991), the Miller Hope Scale

(MHS; Miller & Powers, 1988), the Herth Hope Index (HHI; Herth, 1992), the State Hope Scale (SHS2; Snyder, et al., 1996), The International Personality Item Pool-20 (IPIP-20; Goldberg, et al., 2006), the Psychological Entitlement Scale (PES; Campbell, Bonacci, Shelton, Exline, & Bushman, 2004), the Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011), and the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0; World Health Organization, 2012). For the purposes of this study, the measures used to answer the present hypotheses will now be expanded upon.

Demographic Questionnaire. Participants completed a demographic questionnaire, adapted from The Demographic Data Schedule (DDS; Linehan, 1994; Appendix D). The DDS is a 69-item unpublished demographic questionnaire from the Behavioral Research and Therapy Clinics at the University of Washington. This questionnaire was adapted for the present study, and items selected for the study focused on assessing age, ethnicity, gender, sexuality, childhood religious practices, current religious practices, and level of education. Additional items were included to assess previous suicide attempts, hospitalizations, and prior mental health treatment. To address the last research question, suicidality was determined based on participant answers to the question on their entry survey regarding previous suicide attempts (i.e., "*Please enter the number that best describes whether or not you have previously attempted to complete suicide. 0 = No, 1 = Yes"*).

Graduation Status. Attrition was measured based on DBT IOP standard operating procedures at Bert Nash Community Mental Health Center. Graduation status is determined based on client attendance at IOP, with those having graduated from the IOP skills group classified as a "graduate," whereas those leaving prior to completion of treatment being classified as a "non-graduate" or "dropout." There is no specific date or number of group

sessions needed to achieve graduation status. Instead, graduation is determined in collaboration between the client, their individual DBT therapist, and the DBT director. Thus, graduation status is determined on an individual basis, and typically occurs once it is mutually determined that the client no longer needs intensive services and would be appropriate to transition out of DBT IOP and into a weekly DBT group.

Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006). The FFMQ (see Appendix C) was used to measure five facets of individuals' general tendency to be mindful in daily life, specifically, *observing*, *describing*, *acting with awareness*, *non-reactivity to inner experience*, and *non-judging of inner experience*. The measure consists of 39 items that are rated using a 5-point Likert-type scale ranging from 1 (*never* or *very rarely true*) to 5 (*very often* or *always true*). The five facets of mindfulness have been shown to have adequate to good internal consistency (0.72-0.92) with samples of meditators and non-meditators; also, intercorrelations of the facets have been found to range from .32 to .56 ($p < .01$), which is argued to indicate related and distinct constructs (Baer et al., 2008). It has also shown relationships in expected directions with other measures related to mindfulness, including thought suppression, openness to experience, and experiential avoidance (Baer et al., 2006). Further, the FFMQ has been shown to be significantly related to meditation experience, as well as psychological symptoms and well-being (Baer et al., 2008).

Due to the longitudinal design of this study, this researcher emailed Dr. Ruth Baer and requested to slightly alter the instructions for the FFMQ. After receiving permission for this change, the instructions were altered to the following: "Please rate each of the following statements using the scale provided. Circle the number that best describes ***your own opinion*** of what is true for you ***in the past week***." This is a simple alteration to the original instructions,

which encourage the individual to reflect on "what is generally true for you." (Baer et al., 2006). The instructions were altered with the hope of capturing changes in mindfulness scores over the course of treatment and multiple administrations of the measure.

State Shame and Guilt Scale (SSGS; Marschall, Sanftner, & Tangney, 1994). The SSGS (see Appendix B) was used to measure individuals' state feelings of shame, guilt, and pride. The measure consists of fifteen items, with five items measuring shame (e.g., "I feel like I am a bad person"), five items measuring guilt (e.g., "I feel like apologizing, confessing"), and five items measuring pride (e.g., "I feel capable, useful"). Items were rated on a 5-point Likert scale ranging from 1 (*I do not feel this way at all*) to 5 (*I feel this way very strongly*). Participants were prompted to rate each item on "how you are feeling right at this moment." Inter-item reliabilities for shame, guilt, and pride scales have been reported as 0.89, 0.82, and 0.87, respectively (Tangney & Dearing, 2002), with alpha coefficients of 0.86 for the shame and guilt subscales and 0.94 for the pride subscale (Ghatavi, Nicolson, MacDonald, Osher, & Levitt, 2002).

Setting Procedures

Admittance. Many individuals seek treatment at Bert Nash through self-referral, external referrals from various community agencies, or internally through a therapist from a different program within the Bert Nash center. When clients are self-referred or are referred from an external source, the client participates in an evaluative screen by a clinician from the agency. If the client is referred by an internal source, the referring clinician determines need for IOP DBT services. Referrals for the IOP DBT program are approved or rejected by the DBT director. Individuals who are referred to IOP are typically experiencing distress and require more intensive services than weekly therapy can accommodate. Participation in the IOP DBT program

is determined by symptom severity, as opposed to diagnosis, which typically results in a diagnostically heterogeneous group.

Treatment. The treatment provided in this study was informed by Linehan's Dialectical Behavior Therapy treatment manuals (1993b, 2014). There are four components of treatment in the IOP DBT program. The first component is participation in the IOP DBT group, five days a week. Second, clients are assigned to an individual therapist, with whom they meet for one hour on a weekly basis. Third, participants in the IOP group are also provided with phone consultation services, during which they may receive coaching with a focus on use of DBT skills in moments of crisis. Fourth, therapists on the DBT team participate in a weekly consultation team. If clients require additional services, they may be provided with case management and other support services with clinicians at Bert Nash.

The IOP group at Bert Nash is an open, heterogeneous group that meets five days a week (Monday through Friday) for three hours, including a 15 minute break. The first hour and a half of group consists of discussing use of DBT skills recorded on a diary card, client introductions and review of group rules (if new clients are present), and beginning DBT skills training. Following the break, the group tasks consist of continuing DBT skills training and engaging in a mindfulness exercise. It takes approximately four weeks of participation in the IOP group to cover the entire DBT skills curriculum. The IOP group curriculum has been adapted from Linehan's DBT skills training manual (1993b) as well as additional contributions to the DBT literature (i.e., Miller, Rathus, Landsman, & Linehan, 1999). Further adaptations to the IOP group curriculum occurred over the course of the study to reflect the most recent DBT skills training manual (Linehan, 2014).

As previously mentioned, eligibility for graduation is determined through collaboration between the client, the client's individual therapist, and the DBT director. The determinants of graduation include a decrease in risk and client demonstration of understanding and practice of DBT skills to cope with life stressors and feelings of distress. While it may take approximately four weeks to cover the entire IOP curriculum, clients may participate in IOP DBT for a greater length of time, if it is determined to be clinically appropriate. Following graduation from IOP, clients may then be transitioned into a DBT Outpatient program, in which they participate in weekly 1 ½-hour group sessions, as well as continuing weekly individual therapy services.

Training. The director of the DBT program has completed a 10-day intensive training on DBT by Marsha Linehan, as well as an advanced intensive training by Linehan. Therapists that were part of the DBT team were trained and supervised by the DBT director for the duration of the study. Following the procedures outlined in the DBT treatment manuals, and as abovementioned, all individual therapists and group leaders on the DBT team attended a 2-hour weekly consultation team meeting, during which they reviewed the content of the DBT treatment manuals (Linehan, 1993a; Linehan, 2014), discussed clients, and practiced use of DBT skills. All therapists on the DBT team also received approximately 1-hour of individual supervision with the director of the DBT program on a weekly basis.

Study Procedure

Participants were recruited for the study as they were referred and attended IOP. Researchers spoke with new IOP attendants individually, at which time they were given a description of the purpose of the study, as well as an opportunity to ask any questions they may have regarding study participation. Those who chose to participate in the study were provided with the informed consent form and notified that they may stop participation in the study at any

time. Participants then concluded this individual meeting by completing the pre-test survey, which took approximately 20-30 minutes to complete. The completed survey was then securely stored by the principle investigators.

Following completion of this initial survey, individuals who agreed to participate in the study completed an abbreviated version of the survey once weekly. The abbreviated survey was provided for participants by a DBT team therapist or researcher at the beginning of group therapy. This survey took approximately 10 minutes to complete, and consisted of measures that included the FFMQ and SSGS. At graduation from the IOP group, participants completed the post-test survey, which took approximately 20-30 minutes to complete and consisted of the same measures as included in the pre-test measure. All completed measures were placed in the participant's file and securely stored by the researchers.

Participants in the study were issued a participant ID number. A record linking the participant's name with their participant ID number was kept in a password protected electronic file by the principle investigators. This was the only source linking the name of the participants with their participant ID number. Data was stored in a locked file cabinet, which was accessible to the two principle investigators and the director of the DBT program. All survey materials were administered by a therapist or researcher on the DBT team, who delivered those materials to one of the principle investigators following participant completion. A principle investigator then entered the data into an identical version of the pre-test, post-test, and abbreviated weekly survey in Qualtrics.

Data Analysis

Mean age was obtained, as well as frequencies calculated for gender, ethnicity, severe and persistent mental disorder diagnosis (SPMI), and diagnostic information (i.e., primary, secondary, tertiary, and substance).

To address the first hypothesis, specifically exploring the relationship between mindfulness and attrition, a logistic regression was conducted to explore whether scores on the five mindfulness facets (measured at pre-test) can predict group membership (i.e., program completion). This statistical approach was most appropriate for this hypothesis, because the research question was exploring prediction of group membership using five independent variables (i.e., mindfulness facets *observing*, *describing*, *acting with awareness*, *non-judging of inner experience*, and *non-reactivity to inner experience*) and one dependent variable with two discrete levels (i.e., graduates and non-graduates). A logistic regression was run using the total FFMQ mindfulness score, followed by a second logistic regression using the five FFMQ subscales to understand the relationship between mindfulness and its prediction of attrition or completion of the DBT IOP program, as well as the unique relationships with each facet of mindfulness.

To address the second hypothesis of whether measures of mindfulness increase following graduation from the IOP program, a repeated measures MANOVA was used to explore changes in the five mindfulness subscales of the FFMQ from pre-test to post-test for those who graduate from the program. This statistical approach was most appropriate to address this hypothesis, because there were five dependent variables (i.e., mindfulness facets *observing*, *describing*, *acting with awareness*, *non-judging of inner experience*, and *non-reactivity to inner experience*) and one independent variable with two discrete levels (i.e., pre-test and post-test survey time

periods). As addressed in the first research hypothesis analysis, a MANOVA was run using the total FFMQ mindfulness score, followed by a second MANOVA using the five mindfulness subscales, to explore changes in overall mindfulness scores as well as changes in the five mindfulness facets.

To address the third hypothesis exploring change in the experience of shame following graduation in the IOP program, a paired samples t-test was used to compare scores of shame from pre-test to post-test for those who graduate from the program. To address this hypothesis, scores from the shame subscale of the SSGS were used. This statistical analysis was most appropriate to address this hypothesis, because there was one dependent variable (i.e., shame subscale of SSGS) and two observations (i.e., pre- and post-test time periods).

The fourth hypothesis exploring the relationship between mindfulness and suicidality was addressed using a one-way MANOVA to examine pre-test scores of mindfulness for participants reporting past suicide attempts and participants reporting no past suicide attempts. To address this hypothesis, pre-test scores from the FFMQ subscales were used, and past attempts to complete suicide was determined based on participants' answers to the question (i.e., "*Please enter the number that best describes whether or not you have previously attempted to complete suicide. 0 = No, 1 = Yes"*) on their pre-test survey. This statistical analysis was most appropriate to address this hypothesis, because there were multiple dependent variables (i.e., mindfulness facets *observing*, *describing*, *acting with awareness*, *non-judging of inner experience*, and *non-reactivity to inner experience*) and one independent variable with two discrete categories (i.e., past attempts and no past attempts). A one-way MANOVA was run using the total FFMQ score and a second using the five FFMQ subscales, in order to understand overall mindfulness, as well as the five mindfulness facets, in relation to suicidality.

Chapter 4: Results

Hypothesis 1: Mean pre-test mindfulness scores will be significantly higher for clients who graduate from the IOP program compared to mean pre-test mindfulness scores for clients who do not graduate from the IOP program.

This hypothesis was not supported. A logistic regression was conducted to predict group membership (i.e., graduate or drop-out) in the DBT IOP program, using mindfulness scores on the FFMQ. This analysis was first conducted using the total FFMQ scores recorded at pre-test as the predictor variable, while group status (graduate or drop-out) served as the criterion variable. The Omnibus Test of Model Coefficients ($\chi^2(1) = .18$, $p > .05$) did not support the model. A second logistic regression was conducted using the five FFMQ subscale scores recorded at pre-test as the predictor variables; group status (graduate or drop-out) served as the criterion variable. The Omnibus Test of Model Coefficients ($\chi^2(5) = 8.34$, $p > .05$) did not support the model. These findings indicate that using mindfulness at entry to predict graduate or drop-out in this sample did not significantly increase the prediction capacity model over random prediction.

Hypothesis 2: The post-test scores of mindfulness will be significantly higher than the pre-test scores of mindfulness for participants who graduate from the DBT IOP program.

A repeated measures MANOVA was conducted to compare measures of mindfulness at pre- and post-test for graduates of the IOP DBT program. This analysis was first run using the total FFMQ scores at entry and exit as the dependent variable, with pre-test and post-test time points as the independent variable. Significant differences were not found for graduates from pre-test to post-test, Wilks' Lambda = .97, $F(1, 33) = 1.18$, $p > .05$, $\eta_p^2 = .04$. When the analysis was run using the five FFMQ subscale scores at pre-test and post-test, significant differences were found for graduates for the *observing* subscale, $F(1, 33) = 7.96$, $p < .01$, $\eta_p^2 = .19$.

Significant differences were not found for the *describing* subscale, $F(1, 33) = .67$, $p > .05$, $\eta_p^2 = .02$; the *acting with awareness* subscale, $F(1, 33) = .48$, $p > .05$, $\eta_p^2 = .01$; the *non-reactivity to inner experience* subscale, $F(1, 33) = 3.98$, $p = .054$, $\eta_p^2 = .11$; or the *non-judging of inner experience* subscale, $F(1, 33) = .002$, $p > .05$, $\eta_p^2 < .01$. Table 3 contains the means and standard deviations of the five FFMQ subscales. These results indicate that there were no significant differences between initial mindfulness and exit mindfulness scores following graduation from the DBT IOP program related to the total mindfulness scores, as well as four of the mindfulness subscales. Significant differences were present only in the *observe* mindfulness subscale.

Hypothesis 3: The scores of shame will be significantly lower at post-test when compared to pre-test scores of shame for participants who graduate from the DBT IOP program.

This hypothesis was not supported. A paired samples t-test was conducted to compare measures of shame at pre-test and post-test for 14 graduates of the IOP DBT program. A smaller sample size was necessary for this analysis, as some participants did not receive the SSGS survey. The *shame* subscale of the SSGS served as the dependent variable, while pre-test and post-test time points served as the independent variable. This analysis indicated that scores were not significantly different from pre-test measures of shame ($M = 2.93$, $SD = 1.25$) to post-test measures of shame ($M = 2.49$, $SD = 1.05$), $t(13) = 1.93$, $p > .05$, $d = .51$. These results suggest there were no significant differences in graduate's experience of shame when assessed at the beginning and end of participation in the IOP DBT program.

Hypothesis 4: The mean scores of mindfulness at pre-test for participants reporting no previous suicide attempts will be significantly higher than mean scores of mindfulness at pre-test for participants reporting previous suicide attempts.

A one-way MANOVA was conducted to explore the relationship between mindfulness and suicidality by comparing pre-test scores of mindfulness for participants reporting past suicide attempts and participants reporting no past suicide attempts. A one-way MANOVA was first conducted using the total FFMQ scores as the dependent variable, with suicidality as the independent variable (as determined by their report of previous suicide attempts on entry survey). This analysis did not find a significant difference between participants reporting a previous suicide attempt and those reporting no previous suicide attempt, Wilks' Lambda = .83, $F(1, 40) = 1.48$, $p > .05$, $\eta_p^2 = .17$. These findings suggest that there were no significant differences in mindfulness scores between these two groups of participants.

A second one-way MANOVA was conducted using the five FFMQ subscale scores as the dependent variables. This analysis indicated a significant difference in mindfulness scores on the *describing* subscale between participants reporting a previous suicide attempt and those reporting no previous suicide attempt, $F(1, 40) = 4.51$, $p = .04$, $\eta_p^2 = .10$. Significant differences were not found for the other four subscales, specifically *observing*, $F(1, 40) = .09$, $p > .05$, $\eta_p^2 = .002$; *acting with awareness*, $F(1, 40) = .36$, $p > .05$, $\eta_p^2 = .01$; *non-judging of inner experience*, $F(1, 40) = 1.7$, $p > .05$, $\eta_p^2 = .04$; or *non-reactivity to inner experience*, $F(1, 40) = .004$, $p > .05$, $\eta_p^2 = .001$. Table 4 provides the means and standard deviations for the five mindfulness subscale scores. These findings suggest that while the *describing* mindfulness subscale was significantly higher for participants with no previous suicide attempt, there was no significant difference between the two groups on the other four mindfulness subscales.

Chapter 5: Discussion

The purpose of this study was to explore mindfulness, shame, attrition, and suicidality to better understand the presenting concerns and gains of clients seeking mental health treatment in a DBT IOP program at a community mental health center. The results of the study indicated important findings regarding presenting concerns and skill acquisition for this population. First, the findings indicated that mindfulness did not predict graduation status for participants at treatment entry. This suggests that regardless of an individual's exposure to or natural proclivity for practicing mindfulness prior to treatment, this did not predict completion of a DBT IOP program better than chance. As described by Linehan (1993a), mindfulness skills are a central component of DBT, and are labeled "core" skills. In considering their important role in DBT treatment, perhaps it might be an encouraging finding that pre-treatment mindfulness skills are not a prerequisite or predictor for treatment completion.

Second, the findings of the study indicated that there were significant gains in the *observe* mindfulness subscale when comparing pre- and post-test FFMQ scores for graduates of the IOP DBT program, while no significant differences were found for the other four mindfulness subscales. Mindfulness is a complex skill to learn, and this may have been many participants' first exposure to mindfulness. This skill may require a greater length of time in treatment to indicate skill acquisition in all five facets of mindfulness. When reflecting on skill acquisition on the *observe* subscale, it might be argued that the observing of stimuli may be a skill more quickly acquired than the other facets, as it is perhaps the initial step of mindfulness. The *describing*, *acting with awareness*, *non-judgment of internal experience*, and *non-reactivity to inner experiences* facets may require that the individual is first able to observe their experiences in the moment to then be able to put that experience into words, to engage in an activity in the present

moment, to not evaluate their observed experience, and to not react to their thoughts and feelings. Thus, these four facets that did not indicate a significant change from pre- to post-test may simply require further time and practice to develop.

A third finding of this study indicated that measures of shame were not significantly different from pre- to post-test for graduates of the DBT IOP program. Scores of shame at pre- and post-test were overall moderate. This may indicate that shame was not a particular concern for participants in the study. As aforementioned, shame has been found to be linked with a BPD diagnosis more so than other diagnoses (Rüsch, Corrigan, et al., 2007; Rüsch, Lieb, et al., 2007). It may be that the heterogeneity of the diagnoses of participants may have diluted this emotion and contributed to this overall moderate measure of shame, as only 22.8% of participants in the study were diagnosed with borderline personality disorder. It could also indicate a reluctance that individuals may experience regarding sharing intense feelings of shame (Brown, Linehan, et al., 2009). Shame is a powerful emotion that treatment must target to decrease its impact on the individual and the therapeutic process, particularly when considering its association with current and future suicidal ideation and NSSI (Hastings et al., 2000).

Additionally, a fourth finding of this study indicated there was a significant difference in pre-test mindfulness scores on the *describing* subscale between participants reporting a past suicide attempt and those reporting no past suicide attempt, while no significant differences were found on the other four mindfulness subscales. This hypothesis was primarily explorative to see if there was a relationship between mindfulness and suicidality. The results are interesting, with participants with no previous attempt scoring significantly higher than participants with a previous attempt on the *describing* mindfulness subscale. These findings indicate that there may be a relationship between being able to put words to one's experience and not acting on thoughts

of suicide. As the current study was exploring past suicide attempts and mindfulness at pre-treatment, there are many questions and areas for further exploration related to this question of the relationship between mindfulness and suicidality, including how mindfulness skill attainment and current thoughts of suicide might relate. As described by Williams and Swales (2004), research on the relationship between mindfulness and suicidal ideation is limited, yet mindfulness practice may be particularly important when treating clients experiencing thoughts of suicide due to the relief it may provide for clients to learn they do not have to fight these thoughts (e.g., pushing them away or suppressing them). Instead, mindfulness practice would encourage these clients to notice and not judge those thoughts of suicide, and then to re-focus their attention on the purpose of the mindfulness exercise.

There are additional aspects of the present study that may be important to consider when reflecting on the current findings. As previously mentioned, the participants in the study provided a diagnostically heterogeneous sample, consisting of 50.6% of participants meeting diagnostic criteria for a severe and persistent mental illness (SPMI), and 22.8% diagnosed specifically with borderline personality disorder. Individuals with this diagnosis tend to have a significant degree of impairment in a variety of areas of their life; experience initial extreme emotional dysregulation; and improve at a slow rate, often taking many years (Linehan, 1993a; Gunderson et al., 2011). When considering this study in the context of the current literature, it may be important to reflect on the impact of initial emotional distress and length of treatment that often accompanies diagnosis of a SPMI or BPD.

Previous studies exploring skills training and DBT have indicated improvements in symptoms and decreased self-harm, and are typically longer programs than the average stay in this DBT IOP program (e.g., Wilks, Korslund, Harned, & Linehan, 2016, treatment lasted 1 year;

Harned et al., 2008, treatment lasted 1 year; Linehan et al., 2015, treatment lasted 1 year; Sambrook, Abba, & Chadwick, 2007, treatment lasted 18 weeks). When considering the treatment length of the present study, the results are perhaps unsurprising. Participants in the study were referred to the DBT IOP group due to emotional distress and symptom severity, and graduates were then transitioned to a weekly DBT outpatient group, at which time the researchers ceased data gathering for the current study. It may be that skill acquisition and decrease of symptoms occurs slowly initially for clients referred to a DBT IOP program, with the initial goal instead being to help those clients transition from a state of crisis to stabilization, at which time they might attend the weekly DBT outpatient group.

An additional goal of therapy is helping the client to engage in treatment, as attrition is a common concern. As previously discussed, this is particularly a concern in the DBT community, with higher dropout rates ranging from 24 to 58% (Landes et al., 2016). The present study mirrors these rates, with 48 (58.5%) participants dropping out of the IOP DBT program over the course of the study. However, when examining data gathered from graduates of the program, there was a high level of participation that clients engaged in with the DBT IOP program. It seems notable that some clients participated in over 10 weeks of daily group therapy!

Limitations and Future Directions

The findings of the present study highlight many areas for further exploration. The Omnibus tests for the second and fourth hypotheses were not significant. However, the results were interpreted, as trends in subscale scores were in that direction, and can therefore provide important information for future research. Participants of the current study provided a diagnostically heterogeneous sample. While this may have some advantages in regard to generalizing the findings, it could be that the findings related to suicidal ideation and shame may

have been weakened, as these concerns are more characteristic of a BPD diagnosis. It may be important to further explore these questions with a diagnostically homogenous sample of individuals with a BPD diagnosis. Also, diversity was limited regarding gender, race and ethnicity, suggesting that these factors should be taken into account when considering the findings. An additional limitation of the current study was the lack of a control sample. Future studies exploring the effectiveness of brief DBT IOP programs in a community mental health center might benefit from utilizing a control group to compare treatment outcomes, specifically the reduction of symptoms (e.g., feelings of shame), and the acquisition of mindfulness skills.

The participants in the study varied in the amount of time spent in treatment, and graduation status was specifically tailored to each client's unique situation and needs. Thus, an important limitation of the study is that length of time and "dose" of treatment was inconsistent across participants. Further, the potential limitation of treatment length related to skill attainment could provide an important area for further exploration. This could be addressed in future research by following clients through participation of an outpatient DBT IOP program, as well as through graduation and transition to a weekly DBT skills group. A longitudinal study designed to gather data from clients following this transition would contribute important information regarding how treatment outcomes might vary during that initial stabilization period (i.e., daily group participation) and into the weekly DBT group. It also may increase understanding of the rate of skill attainment over the course of these different treatment modalities (i.e., daily and weekly group participation).

In addition, it may be beneficial to explore ways of further improving services for clients seeking DBT treatment, including the explicit treatment of shame and methods for practicing mindfulness skills. Directly assessing and addressing feelings of shame by simply discussing it,

particularly when focusing on client's suicidal behaviors or NSSI, may help to decrease the impact of this emotion and act against the urges that accompany shame (e.g., hiding, avoiding). The practice of mindfulness skills could also be explored by further examining its practice in group and individual therapy treatment. There are a variety of forms of mindfulness practice, with some potentially focusing on the different facets of mindfulness more than others. For example, practicing mindfulness through deep breathing or mindful walking may target different DBT skills and mindfulness facets, and frequency of mindfulness practices targeting each aspect of mindfulness may not be equal. Future studies might address this by identifying specific mindfulness practices that balance time spent focusing on each facet. The findings of the study provide important information that contribute to the DBT literature regarding mindfulness skill attainment, reduction of shame, the relationship between mindfulness and attrition, and the relationship between mindfulness and suicidality. The significant and non-significant findings leave the door open for additional questions to be explored.

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Appendix A

Study Tables

Table 1
Descriptive Statistics of Participants

Category	Percentage
Gender	
Female	65.1%
Male	32.5%
Trans	2.4%
Ethnicity	
African-American/Black	6.0%
American Indian/Native American	2.4%
Asian-American/Asian	2.4%
Arab-American/Arab	1.2%
Caucasian/White	83.2%
Other/Unknown	4.8%
Met Criteria for SPMI/SMI	
Yes	50.6%
No	49.4%
Primary Substance	
Met criteria for substance diagnosis	37.3%
Alcohol	16.9%
Marijuana	9.6%
Sedative, hypnotic, anxiolytic	3.6%
Opioid	2.4%
Methamphetamine	3.6%
Cocaine/Crack	1.2%
Secondary Substance	
Met criteria for secondary diagnosis	8.4%
Alcohol	3.6%
Marijuana	3.6%
Opioid	1.2%

Table 2
Diagnostic Information of Participants

Category	Percentage
Primary Diagnosis	
Borderline Personality Disorder	4.8%
Major Depressive Disorder	37.3%
Posttraumatic Stress Disorder	16.9%
Bipolar Type I	16.9%
Bipolar Type II	2.4%
Generalized Anxiety Disorder	9.6%
Persistent Depressive Disorder	1.2%
Other	10.8%
Secondary Diagnosis	
Met criteria for second diagnosis	62.6%
Borderline Personality Disorder	14.5%
Major Depressive Disorder	12.0%
Posttraumatic Stress Disorder	15.7%
Bipolar Type I	2.4%
Generalized Anxiety Disorder	6.0%
Attention Deficit Disorder	7.2%
Bulimia	1.2%
Other	3.6%
Tertiary Diagnosis	
Met criteria for additional diagnosis	21.6%
Borderline Personality Disorder	3.6%
Major Depressive Disorder	1.2%
Posttraumatic Stress Disorder	1.2%
Panic Disorder	1.2%
Attention Deficit Disorder	10.8%
Other	3.6%

Table 3
Means and standard deviations between entry and exit survey

Subscale	Entry (*n*=34) *M*(SD)	Exit (*n*=34) *M*(SD)
Observing	23.79 (7.58)	26.38 (7.31)
Describing	23.59 (5.45)	24.26 (3.91)
Acting with awareness	23.82 (8.57)	24.71 (8.47)
Non-judging of inner experience	25.00 (7.01)	24.59 (8.99)
Non-reactivity to inner experience	17.21 (5.98)	19.12 (5.66)

Table 4

Means and standard deviations for those with past suicide attempts and those with no past attempts

Subscale	Previous Attempt (n=24) M(SD)	No Previous Attempt (n=18) M(SD
Observing	24.33 (8.40)	25.06 (6.73)
Describing	21.63 (8.23)	27.22 (8.75)
Acting with awareness	17.96 (7.78)	19.22 (5.13)
Non-judging of inner experience	18.75 (9.49)	22.22 (7.09)
Non-reactivity to inner experience	16.00 (5.50)	15.89 (5.13)

Appendix B

State Shame and Guilt Scale (SSGS)

Instructions: The following are some statements which may or may not describe how you are feeling right now. Please rate each statement using the 5-point scale below. Remember to rate each statement based on ***how you are feeling right at this moment***.

1	2	3	4	5
I do not feel this way at all		**I feel this way somewhat**		**I feel this way very strongly**

	I do not feel this way at all		I feel this way somewhat		I feel this way very strongly
1. I feel good about myself.	1	2	3	4	5
2. I want to sink into the floor and disappear.	1	2	3	4	5
3. I feel remorse, regret.	1	2	3	4	5
4. I feel worthwhile, valuable.	1	2	3	4	5
5. I feel small.	1	2	3	4	5
6. I feel tension about something I have done.	1	2	3	4	5
7. I feel capable, useful.	1	2	3	4	5
8. I feel like I am a bad person.	1	2	3	4	5
9. I cannot stop thinking about something bad I have done.	1	2	3	4	5
10. I feel proud.	1	2	3	4	5
11. I feel humiliated, disgraced.	1	2	3	4	5
12. I feel like apologizing, confessing.	1	2	3	4	5
13. I feel pleased about something I have done.	1	2	3	4	5
14. I feel worthless, powerless.	1	2	3	4	5
15. I feel bad about something I have done.	1	2	3	4	5

Appendix C

Five Facet Mindfulness Questionnaire (FFMQ)

Instructions: Please rate each of the following statements using the scale provided. Circle the number that best describes ***your own opinion*** of what is true for you ***in the past week***.

1	2	3	4	5
Never or very rarely true	**Rarely true**	**Sometimes true**	**Often true**	**Very often or always true**

	Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
1. When I'm walking, I deliberately notice the sensations of my body moving.	1	2	3	4	5
2. I'm good at finding words to describe my feelings.	1	2	3	4	5
3. I criticize myself for having irrational or inappropriate emotions.	1	2	3	4	5
4. I perceive my feelings and emotions without having to react to them.	1	2	3	4	5
5. When I do things, my mind wanders off and I'm easily distracted.	1	2	3	4	5
6. When I take a shower or bath, I stay alert to the sensations of water on my body.	1	2	3	4	5
7. I can easily put my beliefs, opinions, and expectations into words.	1	2	3	4	5
8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.	1	2	3	4	5
9. I watch my feelings without getting lost in them.	1	2	3	4	5
10. I tell myself I shouldn't be feeling the way I'm feeling.	1	2	3	4	5
11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.	1	2	3	4	5
12. It's hard for me to find the words to describe what I'm thinking.	1	2	3	4	5
13. I am easily distracted.	1	2	3	4	5
14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.	1	2	3	4	5
15. I pay attention to sensations, such as the wind in my hair or sun on my face.	1	2	3	4	5

	Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
16. I have trouble thinking of the right words to express how I feel about things	1	2	3	4	5
17. I make judgments about whether my thoughts are good or bad.	1	2	3	4	5
18. I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5
19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.	1	2	3	4	5
20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.	1	2	3	4	5
21. In difficult situations, I can pause without immediately reacting.	1	2	3	4	5
22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.	1	2	3	4	5
23. It seems I am "running on automatic" without much awareness of what I'm doing.	1	2	3	4	5
24. When I have distressing thoughts or images, I feel calm soon after.	1	2	3	4	5
25. I tell myself that I shouldn't be thinking the way I'm thinking.	1	2	3	4	5
26. I notice the smells and aromas of things.	1	2	3	4	5
27. Even when I'm feeling terribly upset, I can find a way to put it into words.	1	2	3	4	5
28. I rush through activities without being really attentive to them.	1	2	3	4	5
29. When I have distressing thoughts or images I am able just to notice them without reacting.	1	2	3	4	5
30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.	1	2	3	4	5
31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.	1	2	3	4	5
32. My natural tendency is to put my experiences into words.	1	2	3	4	5
33. When I have distressing thoughts or images, I just notice them and let them go.	1	2	3	4	5
34. I do jobs or tasks automatically without being aware of what I'm doing.	1	2	3	4	5

	Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.	1	2	3	4	5
36. I pay attention to how my emotions affect my thoughts and behavior.	1	2	3	4	5
37. I can usually describe how I feel at the moment in considerable detail.	1	2	3	4	5
38. I find myself doing things without paying attention.	1	2	3	4	5
39. I disapprove of myself when I have irrational ideas.	1	2	3	4	5

Appendix D

Demographics derived from the Demographic Data Schedule:

What is your identified age? _____

Please enter the number that best describes your identified race/ethnicity?

0 = White/.Caucasian
1 = Native American/American Indian or Eskimo
2 = Black/African-American
3 = Chinese or Chinese-American
4 = Other Asian or Asian American
5 = Hispanic/Latina/o
6 = International please specify_____
7 = Other, please specify _____

Please enter the number that best describes your identified gender? _____

0 = Male
1 = Female
2 = Trans*
3 = Other (please specify) _____

Please enter the number that best describes your identified sexuality? _____

0 = Heterosexual
1 = Homosexual
2 = Bisexual
3 = Asexual
4 = Other (please specify) _____

Please enter the number that best describes what religion did you grow up practicing?

0 = Protestantism (please specify denomination) _____
1 = Catholicism
2 = Judaism
3 = Islam
4 = Hindu
5 = Buddhism
6 = Agnosticism or Atheism
7 = Other (please specify) _____
8 = None

Please enter the number that best describes what religion do you currently practice?

0 = Protestantism (please specify denomination) _____
1 = Catholicism
2 = Judaism
3 = Islam
4 = Hindu
5 = Buddhism
6 = Agnosticism or Atheism
7 = Other (please specify) _____
8 = None

Please enter the number that best describes your education level: _____

0 = 8th grade or less
1 = some high school
2 = GED/high school graduate
3 = business or technical training beyond high school
4 = some college
5 = college graduate
6 = some graduate or professional school beyond college
7 = masters degree
8 = doctoral degree

Please enter the number that best describes whether or not you have previously attempted to complete suicide:_____

0 = No
1= Yes

Please enter the number that best describes whether or not you have previously engaged in non-suicidal self-injury behaviors (NSSI): _____

0 = No
1 = Yes

Please enter the number that best describes whether or not you have previously been in treatment for psychological or psychiatric services before: _____

0 = No
1 = Yes

Please enter the number that best describes whether or not you have previously been hospitalized before as a result of being classified as a danger to yourself or being classified as a danger to someone else_____

0 = No
1 = Yes

Please enter the number that best describes whether or not you have previously been in treatment at Bert Nash in the Intensive Outpatient Program (IOP)_____

0 = No
1 = Yes