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Pepperdine University

Graduate School of Education and Psychology

MINDFULNESS TRAINING AND DEVELOPING CLINICIANS' PERCEIVED STRESS  
AND SELF-COMPASSION

A clinical dissertation presented in partial satisfaction

of the requirements for the degree of

Doctor of Psychology

Meredith Kalies

August, 2017

Susan R. Hall, Ph.D., J.D. – Dissertation Chairperson

This clinical dissertation, written by

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under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

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## ABSTRACT

Graduate students in the helping professions experience a large amount of stress due to their dual roles as clinicians and students, which may impact their ability to perform effectively. Due to these demands, many developing clinicians feel ill prepared to cope with these responsibilities, especially when self-care strategies are not included in their curriculum. Given research showing its association with more positive feeling states, increased self-compassion, decreased stress, and better quality of life, mindfulness training may be the missing link in graduate programs to aid students in developing more effective self-care and coping strategies to meet the demands of their clinical and academic workloads. In order to better understand the association between mindfulness engagement, stress, and self-compassion, a quantitative examination was conducted with fifteen master's level graduate students in a clinical psychology master's program. No significant difference was found when comparing stress and self-compassion scores before mindfulness training and after engagement in mindfulness training, which may have been due to limitations regarding data analysis, research design, and the selected sample. Notwithstanding, mean score results counter assumptions of high graduate student stress levels, and highlight the need for Self-Compassion Scale norms for this population. Recommendations for future directions include utilizing a control group, completing measures at various points within graduate programs, and exploring specific mindfulness practices' impact on stress and self-compassion scores. *Keywords:* self-compassion, mindfulness, stress, training, student

## **Introduction**

In order to aid the development of therapists and their skills to assist diverse clients in need of services, graduate programs in psychology set high expectations of performance and workload, which are greater than students have previously experienced in college or high school (Myers et al., 2012). When adding in their first experiences seeing clients and working in clinical settings, these additional demands for learning may lead to coping difficulties, or students perceiving they will be unable to cope with these new demands (Myers et al., 2012). Accordingly, these students may be vulnerable to increased stress, as they struggle to balance clinical, academic, research and personal responsibilities (de Vibe et al., 2013; McCollum & Gehart, 2010; Myers et al., 2012; Newsome, Waldo, & Gruszka, 2014; Shapiro, Warren, Brown, & Beigel, 2007; Tarrasch, 2014).

Mindfulness training may be one of the tools missing in some psychology graduate programs that can increase students' ability to absorb and integrate other useful information and clinical skills (McCollum & Gehart, 2010). Due to the possible benefits derived from mindfulness practices such as cultivation of self-compassion, compassion for others, and empathy (Greeson, 2009; Kabat-Zinn, 2011; Wallace & Shapiro, 2006), research connecting these constructs could provide helpful links in the literature and inform clinical skills development and training. Thus, the aim of this dissertation study was to explore the impact of mindfulness training on helping professionals' perceived stress and self-compassion ratings. To provide context for this goal, this introduction briefly discusses stress levels of psychology graduate students and the benefits of mindfulness as related to both coping with high stress levels and the cultivation of self-compassion in therapists in training. An extended review of this literature is found in Appendix A.

## **Psychology Graduate Student Stress and Mindfulness**

Theoretical and research findings relate how psychology students and professionals' experience of high stress impacts their clinical and academic work as well as their personal lives. Stress can be defined from three perspectives: (a) experiencing substantial adaptive demands, (b) the individual's subjective evaluation of this demand and his/her abilities to cope with these experiences, and (c) his/her affective response to that evaluation and physiological response to the demand (Cohen, Kessler, & Underwood, 1995). In a review of the literature on stress and clinical psychology trainees, Pakenham and Stafford-Brown (2012) concluded that these students were more vulnerable to elevated levels of stress, and experienced negative consequences in their personal and professional functioning, which, in turn, created less than optimal care for clients. Some therapists-in-training may experience secondary traumatic stress, which is defined as the experiencing of symptoms of stress as a result of exposure to others' traumatic material while engaging in helping work (Craig & Sprang, 2010; Newsome et al., 2014; Ray, Wong, White, & Heaslip, 2013; Rossi et al., 2012; Sprang, Clark, & Whitt-Woosley, 2007; Stamm, 2010). They may also experience compassion fatigue, which has several components: burnout, exhaustion, frustration, anger, and depression (Stamm, 2010).

The factors that appear to impact trainee therapists' stress levels include higher expectations (Myers et al., 2012), increased workload, nature of clinical work, the novel process of learning clinical skills, and the need for self-care (El-Ghoroury, Galper, Sawaqdeh, & Bufka, 2012; Shapiro et al., 2007). Self-care is an important component in decreasing stress for psychology graduate students. Additionally, learning to utilize self-care is part of a training clinician's growth as a professional. Despite the value of self-care, many trainees are not taught or modeled how to integrate self-care into their lives such as social support, sleep, hygiene,

emotional regulation, and mindfulness and acceptance (Christopher et al., 2011; Pakenham & Stafford-Brown, 2012; Shapiro et al., 2007).

With that said, however, some educational institutions for health and mental health providers are incorporating mindfulness skills into their curriculum (Mark, Williams, & Kabat-Zinn, 2011). Mindfulness is being used in educational and business settings given scientific research findings about the impact of mindfulness, including positive influences on the brain, stress hormones, immune system, autonomic nervous system and health behaviors such as eating and eating (Frank, Reibel, & Metz, 2013). Additionally, mindfulness has been related to more positive states of mind, less emotional stress and overall better quality of life (Greeson, 2009; Wallace & Shapiro, 2006). Moreover, the use of mindfulness has been suggested to be related to providers' clinical skills, such as attentiveness, awareness, acceptance, compassion, non-judgment, and improved clinical perceptions of clinician competency (Dunn, Callahan, & Swift, 2013; Greeson, 2009); one of these areas, self-compassion, was the focus of this dissertation study.

In a review of the research for this dissertation, 20 qualitative and quantitative studies were found that focused on the use of mindfulness with therapists/counselors in training (see Appendix A and Table 1 for a full review of those studies). In sum, these studies found that use of 4 to 15-week mindfulness programs were related to various outcomes, including increased sense of comfort, well being, and increased self-care (Hemanth & Fisher, 2014), a decrease in stress (Brown & Ryan, 2003; de Vibe et al., 2013; Felton, Coates, & Christopher, 2013; Rimes & Wingrove, 2010) and a decrease in rumination and trait anxiety in relation to their stress level and their clinical work (Rimes & Wingrove, 2010; Sharifi, 2011; Shapiro et al., 2007). Additionally, it was found that small sessions of mindfulness (10 minutes) were found to

increase clinicians' understanding of mindfulness and its utility (Moore, 2008). The following section discusses 6 of these 20 studies that included results related to self-compassion (Boellinghaus, Jones, & Hutton, 2013; Dorian & Killebrew, 2014; Felton et al., 2013; Moore, 2008; Rimes & Wingrove, 2010; Shapiro et al., 2007).

### **Self-Compassion and Mindfulness with Psychology Graduate Students**

Self-compassion is defined by having compassion for oneself, meaning that the sympathetic consciousness of others' distress together with a desire to alleviate that distress is turned inward (Newsome et al., 2014). In other words, to have self-compassion means to acknowledge one's own distress, and then alleviate it sympathetically (Raes et al., 2011). Self-compassion can be seen as showing kindness or understanding towards oneself in instances of pain or failure, rather than being self-critical (Neff, 2014). Accordingly, it has been shown that high scores on the Self-Compassion Scale have been associated with positive mental health outcomes (e.g., less depression, less anxiety, and greater life satisfaction), as well as higher scores on measures of well-being and life satisfaction (Neff, 2003). Given these mental health benefits, self-compassion could be a crucial piece to developing clinicians' development as they go through training and evaluative processes.

Although the literature suggests that fixed factors such as temperament and attachment style and environment of one's upbringing can impact the level of self-compassion in some individuals, it is believed that people can cultivate self-compassion (Neff, 2009; Newsome, Waldo, & Gruszka, 2014).

Neff (2009) posited that one of the ways to cultivate self-compassion is through mindfulness practices. Neff explained:

Mindfulness involves a sort of stepping out of oneself, taking a meta-perspective on one's own experience so that it can be considered with greater objectivity and perspective.

Thus, mindfulness enables a type of self-to-self relating in which one aspect of the self can give compassion to another aspect of the self" (p. 563).

Neff and Pommier (2013) empirically examined the idea that self-compassion may be cultivated by mindfulness meditation practice, and found that practicing meditators in the general population reported greater self-compassion as well as experiencing less subjective personal distress, greater perspective-taking abilities, and greater forgiveness than a sample of undergraduate students and a sample of women from the community who did not engage in mindfulness meditation.

Given the growing body of research showing links between self-compassion and psychological health and between self-compassion and mindfulness training (Neff & Pommier, 2013), it may be beneficial to assess developing clinicians' level of self-compassion - whether cultivated through mindfulness training or not - and observe how it might be related with their clinical work and personal well-being, including stress levels. For example, in a study of undergraduates who hoped to pursue a career in the helping professions, Newsome et al. (2014) examined the relationship between mindfulness group participation and students' levels of self-compassion and perceived stress. Newsome et al. (2014) found that after engaging in a 6 week mindfulness group including activities such as yoga, meditation, body scans and chi-gong, the undergraduate participants self-reported a decrease in perceived stress level as measured by the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), and an increase in mindful

awareness and self-compassion, using the Mindful Attention Awareness Scale (MAAS, Brown & Ryan, 2003) and the Self Compassion Scale (Neff, 2003).

Self-compassion may also influence a developing therapist's professional quality of life, affecting how satisfied one is with his/her work with clients as well as one's perceived abilities of being helpful (McCollum & Gehart, 2010), which is related to compassion satisfaction (i.e., the pleasure one derives from being able to act in a professional role well; Stamm, 2010). One could theorize that individuals may need to feel self-compassion and self-regulation in order to exercise various clinical skills. For developing therapists, having greater self-compassion could lead to better abilities to treat and aid clients' abilities to demonstrate self-compassion as well. This area of research is growing rapidly, and several exploratory studies were located to support these hypotheses.

More specifically, only three qualitative studies about self-compassion, mindfulness training and mindfulness practice with trainee therapists were located in a review of the literature for this dissertation, and only 1 of these set out to focus directly on self-compassion (Boellinghaus et al., 2013). In addition, one qualitative (Felton et al., 2013), two mixed methods (Moore, 2008; Rimes & Wingrove, 2010) and one quantitative study (Shapiro et al., 2007) examined these variables along with perceived stress levels with master's mental health, marriage and family therapy and counseling psychology students. See Appendix A for full review of these 7 studies as well as other studies with different populations that examined mindfulness, self-compassion and perceived stress levels. These seven studies with samples similar to the sample in the present dissertation study are described next.

Regarding the qualitative research, all three involved different types and amounts of mindfulness practices delivered in a formal course format, with varied levels of at home practice,



taken by graduate students/trainee therapists. First, Boellinghaus et al. (2013) studied twelve trainee therapists who completed a mindfulness based cognitive therapy course and a six-session Loving Kindness Meditation (LKM) course, and then were interviewed about their experiences to explore connections with self-care and self-compassion. Using a “double hermeneutic” approach to analyze the interviews, the researchers identified five major themes: engaging with the practice, impact on self, impact on relationships, bringing compassion into the therapy room and integrating LKM into life. The overall analysis of these interviews revealed that almost all participants reported an increase in their self-compassion, in their ability to show compassion, and in becoming more accepting of others (Boellinghaus et al., 2013).

Another qualitative study looked at 21 trainee therapists’ experience during and after a 10-week, 4 hour per week, “basic mindfulness course” (with 30 minute per 5 day outside practice) using inductive methods (not specifically searching for any particular outcomes) and found positive results related to self-compassion (Dorian & Killebrew, (2014). Dorian and Killebrew (2014) used the Constant Comparative Method when reviewing weekly journal papers and an end of the term paper, and their themes showed increases in acceptance, compassion for self and others, attention and capacity for awareness.

Similarly, McCollum and Gehart (2010) examined weekly journal entries completed by 13 marriage and family therapy students as they attended 2 courses of the Interpersonal Mindfulness Program (IMP; Kramer, Meleo-Meyer, & Turner, 2008). These students were asked to reflect on the experience of mindfulness had on their personal life and clinical practice. Results of thematic analysis revealed themes of being present, compassion and acceptance.

Although qualitative research is helpful when exploring new areas of inquiry, it is limited in its ability to determine statistically significant differences between groups and generalizable

findings (even though those are not aims of qualitative research). Despite what some consider to be limitations, the results of these three studies can assist with hypothesis creation. More specifically, given that all three studies found mindfulness practice was related to increased experiences of self-compassion, compassion, and acceptance, quantitative research could hypothesize that engagement in mindfulness is associated with increases in self-compassion as measured by the Self-Compassion Scale (Neff, 2003).

The next small set of studies to be reviewed are most like the present dissertation in that they examined the relationship between mindfulness group participation, self-compassion and stress in trainee therapists. In the qualitative study, Felton et al. (2013) included 44 masters' level graduate students in mental health counseling and marriage and family counseling who participated in a 15 week "Mind-Body Medicine" (adapted MBSR) course, Felton et al. (2013) utilized Conventional Content Analysis (Hsieh & Shannon, 2005) to gain meaning from pre and post open ended question surveys, which asked about the: 1) impact of stress on counseling students, 2) counseling students' self-assessment of abilities to manage stress, 3) impact of stress on counseling, 4) current efforts to manage stress, and 5) concerns about burnout. The researchers found student reports of increases in acceptance, the ability to be present with clients, awareness of stress and self-compassion. Of note, a reduction in stress was not a part of the findings.

In the first mixed-methods study, Moore (2008) examined the use of 8-14 short 10-minute mindfulness sessions over a 4-week period with a group of 23 first year clinical psychology doctoral students in the United Kingdom. Although no statistically significant differences in the 14-item PSS were found, thematic analysis of feedback provided about the course indicated use of a decrease mindfulness to cope within stress and an increase in

understanding of mindfulness. Results using a Wilcoxon signed rank test also did not indicate significant differences in self-compassion scores; however, there were significant increases in self-kindness scores, as measured by the SCS (Moore, 2008).

In the second mixed-methods study, Rimes and Wingrove (2010) found that 20 female doctoral trainees in the United Kingdom who completed an 8-week doctoral training course in MCBT reported a small decrease in rumination as measured by the Reflection Rumination Questionnaire (RRQ; Trapnell & Campell, 1999), and a significant increase in self-compassion as measured by the Self Compassion Scale (Neff, 2003) and a decrease in perceived stress as measured by the Perceived Stress Scale (Cohen et al., 1983). First year students reported a greater increase in self-compassion than 2<sup>nd</sup> and 3<sup>rd</sup> year students, and a larger reduction in stress levels. Additionally, greater amount of home practice was associated with a greater decrease in stress and rumination and greater increase in empathic concern. In their content analysis of written responses to open ended questions about the impact of mindfulness course, Rimes and Wingrove (2010) found the most commonly reported themes were increased acceptance of thoughts and feelings, greater understanding of what the experience would be as a client, and greater awareness of feelings, thoughts and bodily sensations.

Lastly, regarding the quantitative study, Shapiro et al., (2007) conducted a study with graduate students therapists who participated in an 10 week modified MBSR intervention. They found that participants reported a decrease in stress as measured by the Perceived Stress Scale (Cohen et al., 1983), rumination and trait anxiety as measured by the State/Trait Anxiety Inventory (STAI; Spielberger, 1983) and the Reflection Rumination Questionnaire (RRQ; Trapnell & Campell, 1999) and an increase in self-compassion as measured by the Self-Compassion Scale (Neff, 2003) when compared to the no intervention control group. Such PSS

and SCS results were similar to those found more recently by Newsome et al. (2014), discussed above, with a sample of undergraduates who hoped to pursue a career in the helping professions.

The aforementioned studies highlight the need for further research in this area as it is difficult to draw conclusions when given the studies above utilized different types of mindfulness practices and different amounts of time spent in courses/training groups and home practices. Important to the present study were the mixed findings in regards to levels of stress and self-compassion. Myers, et al. (2012) reported similar findings, in that there was not a decrease in self-reported stress, and in the case of Moore (2008), neither a decrease in perceived stress nor an increase in self-compassion was observed. These findings highlight the need to better understand the association between mindfulness and stress, and mindfulness, stress and self-compassion.

### **Hypothesis for Investigation**

In sum, given that mindfulness has been associated with decreases in clients' and students' ratings of stress and increases in their self-compassion scores, mindfulness has the potential to be a helpful form of self-care and useful coping strategy. Given the limited, emerging research in this area, the need remains to study the specific population of developing clinicians and how integrating mindfulness practice within graduate psychology programs relates to their perceived levels of stress, self-reported level of self-compassion, and their clinical work and development. It is hoped that mindfulness may enhance clinical performance and promote self-care. Therefore, this current study hypothesized that engagement in extracurricular mindfulness practice groups would be associated with a decrease in developing clinicians' perceived stress level ratings and an increase in their self-compassion scores as compared to baseline self-report ratings.

## Method

### Participants

The sample of participants in this study ( $N = 15$ ) was purposively selected from the total number of male and female students enrolled in a Master's of Clinical Psychology program with an emphasis in Marriage and Family Therapy (MACLP) at a private university in Southern California during the 2013-14 academic year ( $N = 86$ ). The sample participated in extracurricular mindfulness groups during the Fall 2013 and Spring 2014 semesters and completed a packet of six measures (questionnaire identifying their spiritual beliefs, INSPIRIT\_R (Kass et al., 1991), Perceived Stress Scale (Cohen et al., 1983), Professional Quality of Life 5 Scale (ProQOL 5; Stamm, 2010), Mindfulness/Contemplative Practice Questionnaire (MAAS; Brown & Ryan, 2003), and two Compassion Questionnaires (Neff, 2003), which included one used in this study, the Self-Compassion Scale-Short Form (Raes et al., 2011) and the Compassion for Others Scale (Pommier, 2001) before the Fall 2013 group began and in the 2014 summer term. The mindfulness groups were formed with the goal of teaching future clinicians mindfulness practices to utilize both personally and professionally. In Fall 2013, students attended either an 8-week group facilitated by an adjunct professor who used a modified version of Mindfulness Based Stress Reduction (see Appendix C; 9 students), or a 9-week group facilitated by a graduate student who used a less structured approach that included contemplative practices of mindful walking, body scans, guided meditations, silent meditation, awareness of breathing, and awareness of bodily sensations/thoughts/feelings (four students). For the spring groups, 26 students expressed interest in participating and 14 attended at least one meeting. Of those that attended the fall and/or spring groups ( $n = 27$ ), 15 participants were chosen to comprise this

study's sample based on having completed the above measures in their entirety and their participation in the mindfulness groups.

Participants selected for the study were majority first year (75%), female students (81.3%), whose ages ranged from 21-30 years (mean = 23.81). With regard to ethnicity, 10 participants (62.2%) identified as White, while two identified as Mixed (12.5%), one identified as Asian (6.25%) and one as Hispanic (6.25%). Across the sample, five (31.25%) reported being Agnostic when asked about religious identification, while six (37.5%) reported identifying as religious, one (6.25%) individual reported being Atheist, and one (6.25%) reported "spiritual". Eleven (68.75%) of the participants in the sample reported being single with regard to relationship status, four (25%) were in committed relationships, one (6.25%) was engaged and one (6.25%) reported being married. None of the participants reported having children.

In evaluating length of time spent engaging in different mindfulness and contemplative practices, descriptive information is provided about their practices before the groups began and after engagement in a mindfulness group. Eight participants had previously engaged in some type of practice (61.5%) before starting the mindfulness groups, and five participants had never engaged in mindfulness and contemplative practices before participating in the mindfulness group (38.5%). Regarding specific types of practices, six participants had never engaged in prayer (46.2%), one person had practiced praying for five years (7.7%), one participant had practiced praying for fifteen years (7.7%), two participants had practiced praying for twenty years (15.4%), and three participants did not answer the question (23.1%). None of the participants had engaged in centering prayer. Regarding meditation, seven participants had never engaged in meditation (53.8%), one participant had practiced meditation for six months (7.7%), two participants had practiced meditation for one year (15.4%), one participant had

practiced meditation for ten years (7.7%), and two participants did not answer the question (15.4%). Seven participants had never practiced yoga (53.8%), one participant had been practicing yoga for six months (7.7%), two participants had been practicing yoga for one year (15.4%), one participant had been practicing yoga for four years (7.7%), one participant had been practicing yoga for six years (7.7%), and one participant had been practicing yoga for ten years (7.7%). Seven participants had never engaged in mindful walking (53.8%), one participant had engaged in mindful walking for six months (7.7%), one participant had engaged in mindful walking for one year (7.7%), one participant had engaged in mindful walking for five years (7.7%), and three participants did not answer the question (23.1%).

The researcher compared participant data about mindfulness practices before the Fall 2013 groups began with how they described their mindfulness practices after participation in one of the mindfulness groups ending in either December 2013 or June 2014. Of those participants who did not report certain practices on the Fall 2013 surveys, four participants reported what appeared to be new practices of meditation (30.8%); one participant reported practicing yoga (7.7%); and three participants reported practicing mindful walking (23.1%). Regarding participants who reported mindfulness practices before the Fall 2013 surveys, one participant (out of the 4 total) continued to endorse practicing meditation (7.7%); two (out of the six total) participants continued endorsing practicing yoga (15.4%), and two (out of three total) participants still reported practicing mindful walking (15.4%). In other words, three participants no longer endorsed practicing meditation (23.1%), four participants no longer reported practicing yoga (30.8%), and one participant no longer reported practicing mindful walking (7.7%). None of the four students who initially reported engaging in prayer said that they did so when assessed at the completion of mindfulness groups.

In terms of our participants' experience providing therapy services, one participant had provided psychotherapy or counseling services for seven months (6.3 %), one participant had provided psychotherapy or counseling services for nine months (6.3%), and one participant had provided psychotherapy or counseling services for three years (6.3%). Regarding theoretical orientation, 10 participants reported utilizing or wanting to utilize cognitive behavioral therapy (67%), two participants reported psychodynamic (13.4%), one participant reported humanistic (6.7%), two participants reported not knowing yet (13.4%).

### **Measures**

Two measures were used in this study. Appropriate for individuals with a junior high school education or above, the Perceived Stress Scale (Cohen et al., 1983) was used to measure the participants' perceived level of stress before and after the mindfulness group. It is a four-item questionnaire in which each item is answered on a five-point likert scale, with zero representing "never" and four representing "very often" about the frequency of stress-related feelings. An item example is, "In the last month, how often have you felt you were unable to control important things in your life?"

The Perceived Stress Scale was normed with 2,387 respondents from across the United States who ranged in age from eighteen to sixty-five and identified as Caucasian (83%), Black (7%), Hispanic (4.8%), or other minority (0.02%; Cohen & Williamson, 1988;). This measure has been re-normed using a population of college-aged students majoring in psychology (Cohen, 1988). Although the normative populations are different from the population featured in this proposed study in terms of level of education, the similar interest in psychology should be considered. When used to compare the perceived stress levels of undergraduates and individuals seeking an advanced degree (any degree above a bachelor's), as compared to the stress levels of



the general population (Cohen & Janicki-Deverts, 2012), the PSS has been shown to demonstrate good reliability (.71) and good predictive validity (.52; Cohen & Williamson, 1988;).

The Self-Compassion Scale-Short Form (SCS-SF; Neff, 2003; Raes et al., 2011) is a twelve-item self-report measure that attempts to measure participants' level of compassion they have towards themselves. Participants use a five-point likert scale in which one represents "almost never" to five representing "almost always" regarding the how often participants report behaving in the stated manner. Participants answer items such as, "I'm disapproving and judgmental about my own flaws and inadequacies," and "I'm kind to myself when I'm experiencing suffering." The Self-Compassion Scale-Long Form is said to be appropriate for ages fourteen and older, with an eighth grade reading level or above (Neff, 2003); this should hold true for the SCS-SF as the items are the same.

The SCS- LF was normed on 391 undergraduate students, 166 men and 225 women, with a mean age of twenty years old, and who identified as Caucasian (51%), Asian (21%), Hispanic (11%), Black (4%), and Other (6%; Neff, 2003). The measure has high internal consistency (.78), reliability (.71), and good construct validity (.77), making it a useful measure of self-compassion (Neff, 2003). The self-compassion scale has an internal consistency rating of .92 and is found to represent good construct validity (Neff, 2003). Recent work examining its factor structure supports use of its full-scale score as a measure of self-compassion (Neff, 2016; but see Lopez et al., 2015).

The SCS-SF was normed on 415 undergraduate students, 272 women and 143 men, with a mean age of 20.62 years old, and who identified as Caucasian (53.5%), Hispanic (20.5%),

African American (7.0%), Asian American (7.0%), Mixed Ethnicity (5.3%), Foreign (1.7%), American Indian (0.7%) and Other (4.3%; Raes et al., 2011). The SCS-SF has a correlation of 0.98 with the SCS-LF and was shown to have good internal consistency (Raes et al., 2011).

Given that the SCS-LF and SCS-SF were normed on emerging adults at the beginning of their academic and professional careers, there are some similarities to the sample to be utilized in this study that features students in a clinical program solidifying their professional pursuits; however, there are limitations in that it was not normed with the graduate student population. Notwithstanding, the SCS has been utilized in researching war veterans, women with body image issues who were frequent exercisers in a community sample, college students utilizing counseling services, couples presenting to couples' therapy and their relationship satisfaction, and meditation practitioners (Albertson et. al., 2014; Dahm et. al., 2015; Lockard et. al., 2014; Neff & Beretvas, 2013; Smeets et. al., 2014).

### **Procedures and Analysis**

All methods of this pre-experimental, between-subjects study were approved by the Institutional Review Board of Pepperdine University's Graduate School of Education and Psychology (Appendix B). The participant data used in the study was obtained from a larger longitudinal research project that has been collecting archival, de-identified, clinical research data on the use of contemplative practices in a private graduate school's master's program from 2013 to 2017. This larger database includes student self-report questionnaires assessing various personal characteristics (e.g., demographic information, time spent in psychotherapy, therapeutic orientation, their level of mindfulness participation, and constructs purportedly related to contemplative practices (e.g., state or trait mindfulness; perceived stress; self- and other-compassion; flexibility). After receiving full IRB approval, the researcher created a password-

protected electronic database that included student self-report data directly pertaining to the present study's inclusion criteria (described above in Instrumentation section).

This study used a pre-experimental research design, in which the group examined had participated in the mindfulness training and their scores on pre- and post- measures were compared; there was not a designated control group. The participants completed a packet of measures including both the Perceived Stress Scale and the Self-Compassion Scale-Short Form before beginning the mindfulness training groups and then after engaging in the mindfulness groups. By focusing on the questions related to self-compassion, as well as perceived stress level, the relationship between engaging in mindfulness practices and participants' perceived stress levels and self-compassion ratings was investigated by comparing the scores before and after learning and engaging in mindfulness practices.

The data analyses were conducted in three steps: demographic analysis, descriptive analyses and main analyses. The demographic analyses demonstrated the age, gender and ethnicity of each group. To test the relationship between self-reported stress and self-compassion a paired sample t-test was conducted.

## Results

To determine the reliability and internal consistency of the measures used, Cronbach's alpha was calculated. It was determined that the Perceived Stress Scale had acceptable internal consistency  $r(15) = .714$  for pre test, and good internal consistency  $r(15) = .847$  for posttest (Cortina, 1993). It was determined that The Self-Compassion Scale-Short Form had good pre test internal consistency  $r(15) = .881$  and had excellent internal consistency  $r(15) = .929$  (Cortina, 1993).

The mean scores on the Self Compassion Scale-Short Form and Perceived Stress Scale before mindfulness training and after mindfulness training were compared using a paired samples t-test. Mean scores on the Perceived Stress Scale (PSS) were 6.53 ( $SD = 2.46$ ) at baseline. At follow-up the average scores on the PSS had increased with a mean score of 6.67 ( $SD = 3.12$ ). Results from the paired-sample t test indicated that that these scores were not statistically significantly different from each other ( $t_{15} = -0.183, p = .858$ ). These scores displayed low-moderate levels of perceived stress (0-5 = low levels, 6-11 = moderate levels, 12-16 severe levels of perceived stress) when compared to the normative sample (Cohen et al., 1983; Cohen & Williamson, 1988; Cohen & Janicki-Deverts, 2012).

With regard to the Self Compassion Scale-Short Form, mean scores at baseline were 2.98 ( $SD = 0.72$ ) and 3.19 at follow-up ( $SD = 0.79$ ). Paired Sample t-tests for these means indicated they were not significantly different from each other ( $t_{15} = -1.30, p = .212$ ). There are no specific levels of self-compassion as stated by the literature, other than when assessing level of each subtype category of the SCS Long Form (Neff, 2003), which was not used in the present study. With that said, however, Neff (2016) recently stated that "there are not well-established norms for what counts as low, moderate, or high levels of self-compassion" (p. 272); therefore,

we are not able to draw adequate conclusions about the level of self-compassion these scores revealed.

## Discussion

The high stress of clinical psychology graduate programs has revealed a need to better understand the ways in which self-care strategies can be taught and modeled to aid students in successfully navigating their clinical and academic responsibilities. Since self-compassion has been linked to greater well being and less anxiety/depressive symptoms in trainee therapists (McCollum & Gehart, 2010; Newsome et al., 2014), cultivating it through mindfulness practice may enable graduate programs to model and provide needed self-care strategies for their students. Also, although seven studies have looked at links between mindfulness programs and self-compassion in trainee therapists (Boellinghaus et al., 2013; Dorian & Killebrew, 2014; Felton et al., 2013; McCollum & Gehart, 2010; Moore, 2008; Rimes & Wingrove, 2010; Shapiro et al., 2007), only four studies have examined perceived stress as well (Felton et al., 2013; Moore, 2008; Rimes & Wingrove, 2010; Shapiro et al., 2007). Thus, the aim of this study was to better understand the link between mindfulness practices, stress, and self-compassion among developing clinicians, and to do so using quantitative analyses using valid and reliable measures of stress and self-compassion. The main hypothesis of this study was that engagement in extracurricular mindfulness practice groups would be associated with a decrease in the developing clinicians' perceived stress level ratings (PSS) and an increase in their self-compassion scores (SCS-SF) as compared to baseline self-report ratings.

Regarding the main hypothesis of this study, statistical analysis revealed that perceived stress scores and self-compassion scores were not predicted by engagement in the mindfulness groups. These findings are not consistent with the previously described emerging literature that indicated mindfulness engagement is related to decreased stress in psychology graduate students (Myers et al., 2012; Nelson, 2001), but is consistent with studies not finding this relationship

(deVibe et al., 2013; Felton et al., 2013; Moore, 2008; Myers et al., 2012). Although consistent with Moore's (2008) mixed methods study, our findings are also not consistent with qualitative and quantitative studies finding mindfulness training related with increased self-compassion in therapists/counselors in training and undergraduates seeking a career in the helping professions (Boellinghaus et al., 2013; Dorian & Killebrew, 2014; Felton et al., 2013; Newsome et al., 2014; Rimes & Wingrove, 2010; Shapiro et al., 2007). The circumstances that may have led to these findings are discussed next - first focusing on the PSS results and then the SCS-SF results - as well as in the limitations section.

### **Perceived Stress Scale Results**

In the present study, the mean perceived stress score on the PSS (Cohen, 1983) at pre-test was 6.53 ( $SD = 2.46$ ) and at post-test was 6.67 ( $SD = 3.12$ ). Both sets of scores were in the mild range and neither finding was the expected range of perceived stress level. The results of the present study were considered somewhat surprising as we hypothesized to see higher levels of perceived stress at pre-test and a decrease to lower levels post-test, based on the limited previous research with the population of interest that was reviewed above. Further review of the literature, however, revealed mixed PSS results, or displayed similar findings as the present student of no change in PSS scores like those by Moore (2008), Rimes and Wingrove (2010) and Felton et al. (2013), which merits further investigation,

Factors that may have contributed to low PSS scores at both time points were methodological differences in perceived stress measurement and educational and program status. Of the studies reviewed with our population of interest, three studies (Newsome et al., 2014; Rimes & Wingrove, 2010; Shapiro et al., 2007) reported mean PSS scores; when doing so, they used the long form rather than the short form used in the present study. In that study with

undergraduates who intended to pursue graduate training in psychology, mean scores pre-test were 21.06 ( $SD = 7.33$ ) and post-test mean scores were 14.23 ( $SD = 5.44$ ) (Newsome et al., 2014); in a study with counseling graduate student therapists, mean scores pre-test were 24.64 ( $SD = 7.81$ ) and mean scores post-test were 18.36 ( $SD = 5.15$ ) (Shapiro et al., 2007); in the study with female UK doctoral trainees, mean scores for 1st year students were 24.6 ( $SD = 8.1$ ) at pre-test and 20.6 ( $SD = 6.2$ ) at post-test, mean scores for 2nd year students were 22.7 ( $SD = 5.2$ ) at pre-test and 21.5 ( $SD = 5.0$ ) post-test, and 3rd year students' pre-test means were 21.8 ( $SD = 7.7$ ) and post-test 26.0 ( $SD = 5.0$ ); the long form considers scores above 20 to be in the severe stress range, and below 13 in the low to mild stress range (Cohen et al., 1983). Differences between the Newsome et al. (2014) study and the present study may also be due to the sample utilized, as undergraduates who are pursuing a career in the helping professions likely vary from clinical psychology graduate students. Factors including, but not limited to, age, life experience, financial status, academic setting and status, could account for the differences in reported PSS scores in Newsome et al. (2014) and Shapiro et al. (2007) as compared to the present dissertation.

Relatedly, another potential factor that may have influenced the current findings was that the majority of the participants were in the first year of their program, which could account for the lower levels of reported stress. Similarly, Moore (2008) studied 1st year clinical psychology graduate students and reported no differences in pre-post test PSS scores (unfortunately, neither means for stress levels were reported). Since the pre-test was administered at the start of their program, first-year students may not have reported experiencing high levels of stress because of desires to present as well, effective use of coping skills, and/or because their academic demands were not high at the outset of their first semester and clinical training had not yet commenced. In



other words, low PSS levels may have been understandable for such students if academic pressures are a primary reason for high PSS scores in graduate clinical psychology students. Following this reasoning, the same could be true for the second year students who were just starting up again after a summer break from academic demands. Given the small sample size, comparisons between first and second year students were not able to be made to further examine this potential variable. Such work appears needed because in the one study that looked at differences between years in training, Rimes and Wingrove (2010) found that 1st year students reported the highest initial PSS ratings and greatest decreases in PSS scores post-ACT training, when compared to 2nd and 3rd year students, who reported minimal decreases or increases post-training.

Regarding low or mild PSS post-test scores at the end of the fall semester, they may also have been low for first-year students because clinical training requirements did not begin until the spring term, which occurred after the first follow-up survey administration. With that said, however, post-test scores may have been in the low or mild range due to underreporting or positive coping, which may have included skills and practices used before and during the mindfulness programs.

### **Self-Compassion Scale-Short Form Results**

To discuss the present study's findings related to scores on the Self-Compassion Scale – Short Form (SCS-SF; Raes et al., 2011), the mean self-compassion score at pre-test was 2.98 ( $SD = 0.72$ ) and scores of self-compassion post-test were 3.19 ( $SD = 0.79$ ). There are no specific levels of self-compassion as stated by the literature, other than when utilizing the SCS Long Form (Neff, 2003) when assessing the specific sub-type categories, which were not used in the present study nor recommended for the SCS-SF version used in the present study. Furthermore,

Neff (2016) noted that both the long and short form versions of the SCS are not normed, but rather used to indicate whether self-compassion has been cultivated.

To put our findings in context, of the literature that utilized the SCS Long Form with a similar population of helping professionals (none of which were trainee therapists, however), four studies reported mean scores. Newsome et al. (2014) reported pre-test mean self-compassion scores 2.77 ( $SD = 0.64$ ) that was similar and slightly lower to the present study's pre-test mean score of 2.98 ( $SD = 0.72$ ). Coinciding, three studies conducted with community samples by Neff (and colleagues) reported similar pre-test SCS scores. First, Neff's (2016) community sample evidenced a pre-test mean of 2.71 ( $SD = 0.62$ ) and post-test self-compassion scores averaged 3.76 ( $SD = 0.60$ ); Second, Neff and Germer (2013) studied volunteers from the community (80% held graduate degrees) whose pre-test mean scores on the SCS were found to be 2.58 ( $SD = 0.65$ ) and post-test scores averaged 3.47 ( $SD = 0.79$ ). Most recently in a study looking at overall levels of self-compassion of undergraduates, community, meditators, and a clinical group, the community sample (many who held graduate degrees, and showed active interest in mindfulness) reported mean scores of self-compassion at 3.0 (Neff, Whittaker, & Karl, 2017). Thus, pre-test SCS scores are comparable to a few similar populations in the literature, which may assist with understanding baseline levels of self-compassion.

Regarding post-test mean self-compassion scores, again, an available comparison of mean scores that could be made with the present study was with Newsome et al. (2014), as that study was similar to ours in terms of the sample as well as the nature of the mindfulness group; they collected data after participation in a 8-week 90-minute weekly MBSR group, which was similar to the group attended by the majority of participants in the present study, Newsome et al. (2014) reported a post-test SCS score of 3.67 ( $SD = 0.69$ ). Both Newsome et al. (2014) and the

present study evidenced an increase in SCS scores at post-test; however, Newsome et al.'s study's results showed a statistically significant increase from pre-test (mean change score 1/4.741, SE1/4.106,  $p < .0001$ ), whereas the present study's increase in self-compassion scores (from 2.98 to 3.19) was not enough to achieve statistical significance,

It is unfortunate that the two studies that looked at trainee therapists used the long form rather than the short form used in the present and above mentioned studies. Shapiro et al.'s (2007) results (self-compassion mean scores pre-test were 18.06 ( $SD = 3.97$ ) and mean scores post test were 20.92 ( $SD = 3.84$ ), and Rimes and Wingrove's (2010) results (self compassion mean scores pre-test were 19 ( $SD = 2.9$ ) and post-test were 20.3 ( $SD = 2.4$ ) could not be directly compared because their use of the long form does not specify ranges of self-compassion but rather examines the subtest categories, which were not examined in the present study. Therefore, conservatively speaking, our non-statistically significant SCS results are similar to those reported by Moore (2008). When looking the at the trend of data in our study, it could be seen to be appears consistent with Newsome et al.'s (2014) quantitative data and qualitative data in our population of interest that suggests engagement in mindfulness practices are related to increased levels of self-compassion (Boellinghaus et al., 2013; Keng et al., 2012; Hemanth & Fisher, 2014).

A factor that may impact the ability to influence self-compassion scores is mindfulness practice type. There are a wide variety of mindfulness and contemplative practices, some of which have been linked to self-compassion (e.g., Loving Kindness Meditation), Also some programs have been developed specifically to cultivate self-compassion (e.g., Mindful Self Compassion 8-week course, or 2-day intensive MSC; Neff & Germer, 2013). Studies that found that utilizing four sessions of Loving Kindness Meditation (LKM) with psychology therapists in

training resulted in an increase in self-compassion and compassion as compared to a control group (Boellinghaus et al., 2013) and six sessions of LKM was qualitatively associated with an increase in self-care behaviors and compassion, displaying the importance of evaluating if specific types of meditation will impact self-compassion levels in graduate psychology students. It could be hypothesized that utilizing a specific self-compassion practice or program may have a stronger impact on SCS scores than using a general meditative breathing exercise. Of the studies utilizing similar populations to the current study, they did not engage in or evaluate the effect of self-compassion on specific mindfulness exercises or programs.

Although the present study did not see a post-test statistically significant increase as was presumed based on the current literature, its null results were consistent with a comparable study conducted by Moore (2008) with first year clinical psychologist trainees, in which similar results were hypothesized but not found. Moore (2008) posited that the high reliability of the “Neff Compassion Scale” (SCS; Neff, 2003) could affect the utility of this scale to assess change over short periods of time (4 weeks). Current SCS Long Form research has also been examining whether variances in use of total score versus factor scores / factor structure may influence outcomes, concluding with support for use of total scale scores for purposes of studies like this dissertation (Neff, Whittaker, & Karl, 2017; Neff, 2016). In order to further understand the results of the current study, methodological limitations are considered next. The insignificant difference also allows for opportunities for future research and exploration.

### **Limitations**

The current study had several limitations that likely contributed to the observed results. The use of self-report measures pose limitations to the specific types of information that can be collected from participants, such as examining only the information prompted by questions asked, and the exclusion of open-ended questions, which can create barriers to learning about

their experience of stress and self-compassion, as well as their experience of the groups.

Additionally, the use of the SCS-SF made it difficult to directly compare previous studies' results using the SCS-LF to those of the present study.

Given their status as students, they may have felt the need to emphasize an increase in positive effects or withhold criticism of the mindfulness training due to wanting to be perceived well by the survey administrator, or increasing perceptions that the training was effective, and/or feeling apprehensive about providing negative feedback to the university. Additionally, answers may have been dependent upon, exaggerated, or under-reported due to factors such as the time at which the self-report measures were filled out, as inherent biases or memory issues may have impacted responses (Beaton et al., 2000). Further, as Rimes and Wingrove (2010) surmised, their "first come, first served" recruitment methods - similar to those used in the present study - may have involved participants who were more enthusiastic about or skilled in mindfulness, or felt in greatest need of help.

The students' experiences of the leader(s) of the groups may have also been a factor that may have influenced their self-reported experiences, even though their perceptions of gained benefits or the quality of practice were not examined in the present study. Limited exploratory research exists regarding qualities of facilitators. For example, van Aalderen et al. (2014) used a thematic analysis of successful mindfulness teacher-participant qualities and concluded that empowerment, non-reactivity, and support appeared the most impactful to participants in the mindfulness group. Guidelines are currently being developed to inform qualifications of mindfulness educators (Crane et al., 2012; Woods, 2009). Based on professional opinion, such qualifications typically include that effective teachers need to have a longstanding history of mindfulness practice, current practice that is not less than what they ask students to do, and

ongoing training participation in the modality of mindfulness they are teaching (e.g., to teach MBSR, they must have participated in the program as a student; Kabat-Zinn et al., 2016). Future research is needed to test out these professional opinions about mindfulness educator qualities and guidelines.

Concerning the limitations to the data analysis used, a t-test can provide information about means but not about individuals. Therefore, this study cannot be generalized to developing clinicians. Another limitation is that t-tests do not account for variance with other variables. Demographic variables such as age or gender, experience of mindfulness or previous engagement in mindfulness may influence responses on measures (Neff & Pommier, 2013; Soler et al., 2014; Vettesse et al., 2009; Zeng et al., 2017). Although the present study reported demographic data, further analysis of how these variables influenced the scores was outside the scope of the conducted analysis. The demographic data and other cultural factors related to the participants' experience as graduate students and clinicians could provide rich information and should be considered for future research.

Lastly, there were limitations of this study concerning the dataset. The small sample size, and the lack of random selection to the mindfulness groups, influences external validity or generalizability and decreases the likelihood that the selected participants represent clinical psychology graduate students. Additionally, these participants were self-selected and may have already had an interest in mindfulness or a mindfulness practice, and could impact the results of the study. The small sample size does not allow for between group comparisons, in addition to the lack of a control group also limits the ability to attribute a difference, or in the case of this study lacking in a decrease in perceived stress or increase in self-compassion, to engagement in mindfulness/contemplative practices. In addition, the data only represented a subset of helping

professionals. Participants were graduate students in a psychology program at a small, private, and Christian university, which influenced how generalizable the findings are to other developing clinicians in other size universities, training facilities without as many financial resources, and programs without an affiliation to a religious organization.

### **Future Research**

In regards to directions for future research, this study revealed somewhat surprising results in low reported levels of perceived stress at both pre and posttest. In the literature reviewed for this study (El-Ghoroury et al., 2012; Myers et al., 2012; Shapiro et al., 2007), graduate psychology students are said to have high stress levels throughout their programs. Accordingly, Rimes and Wingrove (2010) found high baseline PSS levels in 1st, 2nd and 3rd year UK clinical psychology trainees. However, Moore (2008) and de Vibe et al. (2013) posed conflicting results, emphasizing the need for future research in this area. Since neither study displayed significant decreases in PSS ratings, perhaps null results were due to the modified nature of the mindfulness practices used in their studies, as compared to Shapiro et al.'s (2007) use of 10 weekly 3-hour classes of MBSR: Moore (2008) utilized frequent (14 sessions in 4 weeks), short (10 minutes) mindfulness practices and de Vibe et al. (2013) utilized a modified MBSR over an 8-week period, with 6 weekly sessions of 1.5 hours of mindfulness practice.

The unexpected results of the present study may have implications about the assumptions made about graduate students' stress levels. For example, perhaps students seeking out self-care strategies are already aware of the need to incorporate coping strategies, and, therefore, manage their stress levels more holistically, resulting in lower baseline levels of reported stress. Additionally, the timing of when stress level is measured could impact the way in which stress is reported by participants, and therefore should be considered. Future researchers may need to

consider when they are measuring stress levels, if the time frame in which they continue to measure stress matters (e.g., middle of academic calendar vs. summer), and whether there is an association between individuals who seek out mindfulness practices and their level of stress as compared to those who do not seek out such programs (meditation, yoga, qigong). Also, other measures of perceived stress levels may be more able to detect stress level changes over time than the PSS Long Form (Moore, 2008).

In regards to the Self Compassion Scale (Neff, 2003; Raes et al., 2011), future research is needed to in regards to both the Long Form and Short Form versions to develop norms on the specific population of graduate students in psychology as well as other helping professions. Neff (2016) stated that norms for specific populations are needed to more reliably conclude if initial scores are low, moderate, or high, which would assist in effectively understanding individuals' experiences of self-compassion, as well as to determine the best methods to cultivate self-compassion in this population. Furthermore, being able to have reliable and valid normative SCS data with diverse groups will allow for more effective comparison between groups.

With regard to the unsupported main hypothesis of this study (no significant changes in perceived stress and self-compassion pre-mindfulness training to post-mindfulness training), which was inconsistent with most other literature on the aforementioned topics, there is continued need to examine these variables in clinical psychology graduate students and trainee therapists. Future studies exploring this topic should try to expand sample size and match the samples when possible on demographic variables (e.g., gender, ethnicity), and investigate variables that could affect engagement in, or results of, participation in mindfulness training, including, but not limited to, previous experience using mindfulness practices, level of spirituality, year in training program, type of training program, schedule, and/or time available.



Researchers may discover an association between previous engagement in mindfulness or contemplative practices with outcomes including increased subjective well-being, reduced psychological symptoms and emotional reactivity, and improved behavioral regulation (Keng et al., 2011).

Additionally, improvements in medical and psychological symptoms were associated with trait mindfulness and spirituality (Carmody et al., 2008), which can be useful knowledge for personal and professional use of mindfulness for developing clinicians. Thus, in association with self-compassion, it may be important for future research to incorporate level of spirituality in relation to mindfulness practice due to its association with improvement in health related quality of life and increased spirituality, which provides additional evidence for the incorporation of mindfulness as a self-care strategy for developing clinicians. (Greeson et al., 2011; Carmody et al., 2008)

As noted above, student clinicians' year in graduate school may be related to their level of stress and motivation to engage in these practices. According to El-Ghoroury et al., (2012), stressors change throughout graduate programs but high levels of stress remain throughout. Given the low stress levels reported over time by students in different years in their master's program in the present study, future research appears needed to explore stress and self-compassion at different points during graduate training. As part of this work, it could be beneficial to evaluate the different settings or types of populations with which developing clinicians are working, such as comparing solely therapy clinical placements versus assessment placement, or clinicians' working in specialized treatment areas for specific diagnoses (e.g. substance use, dual diagnosis, eating disorders). A future study design could include evaluating stress and self-compassion before and after engagement in mindfulness/contemplative practices

at the beginning of a graduate program, in the middle, and towards the end. In terms of type of statistical analysis and design, researchers could pursue the use of an ANOVA in order to compare multiple group means (Davison & Sharma, 1994). To evaluate if group means are significantly different from one another and to capture the difference in means at different time points, it is suggested that researchers use a multivariate analysis of variance (MANOVA) (Dunteman, 1994).

Studies are also needed to further current literature suggesting that the frequency of mindfulness practice, years of schooling, lifetime practice and age are associated with heightened mindfulness skills (Soler et al., 2014; Zeng et al., 2017). Questions to be explored may include investigating the types, frequency, and length of mindfulness practice necessary to produce noticeable differences in stress and self-compassion. For example, shorter, more frequent mindfulness exercises may be more accessible to graduate students' with busy schedules, rather than long formal class exercises (Soler et al., 2014). Relatedly, Zeng et al., (2017) found that daily practice of 15-22 minutes of LKM for 7 weeks was associated with positive emotions and long term benefits 15 months after the 7 week trial was over. Similarly, Berghoff et al., (2017) noted that although 20 minutes of daily practice of informal meditation showed the greatest improvement in self-reported self-compassion scores, as little as 10-15 minutes twice weekly practice still showed noticeable increases in self-compassion. These results highlight the need to better understand the optimal frequency and length of mindfulness practice.

A future study could use a control group along with two or three different groups participating in mindfulness/contemplative practices for different amounts of time (e.g., 15, 30, and 60 minutes) and different frequencies (daily, bi-weekly, and weekly) to explore whether these variables are associated with less perceived stress and more self-compassion.

Similarly, an exploration of general mindfulness practices compared to specific self-compassion mindfulness exercises could elicit differences in a sense of self-compassion, as well as a decrease in perceived stress. Additionally, cultural factors related not only to the demographics of the participants but also types of clinical work, type of training, and context of their work will be important variables to account for in future studies. Lastly, exploration of facilitator expertise appears needed to determine whether differences exist in both the experience and benefits derived from participation in mindfulness practices, such as self-compassion and stress levels.

### **Conclusion**

In conclusion, this dissertation represents one of a growing number of studies examining the potential of mindfulness training as a coping strategy for developing clinicians. In particular, this study was one of 20 that focused on mindfulness and training clinicians, and was one of only four that looked at mindfulness, training clinicians, stress and self-compassion.

Despite studies indicating graduate psychology students' high levels of stress, the current study found low-moderate self-reported perceived stress levels in first and second year clinical psychology graduate students. These results may indicate the need to re-examine the assumptions that developing clinicians are in a constant state of high stress, what, if any, impact mindfulness has on stress for developing clinicians, and what such findings mean for the way programs incorporate and teach self-care strategies. Similar results in regards to stress levels were observed by four other studies (de Vibe et al., 2013; Moore, 2008; Myers et al., 2012; Nelson et al., 2001), highlighting the need to continue to explore these associations and whether and how mindfulness may be a way to assist with the stresses of graduate school and clinical training.

This dissertation also contributed to the need for data on different groups self-compassion scores, given the lack of normative data on non-university groups (Lopez et al., 2015; Neff, 2017). The self-compassion scores of the current study fell in a similar range to samples of community groups (Neff, Whittaker, & Karl, 2017), and undergraduates pursuing careers in the helping professions (Newsome et al., 2014). More work is needed to determine what levels of self-compassion are normative for such groups, as compared to undergraduate students and experienced meditators because self-compassion can move individuals from judgment to kindness, allow for more understanding of suffering, and cognitive acknowledgment of one's own and other's predicaments (Neff, 2015), new clinicians may wish to furthering their cultivation of self-compassion in order to enhance their self-care strategies and clinical skills.

Although its hypothesis was not supported, the results from the present study may have been due to methodological issues, as well as the frequency of mindfulness engagement. Some current literature posits that more frequent mindfulness engagement is necessary, as more frequent and lifetime practice has been shown more impactful than length of practice and type of practice utilized (Soler et al., 2014; Vettese et al., 2009). Alternatively, Zeng et al. (2017) concluded that the short term impact of mindfulness practice was associated with better outcomes versus amount of time spent in practice. Therefore, future research is needed to understand the relationship between mindfulness engagement, stress and self-compassion as well as potential moderating variables such as length and type of mindfulness engagement, age, gender, year in program, ethnicity, and spiritual beliefs for developing clinicians and their programs.

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## TABLES

Table 1.

*Literature Table of Mindfulness Practice and Therapists in Training*

Citation	Sample	Type of Mindfulness Practice	Method	Measures/Interview	Key Findings	Limitations
Baker, S. (2015), Working in the present moment: The impact of mindfulness on trainee psychotherapists' experience of relational depth. <i>Couns. Psychother. Res.</i> , 16: 5-14. doi:10.1002/capr.12038	15 student enrolled in psychotherapy or counseling psychology doctorate program without previous mindfulness experience	8 week MBSR/MBCT mindfulness training adapted for therapists.  Consisted of 8 2.5 hours of practice and one day of silent practice per week.	Interpretive Phenomenological Analysis (IPA; Smith, 1999).	Semi-structured interview four months after mindfulness course with prompts addressing themes of lived experience of mindfulness practice.	Analysis found four major themes; opening up a new way of being, mindfulness as a resource, enhancing relational depth and integrating mindfulness.  Participants were said to have deeper self-attunement, more openness and acceptance, greater wellbeing, deeper connection and moments of meeting, modeling mindful qualities, and more experiences of being versus doing.	Changes noted as being due to mindfulness training could be due to changes that happen as trainees continue to develop in their clinical training and therapeutic practice. The self-selection bias of the participants already had an interest in mindfulness practice and could have held pre-existing positive beliefs about mindfulness practice.  Range of clinical experience of participants was broad and could limit generalizability of results.
Boellinghaus, I., Jones, F. W., & Hutton, J. (2013). Cultivating self-care and compassion in psychological therapists in training: The experience of practicing loving kindness meditation. <i>Training and Education in Professional Psychology</i> . doi:10.1037/a0033092	12 trainee clinical psychologists	8 week Loving Kindness Meditation course, which consisted of 6, one-hour sessions.	Interpretive Phenomenological Analysis (IPA; Smith, 1999).	Semi-structured interview, lasting 50-85 minutes and were completed 6 weeks after the completion of the course.	Results reviewed several themes: intellectual understanding and experiential engagement, self-awareness, self-compassion, self-confidence, awareness of self in relationships, compassion for others and overcoming interpersonal difficulties.	No control group was utilized and therefore does not allow for comparison of the intervention, results dependent on participants sharing their personal experience and they may be biased or with the intent to impress instructor. Homogenous sample may not be generalizable.
Christopher, J., Chrisman, J., Trotter-Mathison, M., Schure, M., Dahlen, P., & Christopher, S. (2011).	Former master's level graduate students in mental health counseling	15 week course Twice weekly 75-minute mindfulness practice (hatha yoga, sitting meditation, conscious relaxation, qiqong). Home practice of 45	Qualitative - content analysis by Guba and Lincoln (1992), Patton (2002)	Semi-structured interview guide based on life domains influenced by mindfulness training	Two major themes: impact on personal life and impact on professional life. No differences in responses were noted. Participants noted physical and	Self-selection bias, as participants chose to participate. Population not generalizable due to rural western

<p>Perceptions of the long-term influence of mindfulness training on counselors and psychotherapists: A qualitative inquiry. <i>Journal of Humanistic Psychology</i>, 37(4), 380-392. doi: 10.1177/0022167810381471</p>	<p>g, school counseling and marriage and family counseling (n=24)</p>	<p>minutes, 4 times per week.</p>		<p>(conducted by same interviewer for all participants)</p>	<p>emotional changes, attitudinal cognitive changes, increased awareness and increased acceptance.</p>	<p>community. Adherence to home mindfulness practice not assessed or monitored. Interview used was created by study and therefore questions could limit type of responses received.</p>
<p>Christopher, J. C., Christopher, S. E., Dunnagan, T., &amp; Schure, M. (2006). Teaching self-care through mindfulness practices: the application of yoga, meditation, and qigong to counselor training. <i>Journal of Humanistic Psychology</i>, 46, 494-509. doi: 10.1177/0022167806290215</p>	<p>11 master's level graduate students in school counseling, mental health counseling, and marriage and family therapy.</p>	<p>Semester long elective stress reduction course. Followed MBSR, 75 minutes of course would be hatha yoga, meditation or body scan, and the other portion of the 2 hour 15 minute class was focused on mindfulness literature and teachings. Students were required to engage of 45 minutes, 4 days per week of outside practice. Experiential and intellectual journal entries (60 pages total required).</p>	<p>Inductive content analysis (Patton, 2002; Strauss &amp; Corbin, 1999)</p>	<p>Focus group following an interactive framework. Field notes completed during and after group.</p>	<p>Participants reported the course was rigorous but helpful and noticed changes in increased awareness, more consciousness about themselves and clients, and better able to cope with stress.</p>	<p>Focus group interview was not formalized, and created by writer of study, therefore could limit responses received, and could have potential biases in types of questions asked. Writer was instructor of the course which could have lead students to bias their responses to received more positive benefits from course.</p>
<p>Christopher, J. C., &amp; Maris, J. (2010). Integrating mindfulness as self-care into counseling and psychotherapy training. <i>Counseling and Psychotherapy Research</i>, 10, 114-125. doi: 10.1080/14733141003750285</p>	<p>Previous master's level students in mental health counseling, school counseling and marriage and family therapy.</p>	<p>15 week course adapted by author utilizing the following; insight meditation, yoga, qigong, tai chi and body scan in 75 minute class led sessions, and 15 minute instructional/informational teaching, as well as encouraged at home practice</p>	<p>Inductive content analysis (Patton, 2002; Strauss &amp; Corbin, 1999)</p>	<p>Summary of all five qualitative conducted prior and utilized a focus group following an interactive framework. Field notes completed during and after group, five person case narrative, analysis of journal entries and semi structured interviews</p>	<p>Results of summary of previous research concluded mindfulness practices reported emotional changes, more awareness, increased bodily awareness, ease of integrating therapy skills, reduced fear of inadequacy, enhanced ability to trust self as therapist, and wish to continue with personal practice.</p>	<p>Self-selection bias, as participants chose to participate. Population not generalizable due to rural western community. Adherence to home mindfulness practice not assessed or monitored. Interview used was created by study and therefore questions could limit type of responses received. Writer was instructor of the course which could have lead students to bias their responses to received more positive benefits from course.</p>

<p>Dorian, M., &amp; Killebrew, J.E., (2014) A study of mindfulness and self-care: a path to self-compassion for female therapists in training, <i>Women &amp; Therapy</i>, 37:1-2, 155-163, DOI: 10.1080/02703149.2014.850345</p>	<p>19 Female and 2 Male CSPA Graduate students registered for mindfulness course</p>	<p>Basic Mindfulness course: 4 hour course per week, for 10 weeks  30 minutes of outside mindfulness practice 5 days per week</p>	<p>Qualitative – Constant Comparative Method (Glaser, 1965)</p>	<p>Weekly one-page journal papers. 8-10 page paper addressing assimilation to mindfulness, theoretical understanding and personal/professional integration into psychotherapy practice</p>	<p>Students shared that mindfulness practice helped them gain the following: acceptance, compassion for self and others, and increased capacity for awareness and attention.</p>	<p>Sample may have preliminary interest in mindfulness, no control group; students may have been biased to write about the experiences in which they thought they should be having versus their actual experiences. No formal measure were used to measure mindfulness or levels of the constructs said to have shifted due to mindfulness practice.</p>
<p>de Vibe, M., Solhaug, I., Tyssen, R., Friberg, O., Rosenvinge, J. H., Sørli, T., &amp; Bjørndal, A. (2013). Mindfulness training for stress management: A randomized controlled study of medical and psychology students. <i>BCM Medical Education</i> doi: 10.1186/1472-6920-13-107</p>	<p>288 psychology and medical students from University of Oslo and Tromsø</p>	<p>8 week Modified MBSR: 6 weekly sessions of 1.5 hours each, 6 hour session in week seven and 30 minutes of daily home mindfulness practice (compared to control group who did not engage in course)</p>	<p>Quantitative- utilized a MANCOVA and ANCOVA  Computerized random control design</p>	<p>General Health Questionnaire (GHQ12) Maslach Burnout Inventory (MBI) Perceived Medical School Stress (PMSS) Scale Subjective well-being (SWB) Five Facet Mindfulness Questionnaire (FFMQ) Student Attendance and Mindfulness self-practice self-reported</p>	<p>Mindfulness intervention displayed a significant effect on mental distress and well-being when compared to control group, but did not significantly reduce student stress or burnout, however when gender was analyzed, women showed significant effect for mental distress, subjective well-being and student stress, however men did not.</p>	<p>Possible selection biases during recruitment, potential for contamination of the control group due to interacting with intervention group, and there was no way to determine which part of intervention was most effect as control group received no intervention.</p>
<p>Felton, T. M., Coates, L., &amp; Christopher, J. C. (2013). Impact of mindfulness training on counseling students' perceptions of stress. <i>Mindfulness</i>, 6(2), 159-169. doi:10.1007/s12671-013-0240-8</p>	<p>44 master's level graduate students in mental health counseling and marriage and family counseling enrolled in Mind-Body Medicine</p>	<p>15-week course based on MBSR 8-week program (twice weekly 75 minute mindfulness sessions including yoga, meditation, and conscious relaxation). Students were required 45-minute mindfulness practice 4 times per week outside of class, and journaling 6 days per week.</p>	<p>Conventional Content Analysis (Hsieh and Shannon, 2005) focusing on themes of meaning and patterns.</p>	<p>Pre and post survey that consisted for 5 questions evaluating the following themes 1. impact of stress on counseling students 2. counseling students' self-assessment of abilities to manage stress 3. impact of</p>	<p>Results found after participating in mindfulness course students reported increased ability to be present with clients, increased acceptance of clients, improved self-care, increased awareness of stress and increased self-compassion.</p>	<p>The questions to assess themes were creation of writer and calls to question validity of measure. The writer was present for interviews and therefore bias of interviewer and the bias of presenting well to interviewer need to be considered in</p>

	course			stress on counseling 4. current efforts to manage stress 5. concerns about burnout		regards to the reliability of the results.
Grepmaier, L., Mitterlehner, F., & Nickel, M. (2008). Promotion of mindfulness in psychotherapists in training. <i>Psychiatry Research</i> , 158(2), 265. doi: <a href="https://doi.org/10.1159/000107560">10.1159/000107560</a>	18 psychotherapists in training (9 to mindfulness group, 9 control group with no meditation)  124 inpatients and their treatment results	Random assignment to group practicing mindfulness lead by a Japanese Zen Master and a control group that did not meditate	Linear Mixed-Effects Model	Session Questionnaire for General and Differential Individuals Psychotherapy (STEP) Questionnaire of Changes in Experience and Behavior (VEV) Symptom Checklist-90	Both groups performed similarly in regards to results on the measure of the relationship and individual therapy, however symptom reduction was observed and showed significant differences between the meditation group and control group, which author concluded could represent that therapists engagement in mindfulness will have positive outcomes for their patients.	Full explanation of study methods was limited as this study results was presented in a one-page letter to the editor of the journal. Additionally, there were no measures of the therapists level of mindfulness or experience of mindfulness and therefore results cannot be generalized to the patient results. The control group's previous experience with mindfulness was not noted and is an additional limitation. Furthermore, additional information outlining the types of therapy, the length of treatment, or experience providing therapy.
Hemanth, P., & Fisher, P. (2014). Clinical psychology trainees' experiences of mindfulness: an interpretive phenomenological analysis. <i>Mindfulness</i> , 6(5), 1143-1152. doi:10.1007/s12671-014-0365-4	Six clinical psychology trainees.	10-week mindfulness group, 1 hour per week, split into 30-minute halves utilizing practices from Mindfulness Skills Volume 1 and 2 (Russ Harris, 2008a, 2008b).	Interpretive Phenomenological Analysis (IPA; Smith, 1999).	Semi-structured, 35-50 minute, interviews following the Interpretive Phenomenological Analysis (IPA; Smith, 1999).	Analysis revealed that participants noticed increased initial discomfort within the mindfulness group, increased self-care, increased personal and professional use of mindfulness, and an increase in therapeutic presence and confidence in mindfulness.	The self-selected sample and knowledge of author of paper create biases in the effectiveness of the group or the initial interest in participation. This study conducted interviews only after groups were completed meaning it required retrospective recall, which may not be a reliable measure of experience or effectiveness of mindfulness.
McCullum, E. E., & Gehart, D. R. (2010). Using	13 Marriage and Family	Interpersonal Mindfulness Program (IMP; Kramer, Meleo-	Thematic analysis from a social	Weekly journal entries reflecting on experience of	Results revealed several themes: being present, effect of meditation, and	Participants volunteered their journals and may have done so due



<p>mindfulness meditation to teach beginning therapists therapeutic presence: A qualitative study. <i>Journal of Marital and Family Therapy</i>, 36(3), 347-360. doi: 10.1111/j.1752-0606.2010.00214.x</p>	<p>Therapy students who participated in two courses of authors allowed the authors to use their weekly journal entries.</p>	<p>Meyer, and Turner, 2008) Meditative practice that focuses on intentional focus of attention on present experience, and physical sensations.</p>	<p>constructivist framework (Denzin &amp; Lincoln, 1994).</p>	<p>learning mindfulness and the impact it had on their personal life and clinical practice.</p>	<p>compassion and acceptance.</p>	<p>to finding the course effective versus those who were not willing to consent to use of their journals may not have been impacted by the experience or enjoyed the course. No way to measure experience or levels of mindfulness, compassion or acceptance, and can cause question of the reliability of results.</p>
<p>Moore, P. (2008). Introducing mindfulness to clinical psychologists in training: An experiential course of brief exercises. <i>Journal of Clinical Psychology in Medical Settings</i>, 15(4), 331-337.</p>	<p>23 clinical psychology doctoral students</p>	<p>14 sessions of 10 minute structure mindfulness sessions, over the course of 4 weeks. Week 1- mindfulness of breathing Week 2- mindfulness of body Week 3- mindfulness of emotions Week 4- mindfulness of thought</p>	<p>Repeated measures design, utilizing within subjects comparison of pre and post self-report measures</p>	<p>Perceived Stress Scale- (PSS-14; Cohen, Kamarck &amp; Mermelstein, 1983). Kentucky Inventory of Mindfulness Skills (KIMS: Baer, Smith, &amp; Allen, 2004) Neff Compassion Scale (SCS; Neff, 2003)</p>	<p>Increased mindfulness abilities compared from beginning to end, specifically on the observe and acting with awareness and accepting subscales. There were no significant differences observed on the PSS-14 or the SCS. However, the SCS did show a significant increase on the Self-kindness subscale.</p>	<p>This study lacked a control group, as well as utilized a self selected population of participants. Additionally, the adherence and accountability to the practice were self-reported questioning the reliability of these findings. The measures utilized to assess constructs should be interpreted with caution due to lack of norms for the SCS.</p>
<p>Myers, S., Sweeney, A., Popick, V., Wesley, K., Bordfeld, A., &amp; Fingerhut, R. (2012). Self-care practices and perceived stress levels among graduate students. <i>Training and Education in Professional Psychology</i>, 6(1), 55-66. doi: 10.1037/a0026534</p>	<p>488 graduate students in clinical psychology graduate programs throughout the U.S.</p>	<p>Not specified- examining self-care practices (sleep, exercise, social support, emotion regulation, mindfulness, and suppression)</p>	<p>Quantitative descriptive statistical analysis</p>	<p>Sleep Hygiene Index (Mastin, Bryson, Corwyn, 2006) Godin Leisure Time Exercise Questionnaire (Godin &amp; Shephard, 1985). Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet &amp; Farley, 1988). Emotional Regulation Questionnaire (Gross &amp; John, 2003). Mindfulness Practice Question Philadelphia Mindfulness</p>	<p>Results revealed healthy sleep practices, engagement in exercise and suppression had the greatest decrease on perceived stress levels. Mindfulness practice was not associated with a decrease in perceived stress.</p>	<p>The sample was mostly Caucasian women therefore generalizability of sample may not be applicable. There may have been a sampling bias present as only currently enrolled students were eligible potentially limiting the pool of students to those who may already have strong self-care practices in place. Sample was self-selected and bias of importance of self-care may be present. As well as a limitation about the way in which self-care is</p>

				Scale (Cardaciotto, Herbert, Forman, Moitra & Farrow, 2008). Perceived Stress Scale (PSS-14; Cohen, Kamarck & Mermelstein, 1983).		measured.
Nelson, N. G., Dell'Oliver, C., Koch, C., & Buckler, R. (2001). Stress, coping, and success among graduate students in clinical psychology. <i>Psychological Reports</i> , 88, 759–767. doi: 10.2466/pr0.2001.88.3.759	53 clinical psychology doctorate students	N./A	Questionnaire packet distributed through departmental email. Pearson correlations and multiple regression analysis were conducted	Grace point Average Demographic & Stress questionnaire created by author General Health Questionnaire (Goldberg, 1978) Multidimensional Support Scale (Winefield, Winefield, & Tiggemann, 1992) COPE (60 item coping scale; Carver et al., 1989)	Academic success was associated with less use of denial, more use of religious coping, seeking out social support, and more emotional focus and venting. Highest sources of stress were financial difficulties, dissertation, practicum/internship placements, time management, and coursework. Students with highest level of reported stress appeared less likely to utilizing social support, and reported less contact with professors or mentors.	Small homogenous sample size therefore results may not be generalizable to other programs or samples. Biased self-reported responses should be considered, as well as the weak correlations.
Rimes, K. A., & Wingrove, J. (2010). Pilot study of mindfulness-based cognitive therapy for trainee clinical psychologists. <i>Behavioural and Cognitive Psychotherapy</i> , 39(02), 235-241. doi:10.1017/s1352465810000731	20 female trainees from Institute of Psychiatry doctoral training course in clinical psychology	8 week MCBT course based on Segal et al., 2002 but specified to focus on stress	Paired sample t-test and Pearson's correlations were conducted.	Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983). Hospital Anxiety and Depression Scale (HADS; Zigmond and Snaith, 1983) Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, and Toney, 2006) Self-Compassion Scale (Neff, 2003) Rumination-Reflection Questionnaire (RRQ; Trapnell and Campbell, 1999)	Results revealed slight decrease in rumination, 1 <sup>st</sup> year students reported significant increases in self-compassion when compared to 2 <sup>nd</sup> and 3 <sup>rd</sup> year students, and all reported a decrease in perceived stress. Greater time spent in home practice was associated with lower levels of rumination, increase empathic concern and decrease in stress.	Lack of control group means results cannot necessarily be attributed to engagement in MCBT. Due to study's design certainty of associations cannot be made. Sample may be biased towards learning about self-care and asking for help due to the first come first served nature of recruiting participants.

				Mechanisms of Mindfulness Questionnaire		
Shapiro, S., Warren Brown, K., & Biegel, G. (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapists in training. <i>Training and Education in Professional Psychology, 1</i> (2), 105-115. doi: 10.1037/1931-3918.1.2.105	22 graduate students were enrolled in the intervention course and 32 students in the control course group.	10 weekly classes, 3 hours per week MBSR intervention (sitting meditation, body scan, loving kindness meditation, and informal practice).	Prospective, nonrandomized, cohort controlled design.	The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) Perceived Stress Scale (PSS-14; Cohen, Kamarck & Mermelstein, 1983). State/Trait Anxiety Inventory (STAI, Spielberger, 1983). Reflection Ruminant Questionnaire (RRQ; Trapnell & Campbell, 1999). Self-Compassion Scale (Neff, 2003).	Results revealed an increase in mindful attention and awareness, decrease in rumination, trait anxiety, perceived stress and an increase in self-compassion.	This study did not utilize a random control trial, and was cohort controlled, therefore motivational differences were unable to be assessed. Small sample size poses questions for the reliability of the study, as well as its ability to be generalized to the population of psychology graduate students due to the specific nature of the small, private program.

<p>Schure, M. B., Christopher, J., &amp; Christopher, S. (2008). Mind-body medicine and the art of self-care: teaching mindfulness to counseling students through yoga, meditation, and qigong. <i>Journal of Counseling &amp; Development</i>, 86(1), 47-56. doi:10.1002/j.1556-6678.2008.tb00625.x</p>	<p>33 1<sup>st</sup> and 2<sup>nd</sup> year master's level mental health counseling, marriage and family therapy and school counseling who enrolled in a "Mind Body Medicine and Art of Self Care" course.</p>	<p>15 week course based on MBSR program. Twice weekly in class 75 minute mindfulness practice (hatha yoga, sitting meditation, qigong) and 45 minute home practice exercises 4 days weekly</p>	<p>Qualitative data analysis following method by Guba and Lincoln (1992), and Strauss and Corbin, 1994)</p>	<p>Journal assignment of four questions: 1. How has your life changed over the course of this semester in ways that may be related to the class? 2. Of all the practices learned in class, which one are you drawn to the most and why? How has it affected you? 3. How, if at all, has this course affected your work with clients, both in terms of being in the room and thinking about the treatment? 4. How do you see yourself integrating, if at all, any of the practices from class into your clinical practice (or career plans)?</p>	<p>Five themes were observed in the analysis- Physical changes, emotional changes, attitudinal changes, spiritual awareness and interpersonal changes</p>	<p>Reliance on self-reported information of students' experiences, instructor of course was author of study and students may have felt pressured to find course helpful and view in positively. Additionally, selection bias of students who attended course may have had interest in topic and biased their answers/experience.</p>
<p>Solhaug, I., Eriksen, T., De Vibe, M., Haavind, H., Friberg, O., Sorlie, T., &amp; Rosenvinge, J. H. (2016). Medical and psychology student's experiences in learning mindfulness: benefits, paradoxes, and pitfalls. <i>Mindfulness</i>, 7(4), 838-850. doi:10.1007/s12671-016-0521-0</p>	<p>11 medical and 11 psychology students</p>	<p>7 week abridged MBSR condition group</p>	<p>Interpretive Phenomenological Analysis (IPA; Smith, 1999).</p>	<p>Individual and group interviews focused on themes of everyday life, self-understanding, social relationships, self care and stress coping, and private lives</p>	<p>Two themes were observed; understanding mindfulness and engaging in mindfulness, and revealed details of more experiences of relaxation and concentration, containing difficult thoughts and emotions, self acceptance and broader perspectives in interpersonal relationships</p>	<p>Small sample size limits generalizability and reliability of results, participants were self-selected and may have a biased interest in mindfulness. Authors served as both instructors and interviewers which may have biased the responses they received from students</p>
<p>Stafford-Brown, J., &amp; Pakenham, K. I. (2012). The effectiveness of an ACT informed intervention for managing stress</p>	<p>56 interns from clinical psychology postgraduate training programs</p>	<p>Treatment condition was ACT stress management group and control group was a waitlist condition.</p>	<p>Nonrandomized control trial with repeated measures design</p>	<p>Mental Health Professional Stress Scale (Cushway, Tyler, &amp; Nolan, 1996) General Health Questionnaire (GHQ-28;</p>	<p>Results revealed that participation in treatment group (ACT stress management) was deemed an effective intervention for managing stress and enhancing positive</p>	<p>Self-selection bias as students volunteered to participate and could have had a pre-existing interest. The study lacks follow up data</p>

<p>and improving therapist qualities in clinical psychology trainees. <i>Journal of Clinical Psychology</i>, 68(6), 592-513. doi:10.1002/jclp.21844</p>	<p>(28 were treatment condition, 28 were control condition)</p>			<p>Goldberg, 1978) Satisfaction with Life Scale (Diener, Emmons, Larsen, &amp; Griffin, 1985) Self Compassion Scale (SCS-26; Neff, 2003) Counselor Activity Self-Efficacy Scales-Helping Skills Scale (Lent, Hill, &amp; Hoffman, 2003) Working Alliance Inventory Short Form (Tracey &amp; Kokotovic, 1989) Acceptance and Action Questionnaire (Bond &amp; Bunce, 2003) Five Facet Mindfulness Questionnaire (Baer, Smith, Hopkins, Krietemeyer, &amp; Toney, 2006) The White Bear Suppression Inventory (WBSI; Wegner &amp; Zanakos, 1994) Valued Living Questionnaire (Wilson, Sandoz, Kitchens, &amp; Roberts, 2010) 20 item questionnaire to gather social validation data</p>	<p>therapist qualities, and treatment gains were mediated by engaging in ACT processes.</p>	<p>from the control group, which could have shown improvements without the intervention. Utilized a cohort-controlled study rather than randomized control, which could have had implications for the outcomes.</p>
<p>Tarrasch, R. J. (2014). Mindfulness meditation training for graduate students in educational counseling and special education: A qualitative</p>	<p>9 educational counseling students 10 special education students who enrolled in "Meditati</p>	<p>Two Semesters of courses, the first was 13 lessons 1.5 hour each (20 minutes dedicated to mindfulness practice) The second semester students taught mindfulness meditation for 8 weeks for 45-minute sessions.</p>	<p>Thematic Analysis based on social constructionist framework (Denzin and Lincoln, 1994)</p>	<p>Students were asked to journal about when and why they did or did not engage in meditative practice each week. Additionally they were asked to reflect</p>	<p>Core Themes were analyzed following the thematic approach following key themes: process, experience and outcomes. 30 % reported initial negative perceptions about meditation and did not anticipate it being helpful. 95%</p>	<p>The small sample size limits generalizability, as does the use of qualitative analysis. Additionally, prompts appeared leading in terms of themes in which researchers were</p>

<p>analysis. <i>Journal of Child and Family Studies</i>, 24(5). doi: 10.1007/s10826-014-9939-y</p>	<p>on: Theory, research and Practice” class</p>	<p>Students were encouraged to practice at home 5-20 minutes per day but were not penalized if they did not participate.</p>		<p>on their experience, observed thoughts, and insights gained from the experience.</p>	<p>found mindfulness practices taught in class to be difficult, requiring significant effort. 18 participants reported a change in their experience from the first semester to the second. Outcomes from the analysis revealed 47% of students reported being more conscious in their everyday life, 37% reported an increase in compassion and loving acceptance of self, and 53% reported being calmer and feeling they had more control over their stress and ability to cope.</p>	<p>hoping to gather specific information about. The student participants receive course credit for their participation, which could have biased the positive results. Lastly, the instructor of the course also performed the analysis which could have biased the interpretation of the results.</p>
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Table 2.

*Participant Demographics*

Variable	Total Sample
	<i>n</i> = 15
Average Age	M (23.81) SD (2.373)
Gender (%)	
Female	12 (81.3%)
Male	3 (16.8%)
Ethnicity (%)	
African American/Filipino/Creole/Native American	1 (6.3%)
Black American/French Canadian	1 (6.3%)
Caucasian	10 (62.2%)
Chinese/ Indonesian	1 (6.3%)
European	1 (6.3%)
Hispanic	1 (6.3%)

Table 3.

*Fall 2013 Previous Mindfulness/Contemplative Practice*

Type of Practice	Total Participants	(%)
	<i>n</i> =15	
Prayer	4	30.8
Centering Prayer	0	0
Meditation	4	30.8
Yoga	6	46.1
Mindful Walking	3	23.1



Table 4.

*Length of Time of Previous Contemplative Practice*

Type of Practice	Length of Time	Total Participants	(%)
		<i>n</i> =15	
Prayer	None	6	46.1
	5 years	1	7.7
	15 years	1	7.7
	20 years	2	15.4
	Did not report	3	23.1
Meditation	None	7	53.8
	6 months	1	7.7
	1 year	2	15.4
	10 years	1	7.7
	Did not report	2	15.4
Yoga	None	7	53.8
	6 months	1	7.7
	1 year	2	15.4
	4 years	1	7.7
	6 years	1	7.7
	10 years	1	7.7
Mindful Walking	None	7	53.8
	6 months	1	7.7
	1 year	1	7.7
	5 years	1	7.7
	Did not report	3	23.1

Table 5.

*Mindfulness/Contemplative Practice after Mindfulness Training*

Type of Practice	Total Participants	(%)
	<i>n</i> =15	
Began Meditation	4	30.8
Began Yoga	1	7.7
Began Mindful Walking	3	23.1
Continued Meditation	1	7.7
Continued Yoga	2	15.4
Continued Mindful Walking	2	15.4
Stopped Prayer	4	30.8
Stopped Yoga	3	23.1
Stopped Mindful Walking	1	7.7

Table 6.

*Time Spent Providing Psychotherapy*

Length of Time	Total Participants	(%)
	<i>n</i> =15	
None	12	75.0
6 months	0	0
7 months	1	6.3
9 months	1	6.3
3 years	1	6.3

Table 7.

*Orientation*

Length of Time	Total Participants <i>n</i> =15	(%)
Cognitive Behavioral Therapy	10	67
Psychodynamic	2	13.4
Humanistic	1	6.7
Eclectic	0	0
Two Different Orientations	0	0
Three or More Difference Orientations	0	0
Do not know yet	2	13.4
Did not report	0	0

Table 8.

*T-Test Results*

Measure	Total Participants		<i>n</i> =15		
	<i>M</i>	( <i>SD</i> )	<i>t</i>	<i>df</i>	<i>p</i>
PSS PRE	6.53	2.45			
PSS Post	6.67	3.18	.183	15	.858
SCS PRE	2.98	0.71			
SCS Post	3.19	0.79	1.30	15	.212

\**p* < .05. \*\**p* < .01

APPENDIX A

Extended Review of the Literature

This dissertation examined how integrating mindfulness practice within graduate psychology programs relates to developing clinicians' perceived levels of stress and self-reported level of self-compassion. To provide context for this goal, this review summarizes literature regarding developing clinicians and their experience of stress, the benefits of mindfulness, mindfulness and its relation to self-compassion and stress for developing therapists. This extended review of the literature, revised since the preliminary orals, served as the basis for the final dissertation's brief literature review.

### **Developing Therapists and Stress**

Training in graduate programs in clinical and counseling psychology involves balancing academic, clinical, research and personal responsibilities, which can be challenging and stressful. Therapists are particularly vulnerable to stress, a result of the nature of their clinical work (DeAngelis, 2002), and therapists-in-training report experiencing high levels of stress (de Vibe et al., 2013; McCollum & Gehart, 2010; Myers et al., 2012; Nelson et al., 2001; Newsome et al., 2014; Pica, 1998; Shapiro et al., 2007; Tarrasch, 2014) as well as anxiety and low life satisfaction (Pica, 1998). Furthermore, over half of psychology graduates students (in a sample of 281 from the United Kingdom) reported experiencing moderate to high levels of stress more days than not, with the largest protective factor being supervisor or professor supportive involvement (Cushway, 1992). Moreover, Pica (1998) reported that clinical training programs have seen self-reported anxiety increase year to year. For this study's purposes, stress can be defined from three perspectives: a) experiencing substantial adaptive demands, b) the individual's subjective evaluation of this demand and his/her abilities to cope with these experiences, and c) his/her affective response to that evaluation and physiological response to the

demand (Cohen, Kessler, & Underwood, 1995).

There are a number of factors that appear to contribute to trainee therapists' stress levels, including higher expectations, increased workload, the nature of clinical work, the novel process of learning clinical skills, the possibility of compassion fatigue (including burnout), and the need for self-care. Each of these factors is described next along with outcomes of stress.

The transition from college student to graduate student-clinician involves an increased time commitment, increased expectations of performance and workload, and the need to learn a new clinical skill set, including dealing with constructive feedback (Myers et al., 2012). In a study looking at the experience of first year medical students shadowing doctors working in the medical field, students reported it was difficult to learn in the unstructured environment of observing in an early clinical contact program (Iwata & Gill, 2013). Similar to the training of beginning therapists, students in these types of programs may find it difficult to learn by observing their clinical supervisors and others at their practicum sites without the support of additional studying and understanding the use of these skills. This difficulty further adds to the academic load of developing therapists. Given that graduate school provides many students with their first experiences in seeing clients and working in clinical settings, these added demands and opportunities for learning may lead to coping difficulties, or students perceiving that they will be unable to cope with these newfound academic and clinical demands (Myers et al., 2012).

High stress and poor coping appears to have a negative impact on the overall well-being of graduate psychology students (MacArthur, 2000), as well as their clinical and academic performance. Based on their research with undergraduates seeking careers in the helping professions, Newsome, Waldo, and Gruszka (2014) theorized that graduate students' experience of high stress can have a detrimental impact on their personal well-being, sense of self, view of



their work, and their clinical performance. Similarly, El-Ghoroury et al. (2012) found that over seventy percent of graduate psychology students (in a sample of 273 students who were members of APAGS database) reported experiencing stress significant enough that it was negatively impacting their clinical and academic performance; sixty-eight percent of these same students reported being unable to cope with the burden of their debt accrued from their program, impacting their overall well-being.

When stress impacts students-trainees' work satisfaction and their ability to experience compassion and empathy for their clients and themselves, burnout may occur very early in their career or even before completion of graduate school (Conrad & Kellar-Guenther, 2006; Craig & Sprang, 2010; Ray et al., 2013; Rossi et al., 2012; Sprang et al., 2007). According to de Vibe et al. (2013), "stress and burnout among psychology professionals is commonly reported and have implications for the quality of patient care delivered" (p. 7).

Clinical work is a unique field that is taxing and possibly emotionally draining from the beginning of training. Because developing therapists may feel overwhelmed and burned out by increasing demands in various domains of their personal and professional/academic lives, research is critical to understand what students do to cope with and manage their stress and the impact of their strategies. Nelson et al. (2001) found that graduate students most frequently utilize social support from peers and loved ones, religion, focused attention, exercise, and medical care as forms of coping with stress, and the consequences of stress. These same graduate students also mentioned insufficient time as a reason they weren't utilizing these strategies (Nelson et al., 2001). Similarly, El-Ghoroury et al. (2012) found that many student-clinicians do not implement self-care, contemplative practices, and mindfulness as strategies to help alleviate stress and negative feelings associated with their training because of feeling

overwhelmed, experiencing a lack of time, and not having the monetary resources as reasons preventing them from utilizing wellness and self-care strategies. Despite the importance of self-care strategies and coping skills, not much is known in regards to the factors that may impact stress management among psychology graduate students (Myers et al., 2012), which could include time, number of demands and expectations of these students, monetary limitations, cultural factors, and access to self-care strategies.

One strategy that is being proposed and used currently in healthcare settings, mental health settings, social work, and training programs in psychology and education is mindfulness (Butryn et al., 2013; Christopher et al., 2011; Frank et al., 2013; Hofmann et al., 2010; Irving et al., 2009; McCollum & Gehart, 2010; McGarrigle & Walsh, 2011; Newsome et al., 2014; Shapiro et al., 2007; Tarrasch, 2014; van der Valk et al., 2013). Mindfulness training for developing therapists may buffer the stressors of their graduate programs (Shapiro et al., 2007), positively influence their ability to learn clinical skills (Myers et al., 2012), as well as enable them to feel self-compassion (Boellinghaus, Jones, & Hutton, 2013; Felton et al., 2013; Newsome et al., 2014). Mindfulness training may be one of the tools missing in psychology graduate programs that can increase students' ability to absorb and integrate other useful information and clinical skills (McCollum & Gehart, 2010).

## **Mindfulness**

Stemming from ancient meditative practices aligned with philosophical, cultural, and religious perspectives, mindfulness can help broaden our understanding of the mind and body connection, so vital to mainstream healthcare (Kabat-Zinn, 2011). Mindfulness is also currently used in other settings such as education and business, given scientific research findings about the impact of mindfulness, including positive influences on the brain, stress hormones, immune

system, autonomic nervous system and health behaviors such as eating and sleeping (Frank et al., 2013). Mindfulness has also been related to less emotional distress, more positive states of mind, and better quality of life (Greeson, 2009; Wallace & Shapiro, 2006). For some, mindfulness is a way of being that is beneficial, no matter the life circumstances.

To cultivate mental health and alleviate symptoms, mindfulness has been incorporated into different psychotherapeutic treatment approaches including Dialectical Behavioral Therapy, Acceptance and Commitment Therapy, Mindfulness-Based Stress Reduction (MBSR), and Mindfulness-Based Cognitive Behavioral Therapy, to name a few. In addition, programs are also being modified to reduce time commitments. Carmody and Baer (2009) conducted an analysis of several studies that utilized both the formal MBSR program and those that modified the program by using formats of fewer hours or courses, and found that the effectiveness of MBSR was still present even with 8 weekly 1-hour sessions. Coinciding, in a systematic review of 22 articles, Zeng et al. (2017) found that shorter, condensed mindfulness practice was associated with more benefits than longer mindfulness sessions spread week to week. For example, they reported that just 15 minutes of Loving Kindness Meditation 4 days weekly was enough to display increases in awareness, well being, and more positive emotional states experienced daily (Zeng, et al., 2017).

Whether formally incorporated in such approaches or used on an informal or ad hoc basis, mindfulness has been said to be effective in treating a variety of individuals with mental health issues, including mood, anxiety, psychotic, and eating disorder symptoms (Butryn et al., 2013; Hofmann et al., 2010; van der Valk et al., 2013). In fact, the National Health Service in the United Kingdom has endorsed Mindfulness-Based Cognitive Therapy as the preferred treatment for individuals with major depressive disorder (Williams et al., 2011).

Of particular relevance to the current program of research, different educational institutions designed to educate health and mental health providers are incorporating mindfulness skills in their programs (Mark et al., 2011), in part because mindfulness training and the use of mindfulness has been suggested through research to possibly be related to providers' clinical skills, such as attentiveness, awareness, acceptance, compassion, nonjudgment, and improved client perceptions of clinician competency (Dunn et al., 2013; Greeson, 2009). Furthermore, Bruce et al. (2010) studied the process by which therapists relate to their patients and hypothesized that mindfulness can increase both self-attunement, and emotional attunement to others; therefore, aiding therapists in attuning to the therapeutic relationship in a meaningful way.

These clinical skills are connected with the concept of mental balance. Individuals in the helping professions (e.g., teachers, nurses, physicians, counselors, psychologists, social workers) demonstrate mental balance when they contain and attune with their students, patients, and clients' emotions, handle stressful situations, and interact on a daily basis with others in order to impact clients' lives for the better (Thomas & Otis, 2010). It is theorized that mindfulness may provide four types of mental balance: attentional, cognitive, conative, and affective (Wallace & Shapiro, 2006). Attentional balance focuses on overcoming attention deficits or hyperactivity; cognitive balance involves experiencing the world without cognitive distortions; emotional balance allows one to achieve positive emotions of kindness, compassion, empathic joy, and equanimity, while keeping them under control; and lastly conative balance is cultivating the meaningful desires and aspirations of one's life (Wallace & Shapiro, 2006). Wallace and Shapiro (2006), hypothesized that cultivating these types of mental balance may enable clients and

clinicians to achieve well being and better awareness of their own mental health. Of specific interest to our research program, compassion is discussed below in more detail.

### **Therapists and Mindfulness**

Self-care is an important component in decreasing stress for psychology graduate students. Additionally, learning to utilize self-care is part of a training clinician's growth as a professional. Despite the value of self-care, many trainee therapists are not taught strategies for implementing self-care into their lives, such as social support, sleep hygiene, emotional regulation, and mindfulness and acceptance (Christopher et al., 2011; Shapiro et al., 2007). Based on the literature reviewed above, there appears to be a need to provide developing clinicians with adequate ways of not only coping with the stress of their newfound roles, but also engaging with clinical populations and identifying the impact of their clinical work on themselves and their clients.

The impact of mindfulness on clients has been studied with a variety of helping professions (e.g., Christopher et al., 2011; Dunn et al., 2013; Myers et al., 2012). In a theoretical article, Dunn, Callahan and Smith (2013) used de-identified clinical material of verbatim group therapy session transcripts to explore potential benefits of both formal (using a mindfulness intervention within session) and nonformal (assigning mindfulness homework outside of session or encouraging more awareness in session through commenting on client's body language, or affect) mindfulness training within treatment. Data from two transcripts included client expressions of feeling more relaxed upon completing mindfulness exercises, but they did not explicitly state they felt more self-compassion or less stress. The article did not specify the degree or level of training of the therapists, the type of therapy modality they utilized, or take into account such variables as the extent to which the clinicians used mindfulness within their

personal lives or clinical practice. Moreover, conclusions are difficult to draw from this article because it did not involve any specified form of qualitative or quantitative research.

To meet these needs, another study completed by Dunn et al. (2013) investigated 25 trainee therapists' use of a mindfulness centering exercise 5 minutes prior to engaging in therapy. The therapists perceived themselves as being more present as measured by the Therapist Presence Inventory (Geller, Greenber, & Watson, 2010) in session after the use of the mindfulness exercise; whereas clients perceived their therapists as present as measured by the Session Rating Scale (Johnson, Miller & Duncan, 2000) with or without the use of the centering exercise. However, clients perceived the session to be more effective when therapists utilized the centering exercise five minutes prior to session (Dunn et al., 2013).

Grepmair and colleagues have also been investigating the impact of mindfulness training and practice on therapists' patient outcomes in a few studies using control groups (Grepmair et al., 2008; Grepmair et al., 2007). After leading a group of psychotherapists in training through mindfulness meditation groups, they have found that these trainees' patients reported greater symptom reduction than the therapists who were part of the no meditation control group (Grepmair et al., 2008; Grepmair et al., 2007).

Although the impact of mindfulness has been studied with a variety of helping professions to examine its impact on clients (e.g., Christopher et al., 2011; Dunn et al., 2013; Grepmair et al., 2008; Myers et al., 2012), the helpers are less often studied to see what it is that enables these individuals to maintain and succeed professionally despite these difficulties. One relatively large study of 148 mental health professionals with varying degrees (undergraduate or higher) was located in this literature review that sought to investigate if there was positive correlation between self-awareness and mindfulness, and if self-care and mindfulness can impact

well-being (Richards, Campenni, & Burke, 2010). Self-care was self-reported and based on a broad definition of doing something to feel good about oneself, and participants are then asked to rate how often they participated in these activities (0= one or more times daily to 6=never). Self-awareness was assessed using the Self-Reflection and Insight Scale (SRIS; Grant et al., 2002), levels of mindfulness was assessed using the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), and overall well-being was assessed utilizing the Schwartz Outcomes Scale-10 (SOS-10; Blias et al., 1999). It was found that mindfulness and well-being were positively correlated with self-care importance, and mindfulness was strongly correlated with well being (Richards et al., 2010).

Research is starting to look at the benefits of mindfulness for helping professionals, a group that includes professional clinicians and therapists-in-training. Our review of the research located forty-three such studies, looking at helping professionals overall, and 20 focused on therapists/counselors-in-training. A review of each of these 20 studies is provided in Table 1, and a brief summary of the article findings is presented next.

Of the 20 studies focusing on therapists in training and mindfulness, 12 utilized qualitative analysis and 8 utilized a quantitative approach. Self-report measures, interviews, personal reflective journaling and papers were utilized to measure scores or uncover themes related to acceptance, compassion, stress, and professional satisfaction. The studies utilized a variety of mindfulness practices that ranged from 4-15 week programs including informal 10-minute sessions, 1.5 hour formal, guided sessions following MBSR, Loving Kindness Meditation, and ACT for stress reduction as well as formal course instruction, with most trainees having little or no previous mindfulness practice experience. The following themes and outcomes were observed in therapists in training who participated in the various forms of

mindfulness practices; increased acceptance (Baker, 2015; Felton et al., 2013; McCollum & Gehart, 2010), awareness (Moore, 2008; Shapiro et al., 2007), compassion for clients (Stafford-Brown & Pakenham, 2012) and self compassion (Boellinghaus et al., 2013; Christopher et al., 2011; Felton et al., 2013), decreased stress (Boellinghaus et al., 2013;), decreased negative experience of clients (Stafford-Brown & Pakenham, 2012), and more positive professional experiences (Christopher et al., 2006).

Of the aforementioned studies, 11 utilized a small sample (Boellinghaus et al., 2013; Christopher et al., 2011; Dorian & Killebrew, 2014; Felton et al., 2013; Grepmaier et al., 2008; Hermanth & Fisher, 2014; McCollum & Gehart, 2010; Moore, 2008; Shapiro et al., 2007; Tarrasch, 2014), which although appropriate for qualitative work, restricted the generalizability of their results to the population of therapists in training. Additionally, of the studies, all appeared to have a homogenous sample in terms of gender (female) and ethnicity (Caucasian), which also calls into question if these results are applicable to the multicultural diversity of the community of therapists in training. For the studies that relied on self-report measures (de Vibe et al., 2013; Moore, 2008; Rimes & Wingrove, 2010; Shapiro et al., 2007; Stafford-Brown & Pakenham, 2012), and who participated in interviews with instructors of the mindfulness courses and/or author of studies in question (Christopher et al., 2006; Christopher & Marris, 2010; Felton et al., 2013), it is important to consider the inherent biases trainees hold and the power dynamics within the instructor student dyad, which for some could mean portraying their mindfulness training and practice experience as positive. Additionally, self-report measures limit the information received to only what is specifically being measured, restricting what can be learned or gained from more open-ended sharing of participant experiences.



## **Self-Compassion and Therapists**

In order to understand self-compassion and it may be helpful to understand the importance of compassion. Compassion may be other- or self-directed. It has been theorized that compassion for others promotes cooperation and protection for those who are suffering (Goetz et al., 2010) as well as promoting the health and well-being of others (Greenberg & Turksma, 2015). Compassion is considered a core value of the American Medical Association, and is seen as a way to not only serve others but to allow communities to flourish (Strauss et al., 2016) as it is a motivator to act in ways that help others. Developing therapists may experience greater contentment related to their professional lives when driven by values of working toward reducing distress in their clients.

Self-compassion is defined by having compassion for oneself, meaning that the sympathetic consciousness of others' distress together with a desire to alleviate that distress is turned inward (Newsome et al., 2014). Self-compassion can be seen as showing kindness or understanding towards oneself in instances of pain or failure, rather than being self-critical (Neff, 2014). To have self-compassion means to acknowledge one's own distress, and then alleviate it sympathetically (Raes et al., 2011). Although the literature suggests that fixed factors such as temperament and attachment style and environment of one's upbringing can impact the level of self-compassion in some individuals, it is believed that people can cultivate self-compassion (Neff, 2009; Newsome et al., 2014).

Researchers typically use the Self-Compassion Scale (Neff, 2003) to assess this construct, as it is currently the only measure of the construct of self-compassion. While there are other measures of compassion (e.g., Relational Compassion Scale, RCS, Hacker, 2008;

Compassionate Love Scale, CLS, Sprecher & Fehr, 2005; Compassionate Care Assessment Tool, CCAT, Burnell & Agan, 2013), the SCS is the only measure that focuses on self-compassion (Strauss et al., 2016). The Self-Compassion Scale measures one's ability to show kindness and understanding with oneself in the face of failure or difficulty (Neff, 2003). It has been shown that high scores on the Self-Compassion Scale have been associated with positive mental health outcomes (e.g., less depression, less anxiety, and greater life satisfaction), as well as higher scores on measures of well-being and life satisfaction (Neff, 2003). The 12-item version of the SCS, used in the present study, has been shown to have high intercorrelations, partially satisfactory for content validity, and acceptable internal consistency for the total score (Strauss et al., 2016). With that said, however, Neff (2016) recently stated that "there are not well-established norms for what counts as low, moderate, or high levels of self-compassion" (p. 272). Because of the aforementioned lack in normative data in the literature, both in regards to the population in question, as well as for a community or clinical population, there needs to be more research conducted to develop norms of self-compassion, to ensure levels are assessed correctly and for better clinical and personal utilization. For more details on the measure's psychometric properties, please see the Method section's instrumentation subsection.

Given the growing body of research showing links between self-compassion and psychological health in college students, community adults and practicing meditators (Neff & Pommier, 2013), it may be beneficial to assess developing clinicians' level of self-compassion and observe how it might be related with their clinical work and personal well-being. In relation to developing clinicians, one could theorize that individuals may need to feel self-compassion and self-regulation in order to exercise various clinical skills. For developing therapists, having greater self-compassion could lead to better abilities to treat and aid clients' abilities to

demonstrate self-compassion as well.

Some of these hypotheses were examined in the two studies located in the present study's literature review that are reviewed below and a more comprehensive review can be found in Table 1. The following discusses the benefits of mindfulness training and practice on trainee therapists' self-reported self-compassion levels, followed by three studies with other related populations.

Examining the benefits of Loving Kindness Meditation (LKM) on cultivating self-care and compassion skills, Boellinghaus et al., (2013) studied twelve trainee therapists who completed mindfulness based cognitive therapy course and a six-session Loving Kindness Meditation course, and then were interviewed about their experiences. In analyses of interviews with the participants, the researchers identified five major themes: engaging with the practice, impact on self and relationships, incorporating compassion into the therapy room and integrating LKM into life. The interviews were analyzed utilizing a 'double hermeneutic' approach consisting of reading and re-reading noting themes, linguistic patterns, and connections between each interview (Boellinghaus et al., 2013). The overall analysis of these interviews revealed that almost all participants reported an increase in their self-compassion, in their ability to show compassion, and in becoming more accepting of others.

Second, McCollum and Gehart (2010) conducted a qualitative study evaluating the use of mindfulness meditation to aid new therapists in learning therapeutic presence. Students attending a Marriage and Family Therapy program were taught mindfulness exercises during their practicum classes, asked to practice 5-10 minutes of mindfulness a day, and keep a weekly journal of their experiences of the mindfulness practices. The study utilized thematic analysis of the students' journal entries in which a variety of themes emerged, including the effects of

meditation practice, balancing being and doing modes in therapy, the capacity to be present, and the development of acceptance and compassion for both themselves and for clients.

Research on self-compassion also has been examining the impact of mindfulness training in populations other than trainee therapists. For example, high school teachers who attended an eight-week mindfulness course taught by a certified MBSR instructor self-reported gains in their own self-compassion and self-regulation as measured by The Self Compassion Scale (Raes et al., 2001), The Affective Self-Regulatory Efficacy Scale (Bandura, 2003), as well as their observing and non-reacting skills as measured by The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008) when compared to a non-practicing control group of high school teachers (Frank, Reibel, & Metz, 2013).

A related study by Irving (2011) utilized a sample of 51 psychologists, social workers, physicians, nurses, and other healthcare professionals in two separate cohorts who completed an 8-week modified MBSR program and were given self-report measures prior to completing the group and after completion. After engaging in MSBR, the helping professionals saw an increase in self reported self-compassion and mindful attention (Irving, 2011). Likewise, Neff and Pommier (2013) found that practicing meditators in the general population reported greater self-reported self-compassion as well as experiencing less subjective personal distress, greater perspective-taking abilities, and greater forgiveness than a sample of undergraduate students and a sample of women from the community who did not engage in mindfulness meditation, suggesting that mindfulness may be a useful component to cultivating self-compassion (Neff & Pommier, 2013).

## **Mindfulness, Self-Compassion, and Stress**

Only 6 studies have been located on stress and self-compassion in relation to mindfulness (see Table 1 for expanded information on the studies with trainee therapists). The earliest research on these variables was conducted by Shapiro and her colleagues. First, Shapiro, Astin, Bishop, and Cordova, (2005) studied health care professionals (social workers, psychologists, nurses and physical therapists) who participated in an 8 week modified MBSR intervention, and found post-test decreases in stress as measured by the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) and increases in self-compassion as measured by the Self Compassion Scale (Neff, 2003) ratings when compared to the no intervention control group. Subsequently, Shapiro et al., (2007) conducted a study with graduate students therapists who participated in a 10 week modified MBSR intervention, and found that post-test decreases in stress as measured by the Perceived Stress Scale (Cohen et al., 1983) and rumination as measured by the Reflection Rumination Questionnaire (RRQ; Trapnell & Campell, 1999) and trait anxiety the State/Trait Anxiety Inventory (STAI; Spielberger, 1983) and increases in self-compassion as measured by the Self Compassion Scale (Neff, 2003) when compared to the no intervention control group.

Third, Rimes and Wingrove (2010) used a mixed-methods approach to study 20 female trainees from the United Kingdom who completed an 8-week MCBT course that was adapted to focus on stress. Results included a decrease in rumination, as measured by the Rumination-Reflection Questionnaire (Trapnell and Campbell, 1999), an increase in self-compassion levels as measured by the Self-Compassion Scale (Neff, 2003) overall and higher for 1<sup>st</sup> year trainees than 2<sup>nd</sup> years, and a decrease in self-reported perceived stress as measured by the Perceived Stress Scale (Cohen et al., 1983). First year students reported a greater increase in self-compassion than 2<sup>nd</sup> and 3<sup>rd</sup> year students, and a larger reduction in stress levels. Additionally,

greater amount of home practice was associated with a greater decrease in stress and rumination and greater increase in empathic concern. In their content analysis of written responses to open ended questions about the impact of mindfulness course, Rimes and Wingrove (2010) found the most commonly reported themes were increased acceptance of thoughts and feelings, better understanding of what the experience would be as a client, and an increased awareness of feelings, thoughts and bodily sensations.

Fourth, in another mixed-methods study, Moore (2008) examined the use of 14 short 10-minute mindfulness sessions over a 4-week period with a group of 23 clinical psychologists in training first year clinical psychology doctoral students in the United Kingdom. Although no statistically significant differences in the 14-item PSS were found, Thematic analysis of feedback provided about the course centering on mindfulness of body, mindfulness of emotions and mindfulness of thought indicated use of a decrease mindfulness to cope within stress and an increase in understanding and awareness of mindfulness. Results using a Wilcoxon signed rank test also did not indicate significant differences in self-compassion scores; however, there were significant increases in self-kindness scores, as measured by the SCS (Moore, 2008).

Regarding the remaining studies with non-trainee therapists, Gard et al. (2012) studied thirty-three young adults (80% Caucasian, 73% female) who engaged in a residential educational immersion program, which was based on a four month manualized mindfulness-based yoga practice, in which students completed on average three to five hours of daily yoga practice, meditation, and breathing practices in addition to three to five hours of daily didactic course work on the integration of yoga practice into daily life activities, and that emphasized the cultivation of witnessing consciousness and compassion for self and others. The participants completed the Self Compassion Scale (Neff, 2003), Perceived Stress Scale (Cohen et al., 1983)

and the Five Facet Mindfulness Questionnaire (Baer et al., 2006) self-report measures before and after the course period. The participants self-reported a decrease in stress scores and an increase in self-compassion ratings post participation in groups, when compared to forty-three young adults (79% Caucasian, 74% female) in the control group who did not engage in the mindfulness yoga practice. Some limitations of this study include no knowledge of mental health difficulties in the group of young adults or the qualifications of the participant practitioners. It would be useful for the future to compare yoga and mindfulness based programs to better clarify the mechanism of benefit from engaging in these practices, as well as to provide information about the mental health status of the participants. Furthermore, although this study involved a group of young adults in a similar age bracket of many new graduate students, it is not clear that results would be similar to those found in a sample of graduate students in psychology who are experiencing large amounts of stress or who maintain hectic schedules. Additionally, the level of stress or schedules of the participants were not included in the study and are considered another limitation.

Relatedly, a dissertation study with 31 undergraduate and graduate students who hoped to work in the helping professions (e.g., nursing, psychology, counseling) engaged in 8 weekly, 90-minute mindfulness groups featuring meditation, yoga, and qui gong, following the MBSR curriculum (Newsome et al., 2014). The groups were led by two master's level counseling and clinical psychology doctoral students, during two separate semesters; no control group was included. Compared to their scores on self-report measures completed before the groups began, the participants' self-reported post-group scores revealed a decrease in their perceived stress levels, as measured by the Perceived Stress Scale, (Cohen et al., 1983), an increase in their self-reported ability to engage in mindfulness, as measured by the Mindful Attention Awareness

Scale (MAAS, Brown & Ryan, 2003), and an increase in their perceived self-compassion, as measured by the Self-Compassion Scale (SCS, Neff, 2003; Newsome et al., 2014). Because the participants were self-selected, they had a personal interest in learning mindfulness practices, which may have impacted results. Additionally, due to the differing nature of the mindfulness groups it is possible that some of the benefits or associations are not directly related to the mindfulness engagement but rather physical activity. Although an interest in working in the helping professions shows like-mindedness with future clinicians, this sample may not generalize to those who are fully immersed in the helping profession's training process (e.g., master's or doctoral student clinicians).

Of the aforementioned studies examining mindfulness practice, self compassion and stress, it appears that the parameters for determining dose of mindfulness practice to attain benefits in stress and self-compassion is conflicting, and poses a strong need for future research. A better understanding of the stress level variance within the graduate student clinician population is needed given the number of studies not reporting significant decreases in stress levels (Moore, 2008; others), including the present dissertation. Due to the lack of normative ranges on the Self-Compassion Scale (Neff, 2003), it appears difficult to determine the amount of self-compassion calculated by this score, and what a significant increase in score means outside of statistical value. Additionally, most of the studies that examined all three constructs from the present study appeared to engage in frequent and lengthy mindfulness based courses which may not be feasible for graduate psychology students to complete, and begs the question at its true applicability to the population in question.



## Summary

In sum, despite emerging research on how mindfulness has been associated with decreases in clients' and students' ratings of decreases in stress and increases in their self-compassion scores, there is considerable research needed to understand the mechanisms at which mindfulness has the potential to be a helpful form of self-care and coping strategy. More research about how stress experienced by graduate student clinicians appears affected by mindfulness training appears needed given the mixed results of the limited existing research in this area. As mentioned previously, norms for the graduate student clinical population for levels of self-compassion could also prove useful, as cultivating self-compassion appears to be a helpful personal and therapeutic tool.

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APPENDIX B

Notice of Approval for Human Research

Date: July 06, 2016

Protocol Investigator Name: Meredith Kalies

Protocol #: 15-09-048

Project Title: Mindfulness Training and Developing Clinicians' Perceived Stress and Self-Compassion

School: Graduate School of Education and Psychology

Dear Meredith Kalies:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the **Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual** at [community.pepperdine.edu/irb](http://community.pepperdine.edu/irb).

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chairperson

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives

APPENDIX C

Outline of Structured Mindfulness Group

- Week 1: Guided Body Scan Meditation
- Week 2: Guided Mindful Movement
- Week 3: Guided Walking Meditation
- Week 4: Guided Mindful Eating Exercise
- Week 5: Guided Sitting Meditation of Breath
- Week 6: Guided Lovingkindness (Meta) Meditation
- Week 7: Guided Sitting Meditation of Thinking
- Week 8: Guided Choiceless Awareness Meditation

APPENDIX D

Demographic and Spiritual Beliefs Questions

**Assessing the development of personal qualities related to counseling practice with therapists-in-training: Exploring the role of contemplative practice.**

**Demographic and Spiritual Beliefs Questions**

**Assessing the development of personal qualities related to counseling practice with therapists-in-training - Thank you for choosing to participate in the study!**

Please choose a 4-digit ID number you can remember at the end of the term: \_\_\_\_\_

Gender: \_\_\_\_\_ Age: \_\_\_\_\_

Ethnicity: \_\_\_\_\_

Religious / Spiritual identification: \_\_\_\_\_

Relationship Status: \_\_\_\_\_

Number of Children: \_\_\_\_\_

Number of Occupants in Household: \_\_\_\_\_

Please list the length of your engagement with any and all of the contemplative practices below:

\_\_\_\_\_ Prayer    \_\_\_\_\_ Centering Prayer    \_\_\_\_\_ Meditation

\_\_\_\_\_ Yoga    \_\_\_\_\_ Mindful Walking    \_\_\_\_\_ Other Practice(s) (\_\_\_\_\_)

Year in MACLP program: Please Circle: 1 or 2

How long have you provided psychotherapy or counseling services? \_\_  
\_\_\_\_\_(months/years)

How would you describe your theoretical psychotherapy/counseling orientation or approach to working with clients:

List length of time (if any) spent in personal psychotherapy: \_\_\_\_\_

APPENDIX E

Self Compassion Scale and Perceived Stress Scale



## Perceived Stress Scale

Instructions: The 4 questions below ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

**[Note for IRB: Conditions of Perceived Stress Scale Use:** Permission for use of the scale is not necessary when use is for academic research or educational purposes.

<http://www.macses.ucsf.edu/research/psychosocial/pss4.php> ]

**1. In the last month, how often have you felt that you were unable to control the important things in your life?**

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

**2. In the last month, how often have you felt confident about your ability to handle your personal problems?**

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

**3. In the last month, how often have you felt that things were going your way?**

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

**4. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?**

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

### Self-Compassion Scale

#### HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

**Almost  
never**

**1**

**2**

**3**

**4**

**Almost  
always**

**5**

- \_\_\_\_\_ 1. When I fail at something important to me I become consumed by feelings of inadequacy.
- \_\_\_\_\_ 2. I try to be understanding and patient towards those aspects of my personality I don't like.
- \_\_\_\_\_ 3. When something painful happens I try to take a balanced view of the situation.
- \_\_\_\_\_ 4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
- \_\_\_\_\_ 5. I try to see my failings as part of the human condition.
- \_\_\_\_\_ 6. When I'm going through a very hard time, I give myself the caring and tenderness I need.
- \_\_\_\_\_ 7. When something upsets me I try to keep my emotions in balance.
- \_\_\_\_\_ 8. When I fail at something that's important to me, I tend to feel alone in my failure
- \_\_\_\_\_ 9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
- \_\_\_\_\_ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
- \_\_\_\_\_ 11. I'm disapproving and judgmental about my own flaws and inadequacies.
- \_\_\_\_\_ 12. I'm intolerant and impatient towards those aspects of my personality I don't like.