

GATHERING EVIDENCE: IDENTIFYING U.S. LAW STUDENTS' LEVELS OF STRESS,
ANXIETY, DEPRESSION, MINDFULNESS, AND COMPASSION

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by

Benjamin Bizar-Stanton

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GATHERING EVIDENCE: IDENTIFYING U.S. LAW STUDENTS' LEVELS OF STRESS, ANXIETY, DEPRESSION, MINDFULNESS, AND COMPASSION

Benjamin Bizar-Stanton

Pacific Graduate School of Psychology, Palo Alto University, 2018

U.S. law students are a population whose mental health issues do not receive much clinical focus and few empirical studies have focused on this population. Law students are thought to have higher levels of stress, anxiety, depression and other mental health issues that increase in severity, to increased substance use and suicidality, as they become attorneys. This study was a preliminary investigation utilizing a convenience sample of U.S. law students. This study investigated the levels of a non-random sample of U.S. law students' stress, anxiety, and depression and compared these levels to population norms. This study also examined the relationship of law student compassion and mindfulness to stress, anxiety, and depression. Analysis utilized one-sample *t*-tests, one-way ANOVAs, and hierarchical multiple regressions to test the hypotheses. The results of this preliminary investigation suggest that further empirical studies of U.S. law student mental health, utilizing more rigorous random sampling, should be conducted. This study finishes with a discussion of the implications and contributions of the findings, limitations of the current study, and directions for future research.

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Gathering Evidence: Identifying U.S. Law Students' Levels of Stress, Anxiety, Depression,
Mindfulness, and Compassion

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CHAPTER I

INTRODUCTION

Stress, anxiety, and depression have been shown to reduce the overall quality of an individual's life and to present significant economic costs to society (McManus, Shafran, & Cooper, 2010). It has been suggested that U.S. law students experience greater levels of clinically significant stress, anxiety, and depression than both comparable graduate and medical students and the general population (Peterson & Peterson, 2013). The higher levels of stress, anxiety, and depression have been suggested to be correlated with law students' increased use and abuse of alcohol and other drugs (Murdoch, 2002; Peterson & Peterson, 2013). These increased stress, anxiety, depression, and substance issues follow law students into their careers as attorneys and can lead to suicidal ideation and behavior (Krill, Johnson, & Albert, 2016). This alarming trend makes it imperative to provide law students tools to prevent and treat these mental health issues.

Mindfulness and compassion have received much support as tools for both prevention and treatment of mental health issues; however, U.S. law school courses are suggested to replace law students' sense of compassion with logic (Chiesa & Serretti, 2009; Keng, Smoski, & Robins, 2011; Myers et al., 2012; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff & Germer, 2012; Ozyesil & Akbag, 2013; Peterson & Peterson, 2013). There are few empirical studies examining levels of depression, anxiety, and stress in U.S. law student population. Additionally, there are no empirical studies examining the levels of mindfulness and compassion or the relationship between mindfulness and compassion and depression, anxiety, and stress within the U.S. law student population.

The main purpose of this study is to fill in the gap in the empirical research regarding

U.S. law students' levels of stress, anxiety, depression, mindfulness, and compassion for self and others. The other purpose of this study is to examine the relationship of mindfulness and compassion and levels of depression, anxiety, and stress within the U.S. law student population.

First, this paper will provide definitions to be used in this study. Next will be a discussion of the prevalence of stress, anxiety, depression, and compassion in the law student population, followed by an appraisal of the impact of these issues on the professional and personal lives of law students as well as the societal impact. There will then be an examination of studies looking at the efficacy of mindfulness and compassion-based interventions in reducing and preventing stress, anxiety, and depression and assessing the relationship between mindfulness and compassion and stress, anxiety, and depression. The method for the study and procedures for data analysis will then be discussed followed by a presentation of results. Lastly, there will be a discussion of the study's results, interpretations and implications of the study findings, limitations, and recommendations for future research directions.

CHAPTER II

REVIEW OF THE LITERATURE

Operationalizing Stress, Anxiety, Depression, Compassion, and Mindfulness

Stress

Stress has been defined in multiple ways in the psychological literature. Commonalities across definitions discuss a relationship between the environment and an individual, which is perceived as burdensome and surpassing that individual's mental or physical ability to cope with and successfully confront (Koolhaas et al., 2011; Saban, Sherwood, DeVon, & Hynes, 2010). The differences across definitions include an increased focus on the environmental demands and stimulus, specifically that the stimulus is unpredictable and uncontrollable (Koolhaas et al., 2011), versus a greater focus on the individual's perception of the environmental stimulus (Saban et al., 2010). While there are differences, the commonalities provide a satisfactory working definition of stress.

Within the psychological literature stress has been operationalized and measured using a multitude of psychological instruments. Of particular interest is the Depression, Anxiety, Stress, Scales (DASS), a self-report questionnaire that measures an individual's stress, anxiety, and depression levels and provides a number and classification delineating the severity of their symptoms. The DASS operationalizes stress using statements such as "I tended to over-react to situations", "I was intolerant of anything that kept me from getting on with what I was doing", and "I found it difficult to relax" (Lovibond & Lovibond, 1995). These questions are a portrayal of the definition of stress in the literature; they assess environmental demands and the ability of an individual to cope.

Anxiety

Within the psychological literature anxiety is differentiated depending on whether an individual's response is within normally expected limits or reaches the level of a significant psychiatric anxiety disorder (McManus et al., 2010). The umbrella term “anxiety disorders” covers eleven disorders with varying features. However, there are commonalities across these disorders that lend themselves to a more general definition of significant anxiety. The commonalities include an individual's appraisal of a stimulus as uncharacteristically amplified in relation to the threat posed, the experience of physical arousal, and a heightened need to avoid or lessen the perceived threat (McManus et al., 2010).

For the current study we will focus on anxiety as operationalized by the DASS. The DASS operationalizes anxiety using statements such as “I experienced difficulty breathing”, “I experienced trembling”, and “I was worried about situations in which I might panic and make a fool of myself” (Lovibond & Lovibond, 1995). These statements operationalize the components of anxiety discussed in the literature such as experiencing physiological arousal and significant worry related to a stimulus and the threat posed.

Depression

The precise definition of depression has been contested in the psychological literature mainly due to the differentiation between ordinary sadness and clinically significant depression (Perkins, 2014). The American Psychiatric Association (2000) has described depression as a mood disorder that includes a variety of symptoms such as persistent sadness, hopelessness, changes in appetite, and loss of pleasure in once enjoyable activities. In order to further differentiate clinically significant depression from ordinary sadness Perkins (2014) elaborated the definition stating that the individual's symptoms must be over and above what would be

expected as an ordinary reaction to contextual factors.

In the psychological literature depression has been operationalized and measured utilizing various instruments. This study is specifically interested in the operationalization of depression within the DASS. The DASS operationalizes depression using statements such as “I couldn’t seem to experience any positive feeling at all”, “I felt I had nothing to look forward to”, and “I was unable to become enthusiastic about anything” (Lovibond & Lovibond, 1995). These questions exemplify the components of depression discussed in the literature, including persistent sadness, a loss of pleasure in once enjoyable activities, and hopelessness.

Somatic Symptoms

Somatic symptoms are symptoms that focus on physical complaints and are highly prevalent in psychiatric disorders, in particular, anxiety and depression (Gierk et al., 2015; Han et al., 2009; Kocalevent, Hinz, & Braehler, 2013; Kroenke, Spitzer, & Williams, 2002; Kroenke, Spitzer, Williams, & Lowe, 2010). In the psychological literature somatic symptoms have been operationalized and measured using multiple instruments. The current study is specifically interested in the operationalization of somatic symptoms within the Patient Health Questionnaire-15 (PHQ-15). The PHQ-15 operationalizes somatic symptoms using statements referencing physical complaints such as “stomach pain”, “back pain”, “dizziness”, “nausea, gas, or indigestion”, and “trouble sleeping” (Kroenke et al., 2002). These statements encompass the components of somatic symptoms as discussed in the literature.

Compassion

The growing influence of compassion within psychology has stemmed from ancient Buddhist practice. Within Buddhism compassion is a practice in which a person cultivates their mind in order to increase their skill for recognizing and motivating themselves in the direction of

important development. This in turn helps them handle difficult emotions and increases their overall understanding of themselves and others (Pauley & McPherson, 2010).

Current psychological trends in the area of compassion, and self-compassion specifically, have gone in at least two major directions, the social-psychological and the evolutionary. Neff (2003a) delineated three components of self-compassion, including a general practice of being mindful, utilizing kindness towards oneself, and feeling connected to humanity. This comprises the basics of the social-psychological approach. The evolutionary perspective, outlined by Gilbert (2005), discusses self-compassion as a phenomenon that has evolved over time as a part of a person's built in self-soothing system and that a well-formed ability for self-compassion leads to increased distress tolerance and a heightened desire to help and support oneself and other people. Taking the commonalities from these two perspectives the current study will discuss compassion as the ability to be generally mindful as well as kind and supportive towards oneself and others.

Measures of compassion are not as prevalent in the psychological literature as are those for stress, anxiety, and depression. However, some important measures have operationalized compassion. The two that this study will focus on are the Self-Compassion Scale (SCS), which operationalizes self-compassion, and the Santa Clara Brief Compassion Scale (SCBCS), which operationalizes compassion for others (Hwang, Plante, & Lackey, 2008; Neff, 2003b). The SCS operationalizes self-compassion using statements such as “when I’m going through a very hard time, I give myself the caring and tenderness I need”, “I’m intolerant and impatient towards those aspects of my personality I don’t like”, and “when something painful happens I try to take a balanced view of the situation” (Neff, 2003b). These statements illustrate components of the definition of self-compassion, including both being generally mindful and kind to oneself. The

SCBCS operationalizes compassion for others using statements such as “One of the activities that provides me with the most meaning to my life is helping others in the world when they need help”, “I often have tender feelings toward people (strangers) when they seem to be in need”, and “I would rather engage in actions that help others, even though they are strangers, than engage in actions that would help me” (Hwang et al., 2008). These statements depict the kindness towards others component of compassion for others that is discussed in the literature.

Mindfulness

Mindfulness is another growing influence in psychology that stems from ancient Buddhist practices. This concept encompasses both the act of being attentive and conscious as well as strengthening that ability through practices such as meditation (Germer, 2005). The term and concept of mindfulness has been given many definitions throughout the psychological literature. The definitions constitute bringing one’s own attention to their present experiences in order to notice their internal experiences with open mindedness, acceptance, and inquisitiveness, and being aware and accepting of one’s experiences in the present moment (Bishop et al., 2004; Germer, 2005; Williams & Kabat-Zinn, 2011). The current study will use the commonalities of these two definitions when discussing mindfulness. This study will refer to mindfulness as the process and practice of actively paying attention to the present moment, and both internal and external experiences, with a mindset that is free of judgment and inquisitive.

Having a working definition of mindfulness is helpful, however, to further elucidate the concept of mindfulness it is helpful to look at psychological measures that assess mindfulness. One such measure is important to the current study, the Five Facet Mindfulness Questionnaire (FFMQ). The FFMQ operationalizes and measures mindfulness by using statements such as “I watch my feelings without getting lost in them”, “I make judgments about whether my thoughts

are good or bad”, “I pay attention to sensations, such as the wind in my hair or sun on my face”, and “I find it difficult to stay focused on what’s happening in the present” (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). These statements represent an accurate interpretation of the components of the mindfulness definition, including paying attention to the present moment, awareness of internal and external experiences, and non-judgment.

Prevalence of Stress, Anxiety, Depression and Levels of Compassion Among Law Students and the General Population

There are a minimal number of studies of stress, anxiety, depression, and compassion within the U.S. law student population (Dammeyer & Nunez, 1999). Therefore, where necessary, the prevalence of each of these issues will be discussed utilizing non-law student populations.

Stress, Anxiety, and Depression

Studies suggest that roughly 44% of law students experience clinically significant stress, anxiety, and depression (Murdoch, 2002). Stress, anxiety, and depression levels are thought to be greater in law student populations than in graduate and medical students. These higher levels of stress, anxiety, and depression increase as law students progress in law school and then join the legal workforce (Krill et al., 2016; Peterson & Peterson, 2013).

Larcombe et al. (2012) conducted a study to determine the levels of distress within the Melbourne Law School law student population. The study utilized the Depression, Anxiety, Stress, Scale 21-question version (DASS-21) to measure stress, anxiety, and depression. The study consisted of 207 participants. The results showed that the particular students surveyed had mean scores of 9.19, 7.57, and 14.30 on the depression, anxiety, and stress subscales, respectively. This study’s major limitation is that it focuses on only one law school, was conducted in Australia, and therefore cannot be easily generalized to the U.S. law student

population.

Leahy et al. (2010) sought to explore levels of distress and self-reported treatment rates in the University of Adelaide tertiary student population. One of the disciplines studied included tertiary law students. A total of 197 law students participated in the study. The results on the Kessler Measure of Psychological Distress, a measure of distress, showed that 58% of the law students were classified as psychologically distressed. Leahy et al. (2010) also compared these students to age-matched non-student counterparts, of which 11% were found to be psychologically distressed, suggesting that Australian law students experience higher levels of distress than the non-law students. Again, this study's major limitation is that it utilized only one Australian law school, and, due to the differences between the U.S. and Australian law school process, among other things, the results cannot be easily generalized to the U.S. law student population.

One study looking at the prevalence of major depressive disorder within 104 various occupations found that attorneys had the highest rates of depression when compared to other occupations (Eaton, Anthony, Mandel, & Garrison, 1990). Benjamin, Darling, and Sales (1990) conducted a survey of 1,184 attorneys seeking to determine the rates of depression and alcohol abuse within the attorney population. The researchers utilized the Brief Symptom Inventory to assess depressive symptomatology and the Michigan Alcoholism Screening Test-Revised to assess alcohol use issues. They found that 18% of attorneys suffered from alcohol abuse and dependence as compared to 10% in the general population. Benjamin et al. (1990) also found that 19% of attorneys suffered from depressive symptoms, with most also experiencing suicidal ideation, compared to 3-9% in the general population, suggesting that attorneys experience depressive symptoms at greater rates than the general population.

Krill et al. (2016) conducted a study of 12,825 licensed attorneys seeking to determine the rates of alcohol and substance use, depression, stress, and anxiety within the attorney population. They found that 20.6% of attorneys had problematic alcohol use as measured by the Alcohol Use Disorders Identification Test (AUDIT) with a significance level of $p = 0.001$. The rates of attorney substance use within the past 12 months included 16.9% having used tobacco, 15.7% sedatives, 10.2% marijuana, 5.6% opioids, 4.8% stimulants, and 0.8% cocaine. Krill et al. (2016) also provided the Drug Abuse Screening Test 10-item version in order to assess the severity of participants' substance use. They assessed attorneys' weekly usage of substances over a 12-month period and found that of all of those who had used the substance during the 12-month period, 74.1% were using stimulants weekly, 51.3% using sedatives weekly, 46.8% using tobacco weekly, 31% using marijuana weekly, and 21.6% using opioids weekly. Of those using substances 76% had low concern about usage, 20.9% had intermediate, 3% had substantial, and 0.1% had severe. Krill et al. (2016) also had participants complete the DASS-21 in order to assess depression, anxiety, and stress. The DASS-21 results showed that 28.3% of attorneys had mild to severe depressive symptoms, 19.3% had mild to severe anxiety symptoms, and 22.7% had mild to severe stress symptoms. In addition, the mean scores for the DASS-21 depression, anxiety, and stress subscales were 3.51, 1.96, and 4.97, respectively. The attorneys also reported mental health concerns they experienced throughout their career, with 61.7% experiencing anxiety, 45.7% depression, 16.1% social anxiety, 8% panic disorder, and 11.5% having had suicidal ideation at some point in their career (Krill et al., 2016).

Crawford et al. (2011) conducted a study to obtain normative data for self-report mood measures from the general adult population in Australia. The study had 497 participants. This study reported normative data mean DASS-21 scores for depression, anxiety, stress, and total

score at 2.57 (SD = 3.86), 1.74 (SD = 2.78), 3.99 (SD = 4.24), and 8.30 (SD = 9.83), respectively.

Henry and Crawford (2005) conducted a study to obtain normative data for the DASS-21 in the general adult population in the United Kingdom. Their study had 1,794 participants. This study reported normative data mean DASS-21 scores for depression, anxiety, stress, and total score at 2.83 (SD = 3.87), 1.88 (SD = 2.95), 4.73 (SD = 4.20), and 9.43 (SD = 9.66), respectively.

Sinclair et al. (2012) conducted a study to obtain normative data for the DASS-21 in the general adult population in the United States. The study had 499 participants. The results on the DASS-21 were doubled in order to be equivalent to the DASS-42. Doubling the DASS-21 has been shown to produce scores not statistically significantly different from the DASS-42 scores (Henry & Crawford, 2005; Sinclair et al., 2012). These doubled scores for the depression, anxiety, and stress subscales were 5.7 (SD = 8.20), 3.99 (SD = 6.27), and 8.12 (SD = 7.62), respectively, with the total score being 17.80 (SD = 20.18). When these scores are cut in half and returned to their DASS-21 values, this study reported normative data mean DASS-21 scores for depression, anxiety, stress, and total score at 2.85 (SD = 4.10), 1.99 (SD = 3.135), 4.10 (SD = 3.81), and 8.90 (SD = 10.09), respectively. A brief comparison of normative data and those reported in the Krill et al. (2016), Larcombe et al. (2012), and Leahy et al. (2010) studies outlined above, it is expected that law students in the U.S. will score higher on the DASS-21 than the general population.

The findings in the psychological literature suggest that the lifetime prevalence of anxiety disorders in the general population is almost 30% (McManus et al., 2010). Additionally, 20 to 25% of females and 10 to 17% of males will experience depression in their lifetime and with

each additional depressive episode it becomes more likely that the individual will experience another (Liu & Alloy, 2010).

Low Levels of Compassion

Peterson and Peterson (2013) discussed that law students are taught within their courses to “think like lawyers by...setting aside their own feelings of empathy and compassion” which leads law students to “lose their sense of self and become analytically and emotionally detached” (p. 372). Additionally, Organ (2011) discussed that law schools focus so much on analytical skills that law students never have a chance to enhance their abilities in interpersonal skills such as compassion. This law school practice becomes extremely concerning when considering that Pauley and McPherson (2010) found that lower levels of compassion are correlated with increased rates of self-criticism, anxiety, and depression. The practice of teaching law students to set aside their compassion may actually be contributing to higher rates of stress, anxiety, and depression in law students. This information suggests that the further a student progresses in law school, the lower their compassion for self and others will become.

Significance of the Problem

The rates of clinically significant levels of stress, anxiety, and depression are suggested to be higher in Australian law student populations than in the general population, however more work is needed to understand U.S. law students’ mental health issues. Further, these higher levels of stress, anxiety, and depression are correlated with law students’ and attorneys’ increased use of alcohol and other drugs and suicidal ideation (Krill et al., 2016; Peterson & Peterson, 2013). Given that anxiety disorders and depression are found to decrease the overall quality of an individual’s life and are economically costly to society as a whole (McManus et al., 2010), these factors should cause great concern for the law students affected and the people they will serve

when they get into the legal workforce. Lastly, the practice of teaching law students to be more logical and rational and to reduce their compassion may not only lower their levels of compassion, which can lead to a heightened occurrence of anxiety disorders and depression (Pauley & McPherson, 2010; Peterson & Peterson, 2010), but may also affect the overall quality of legal service provision and attorney-client outcomes within the legal system.

Based on the aforementioned it is necessary to determine the specific levels of stress, anxiety, depression, mindfulness, and compassion and the relationship between these constructs within the U.S. law student population.

Relationship between Compassion, Mindfulness, Stress, Anxiety, and Depression

In the psychological literature there are many general conceptual approaches to stress, anxiety, and depression and a full discussion of each is outside the scope of the current study. One such conceptual approach looks at the relationship between individual facets of mindfulness and stress, anxiety, and depression. Cash and Whittingham (2010) found that a higher presence of the nonjudgmental facet of mindfulness—which is the ability to prevent oneself from criticizing their somatic feelings, emotions, and cognitions—was correlated with lower levels of depression, anxiety, and stress. In addition, Cash and Whittingham (2010) found that an increased capacity to sustain awareness of the present moment was correlated with lower levels of depression.

In relation to low levels of self-compassion, both the social psychological and evolutionary perspectives regarding self-compassion (discussed above) outline the development of self-compassion as largely based on an individual's experiences and interactions with others throughout life. Specifically, if an individual has had a model in life that exemplifies the mindfulness as well as the kindness and supportive components of compassion, they will have a

stronger sense of self-compassion (Gilbert, 2005; Neff, 2003a). Compassion can also be seen as a conceptual approach to stress, anxiety, and depression. Specifically, lower levels of self-compassion are related to increased rates of anxiety, depression, and self-criticism, which can lead to increased stress (Pauley & McPherson, 2010).

With these broad conceptual approaches to stress, anxiety, depression, mindfulness, and compassion in mind, there will next be a review of traditional mindfulness and self-compassion-based interventions in order to determine whether levels of mindfulness and self-compassion are related to differing levels of stress, anxiety, and depression.

Evidence-Based Studies of Mindfulness and Compassion and their Impact on Stress, Anxiety, and Depression

The following section reviews two meta-analyses and a review of mindfulness-based face-to-face interventions followed by a description of specific studies of mindfulness and self-compassion-based interventions addressing stress, anxiety, and depression. Some of these specific studies utilize populations analogous to law students, such as university, medical, and graduate students.

Chiesa and Serretti (2009) conducted a meta-analysis seeking to determine the efficacy of Mindfulness-Based Stress Reduction (MBSR) in healthy populations. Specifically, they sought to determine if MBSR could reduce stress and other non-clinical levels of psychological symptoms such as anxiety and depression. They chose to focus on healthy populations because MBSR had already been shown to be efficacious in populations with either or both physical and mental disorders. MBSR includes components of awareness of one's breath, nonjudgmental attention to one's cognitions, and components of yoga.

The authors conducted a search of the literature and out of the over 150 articles found

they included only 10 that were deemed appropriate for the purpose of the review. To be included the studies had to have used MBSR, included healthy individuals, assessed stress, and included quantitative data. The outcome measures included comparing Cohen's d effect sizes between pre and post-test stress, spirituality, rumination, empathy, self-compassion, state anxiety, and other psychological changes. Of particular interest to the current study, is the inclusion of five studies using university, premed, nursing, and medical students as the population.

Chiesa and Serretti (2009) found that MBSR was efficacious compared to a control group on baseline measures for stress ($d = .74, p = 0.001$) and rumination (ruminative thoughts decreased from 3.9 to 2.5 with MBSR, no change in control group). MBSR was also found to increase empathy, as shown by increases in scores on the Empathy Construct Rating Scale, and self-compassion, as shown by increases on the SCS, and improved state and trait anxiety as measured by the State and Trait Anxiety Index. No statistically significant differences were found when comparing MBSR and an active relaxation training treatment regarding outcomes of stress and spirituality. This meta-analysis suggests that increased levels of mindfulness are related to improved mental health.

While Chiesa and Serretti (2009) have found support for the use of MBSR in healthy populations they acknowledge that it is still unclear if there is a specific component of MBSR producing the beneficial outcomes. They suggest further research to determine which, if any, component alone is responsible for the outcomes, with a specific focus on mindfulness. Therefore, for the current study, it is important to utilize review papers focusing on general mindfulness.

Keng et al. (2011) conducted a review of the psychological literature with a specific

focus on determining the effects of mindfulness in general on mental health. They sought to identify if mindfulness in general is efficacious in improving mental health and what potential mechanism of change is at work. They reviewed empirical studies examining the correlation between mindfulness and mental health, the efficacy of mindfulness-oriented interventions in promoting mental health, and the instant effects of mindfulness on emotion and behavior. Keng et al. (2011) looked at studies examining the correlation between trait mindfulness (an affinity for mindful awareness) and mental health, as well as mindfulness meditation and mental health. Studies consistently showed that higher levels of trait mindfulness or mindfulness meditation practice were negatively correlated with depression, anxiety, and stress, and were positively correlated with self-esteem, empathy, and self-compassion. Further, mindfulness meditation practice was found to increase mindfulness, which acts as a mediator between the practice and the positive outcomes.

Keng et al. (2011) also examined studies using mindfulness-oriented interventions in randomized controlled trials. This category included interventions such as MBSR, Mindfulness-Based Cognitive Therapy (MBCT), Dialectical Behavior Therapy (DBT), and Acceptance and Commitment Therapy (ACT). They found support for the efficacy of all four of these interventions for improving mental health across multiple domains including stress, anxiety, and depression. However, they acknowledged the need to determine if there is an underlying mechanism of change common to these interventions, as each contains multiple components. Lastly, Keng et al. (2011) reviewed studies examining the instant effects of mindfulness and found that mindfulness practice can have immediate benefits on negative mood and emotional reactivity.

Keng et al. (2011) then discussed potential mechanisms of change related to mindfulness

interventions. These included increasing trait mindfulness (the ability of an individual to be aware of and separate from their thoughts), exposure through attending to experiences nonjudgmentally, memory function, attentional control, and values clarification. They suggested further research in order to determine which change mechanisms account for improvements in mental health.

Cavanagh, Strauss, Forder, and Jones (2014) conducted a meta-analysis of studies looking at the effectiveness of low-cost, self-help, mindfulness and acceptance-based interventions, specifically in reducing the symptoms of depression and anxiety. One other purpose of the study was to determine if low-cost, easily accessible interventions are a viable alternative to face-to-face interventions so that the benefits of such interventions can reach many individuals and populations. Such self-help interventions can range from self-help books and audiotapes to fully digital, internet interventions. Cavanagh et al. (2014) defined self-help as referring to interventions that require limited to no clinician input and help participants practice and develop skills rather than just learning about them.

Studies included by Cavanagh et al. (2014) must have used self-help interventions that were mindfulness or acceptance-based, used little to no clinician support, contained outcome measures of depression, anxiety, acceptance, and mindfulness, provided quantitative data, and utilized random assignment. In total, fifteen studies met these criteria. The studies included comparing a self-help intervention group to a control group or other intervention group. Within the studies utilizing an other-intervention group the interventions included psychoeducation or another psychotherapy intervention.

Cavanagh et al. (2014) found that self-help interventions significantly increased mindfulness and acceptance skills and significantly decreased depressive and anxiety symptoms

as compared to control conditions ($g = 0.49, -0.37, \text{ and } -0.34$ respectively). They then conducted a sub-group meta-analysis to look at the effect of pure mindfulness and acceptance-based interventions (those without multiple components) and found that these interventions significantly decreased depressive and anxiety symptoms compared to the control groups ($g = -0.28$ and -0.32 respectively).

Cash and Whittingham (2010) sought to determine which mechanisms of mindfulness contribute to improved stress, anxiety, depression, and mental health in general by examining a sample of meditators and non-meditators. There were 106 participants, 80 of which belonged to meditation organizations and 26 of which were university students. The measures used included the FFMQ, DASS, and Personal Well-being Index. The study was conducted through the provision of a web-based questionnaire comprised of the aforementioned measures. They then conducted hierarchical multiple regressions examining the relationship between the five facets of mindfulness and wellbeing, depression, anxiety, and stress. They found that higher levels of nonjudgmental awareness of internal and external experiences was significantly negatively correlated with depression, anxiety, and stress, with standardized regression coefficients of $-.305, -.357, \text{ and } -.326$ respectively. Additionally, increased awareness of the present moment was negatively correlated with depression ($-.357$). One limitation of this study was the use of a cross-sectional design, as was the use of volunteers from meditation groups and the use of self-report measures exclusively. However, this study suggests that nonjudgmental awareness may act as an underlying mechanism of change.

Neff and Germer (2012) conducted a study to determine if the Mindful Self-Compassion (MSC) program is efficacious in increasing self-compassion and mindfulness, and decreasing depression, anxiety, and stress. The MSC includes components of both mindfulness and

compassion practice. The measures included the ECRS, Freiburg Mindfulness Inventory (FMI), Beck Depression Inventory, Spielberger State-Trait Anxiety Inventory, and PSS. These were compared from pre-test to post-test and between the intervention group and wait list control group. Twenty-four participants were included in the intervention group and twenty-seven in the control, 74 and 78% of which had previous meditation experience. There were significant differences between the intervention and control group on measures of self-compassion, mindfulness, other-compassion, depression, anxiety, and stress. The Cohen's *d* effect sizes were 1.67, .60, .68, .86, .76, and .37 respectively. They then conducted hierarchical regression analyses to assess the contribution of self-compassion and then the additional contribution of mindfulness to the variance in scores. Increased self-compassion was found to be significantly associated with all outcome measures, while mindfulness was found to contribute significant additional variance for compassion for others and perceived stress. Some limitations of this study included the small sample size and the large percentage of participants with previous meditation experience. This study, however, suggests that higher levels of self-compassion may contribute to overall increased mental health.

Gilbert and Procter (2006) conducted a study to determine the benefits of compassionate mind training, through loving-kindness meditation and compassion meditation, on participant anxiety, depression, and self-criticism. Over the course of 12 weeks, through two hour sessions each week, participants were taught to engage in self-soothing when experiencing negative emotions. Participants were also taught monitoring techniques of ACT, DBT, and cognitive behavior therapy. At post-test, participants identified significant reductions in depression, self-criticism, and anxiety. While this study suggests the benefits of higher levels of compassion, this study had only 6 participants complete the post-test.

Birnie, Speca, and Carlson (2010) sought to examine the impact of MBSR on self-compassion, empathy, mindfulness, stress, and mood disturbance. This study did not include a control group. A total of 51 participants completed pre-test and post-test measures and participated in an 8-week MBSR program. The measures used were the SCS, IRI, Mindful Attention Awareness Scale, Symptoms of Stress Inventory, and POM. MBSR was found to be significantly effective pre to post-test for increasing self-compassion, empathy, and mindfulness ($d = .65, .40, \text{ and } 1.06$ respectively), and decreasing mood symptoms and stress ($d = .84 \text{ and } 1.23$ respectively). Additional correlational analyses were conducted and changes in self-compassion were positively correlated with mindfulness and negatively with mood and stress symptoms. Further, regression analyses showed that changes in mindfulness predicted statistically significant variance in self-compassion at 11%. This research suggests that self-compassion may moderate the effect of mindfulness on mood and stress symptoms. One limitation of the study included a selection bias due to the participants actively seeking out MBSR.

Shapiro, Schwartz, and Bonner (1998) conducted a study to determine the effect of MBSR in medical and premedical student populations. 78 participants were included in the study and were randomly assigned to the intervention or wait-list control group. Randomization was matched for med versus premed, race, and gender. The MBSR intervention was a 7-week intervention. The measures used included the ECRS, HSC-90R, subscale 4 of the SCL-90 to assess depression, and State-Trait Anxiety Inventory. Significant differences were found post-test between intervention and control groups. The intervention group reported statistically significant increases in empathy $F(1, 69) = 4.3$, and decreases in state anxiety $F(1, 69) = 4.11$, trait anxiety $F(1, 69)$, and depression $F(1, 69) = 8.18$. Some limitations of this study are that it did not provide effect size coefficients, and utilized non-random sampling.

Lynch, Gander, Kohls, Kudielka, and Walach (2011) utilized a non-randomized wait-list-controlled study to determine the effect of an 8-week mindfulness-based training on mindfulness, stress, anxiety, and depression in university students. Ten participants were in the intervention group and six in the control group. To measure anxiety, depression, stress, and mindfulness, they used the Hospital Anxiety and Depression Scale, Perceived Stress Scale, and Freiburg Mindfulness Inventory-short version. From pre to post-test the intervention group experienced significant changes as compared to the control group on all measures, anxiety ($d = 1.04, p = 0.03$), mindfulness ($d = 1.06, p = 0.06$), stress ($d = 1.06, p = 0.03$), and depression ($d = 0.52, p = 0.05$). While this pilot study utilized a small sample size, it shows promising results.

Myers et al. (2012) conducted a study to determine how self-care practices affected stress in psychology students in Ph.D. programs. The study included 488 participants from across the United States. One aspect of self-care that the researchers evaluated was mindfulness practice. To evaluate a participant's current mindfulness practice they assessed frequency of mindfulness practice and distributed the Philadelphia Mindfulness Scale, which assesses different aspects of the construct of mindfulness such as mindful acceptance and mindful awareness. To assess a participant's stress, they utilized the Perceived Stress Questionnaire. The researchers conducted a hierarchical multiple regression to determine the effect of each self-care practice on stress scores. Frequency of mindfulness practice and mindful awareness did not have a significant effect on stress scores. However, mindful acceptance was significantly related ($\beta = -.475, p = 0.000$). Interestingly, mindful acceptance was related to frequency of practice ($r = 0.16, p < 0.000$). This suggests that frequency of mindfulness practice is important.

Neely et al. (2009) sought to determine predictors of wellbeing in 203 undergraduate students. To measure wellbeing the researchers used the Well-Being Index, which is made up of

five different scales. These include the Purpose in Life Subscale from the Scales of Psychological Well-Being, the Self-Mastery (helplessness) Subscale, the Perceived Stress Scale, the Intrusive Thoughts Scale, and the Satisfaction with Life Scale. Self-compassion, as measured by the SCS, was one predictor the researchers were interested in studying. The results showed that self-compassion scores correlated with wellbeing scores ($r = .64, p < .05$). This study lends support to self-compassion as a means for increasing general wellbeing across a broad range of constructs.

Using a correlative investigation model Ozyesil and Akbag (2013) assessed the power of self-compassion to predict stress, anxiety, and depression. There were a total of 522 undergraduate participants and the participants were provided the SCS and DASS. Self-compassion was found to be significantly negatively correlated with stress, anxiety, and depression ($r = -0.46, p < 0.001$; $r = -0.37, p < 0.001$; $r = -0.42, p < 0.001$, respectively). Using a regression analysis, the researchers also found that self-compassion is a significant negative predictor of stress, anxiety, and depression, with self-compassion accounting for 21%, 14%, and 18% of the total variance (at $p < 0.001$), respectively. These results further support that higher levels of self-compassion act as a means of preventing and reducing depression, anxiety, and stress.

Smeets, Neff, Alberts, and Peters (2014) conducted a study to determine the effect of a 3-week self-compassion intervention on female undergraduate self-compassion, mindfulness, rumination, worry, optimism, and mood, among others. The participants included 52 female students who were randomly assigned to either the intervention or control group. The researchers utilized the SCS, Kentucky Inventory of Mindfulness Skills, the Life-Orientation Test-Revised (to measure optimism), the Positive and Negative Affect Schedule, the Ruminative Response

Scale-NL-Extended, and an abbreviated version of the Penn State Worry Questionnaire.

Compared to the control group, the intervention group showed greater gains in self-compassion ($d = 1.19, p < 0.01$), mindfulness factor acceptance without judgment ($d = 0.70, p < 0.05$), mindfulness factor non-reactivity to internal experiences ($d = 1.20, p < 0.01$), optimism ($d = 0.66, p < 0.05$), and greater decreases in rumination ($d = 0.70, p < 0.05$). There were no significant between-group differences for mood or worry. Implementing linear regression analyses, to determine pre to post change in the intervention group, the researchers found that an increase in self-compassion was a significant predictor of change in mindfulness factor acceptance without judgment, mindfulness factor non-reactivity to internal experiences, optimism, rumination, and worry, with self-compassion accounting for 19% ($p < 0.05$), 25% ($p < 0.01$), 46% ($p < 0.01$), 36% ($p < 0.01$), and 56% ($p < 0.01$), respectively.

Cavanagh et al. (2013) sought to determine if students' stress, anxiety, and depression symptoms would be reduced through a short mindfulness-based intervention delivered online. The participants included 104 students who were randomly assigned to either the intervention or wait-list control group, with only 58 completing both pre and post-test measures. The measures used included the FFMQ, PSS, Patient Health Questionnaire for depression and anxiety, and Engagement and Experience Questionnaire. The intervention included information regarding mindfulness, audio recordings guiding participants through mindfulness practice, and other mindfulness practice opportunities. They had access for 14 days. There were no significant differences between groups on any measures at baseline. There were however significant differences in mindfulness, stress, anxiety, and depression at post-test ($d = 0.42, 0.62$, and 0.41 [anxiety/depression] respectively). While this study had a high attrition rate, it also suggests that even a brief two-week internet-based mindfulness intervention may be efficacious.

Warnecke, Quinn, Ogden, Towle, and Nelson (2011) sought to determine whether an intervention utilizing a guided mindfulness audio CD would reduce stress, anxiety, and depression in medical students a group comparable to law students. The study included 66 participants who were randomly assigned to treatment or control group. The treatment group was provided a mindfulness audio CD and encouraged to use it every day for 8-weeks. The outcome measures used included the PSS and the DASS. Significant differences were found between groups at *post*-test on the PSS and DASS anxiety subscale (-3.44 and -2.82 respectively). At 8-week follow-up the differences were maintained (-0.65 and -0.43 respectively). While this study had a small sample size, did not report effect sizes, and had a short time between *post*-test and follow up, it further suggests the relationship of mindfulness and stress, anxiety, and depression.

Boettcher et al. (2014) conducted a study to determine whether a mindfulness-based intervention delivered through the Internet would reduce anxiety and depression in those diagnosed with an anxiety disorder. To be included in the study participants must have had a primary diagnosis of an anxiety disorder, no extensive mindfulness experience, and access to the internet. There were a total of 91 participants who were randomly assigned to either the mindfulness-based treatment or online discussion forum group. Only 74 filled out all measures at pre and *post*-test and 6 month follow up. The intervention included psychoeducation regarding mindfulness, written instructions, and audio files. Aspects of mindfulness included meditation, mindful movement, body scan, and breath-focus. Outcome measures included the Beck Anxiety Inventory, BDI-II, and the Quality of Life Inventory. There were no significant differences between groups on any of the measures at baseline. Individuals in the mindfulness group experienced more reduction in anxiety and depressive symptoms from pre to *post*-test ($d = 1.33$ and 1.58 respectively for the mindfulness group and 0.76 and 0.49 respectively for the discussion

group). There was a large between-group difference for both anxiety and depression ($d = 0.99$ and 0.84 respectively). Reduction in anxiety and depression scores continued at 6-month follow up for the mindfulness group ($d = 1.44$ and 1.00 respectively). Even though participants completed less than half of the mindfulness exercises (7.3 out of 16 hours), this study suggests that internet-based mindfulness interventions are effective for individuals with a psychological disorder and that the benefits of the exercise continue for up to six-months after treatment.

Gluck and Maercker (2011) sought to determine if an internet-based brief mindfulness intervention would be effective in increasing participants' mindfulness and decreasing stress and mood symptoms. There were 49 participants who were randomly assigned to an intervention or control group. The intervention lasted 13 days and was comprised of two modules. Each module was presented for 20 minutes per day for 6 days. The intervention consisted of exercises and lessons regarding awareness of the breath, body, thoughts, and emotions. These exercises and lessons were provided in audio, visual, and textual format. The outcome measures included the German BSI, Perceived Stress Questionnaire, FMI, EMO-CHECK/SEK-27, and Positive Affect Schedule Negative Affect Schedule. No significant differences were found between groups. However, there was a significant effect for time, pre to post-test, for stress ($d = 0.47$), mindfulness ($d = 0.32$), and negative affect ($d = 0.43$). When analyzing participants that had participated over 50% of the time they found significant improvements in stress ($d = 0.72$) and negative affect ($d = 0.77$).

Albertson, Neff, and Dill-Shackleford (2015) examined the effect of a 3-week intervention involving self-compassion meditation audio podcasts, which were available to participants for download online, on body dissatisfaction and self-compassion, among others. The study included 228 adult female participants with the wait-list control group containing 130

and the intervention group 98. Treatment was 3 weeks long and involved participants accessing one different 20-minute audio podcast per week and utilizing it once per day. The three different self-compassion meditations were Compassionate Body Scan, Affectionate Breathing, and loving-kindness meditation. Some of the measures used in the study were the SCS, to measure self-compassion, and the Body Shape Questionnaire, to measure body dissatisfaction. The results showed that participants engaged in the intervention on average 3.6 days per week. There were significant differences between the intervention group on self-compassion ($d = 0.82$) and body dissatisfaction ($d = 0.73$), among others. There were also significant differences between groups on all subscales of the SCS (ranging from $d = 0.46$ to 0.80).

Shapira and Mongrain (2010) looked at the effect of self-compassion and optimism intervention, delivered online, on depression, self-criticism, happiness, and dependency. The study consisted of a self-compassion group, containing 63 participants, an optimism group, containing 55 participants, and a control group told to think about a memory, containing 70 participants. The intervention lasted 1 week. The self-compassion group was asked to think about an upsetting situation that happened during the day and to write themselves a kind and understanding letter no longer than a paragraph. The optimism group was told to imagine positive future scenarios and the control group was asked to think about any early memory. The participants were assessed for self-criticism and dependency using the Depressive Experiences Questionnaire, for depression using the CES-D, and happiness using the Steen Happiness Index. The results showed that those in the self-compassion and optimism groups had significant differences from the control group across all measures. This study shows that even an intervention as brief as one week may be improve levels of stress, anxiety, and depression.

Interventions utilizing both mindfulness and compassion-based components, both in

student populations analogous to law students and to other less-similar populations, have received significant support in the literature for their efficacy in reducing stress, anxiety, and depression and increasing mindfulness and compassion for self and others. Additionally, many studies support the finding that traits of mindfulness and compassion within individuals predict levels of stress, anxiety, and depression and that focusing on building these traits may help to prevent symptoms of each of these issues. The literature has also identified the specific components of mindfulness and compassion-based interventions that most contribute to the improvements in individuals' symptoms. The literature suggests that higher levels of non-judgmental awareness of internal and external experiences and non-reactivity to internal experiences, facets of mindfulness, and higher levels of self-compassion are important targets to address in reducing stress, anxiety, and depression and increasing mindfulness and compassion for self and others (Birnie et al., 2010; Cash & Whittingham, 2010; Neff & Germer, 2012).

The aforementioned studies suggest that both mindfulness and compassion-based interventions are effective in reducing stress, anxiety, and depression. Additionally, given that increases in self-compassion and non-judgmental awareness may be mechanisms of change moderating the effect of reducing stress, anxiety, and depression, it is imperative to determine if similar relationships exist within the U.S. law student population. Due to the lack of studies focusing on rates of depression, anxiety, stress, mindfulness, and compassion for self and others within the U.S. law student population, it is necessary to gather data to determine these rates.

Hypotheses

1. The participants' scores on the Depression Anxiety Stress Scales-21 will be higher than those in the normative data of the general population.

2. There will be significant differences in the participants' level of compassion for self and others, as measured by the Self-Compassion Scale Short-Form and Santa Clara Brief Compassion Scale, between participants in differing years of law school.
3. The specific facet of mindfulness, "non-judgmental awareness of internal experiences", will account for the most variance across depression, anxiety, and stress out of the five-facets of mindfulness as measured by the Five-Facet Mindfulness Questionnaire Short-Form.
4. Levels of self-compassion, as measured by the Self-Compassion Scale Short-Form total score, will account for greater variance in levels of stress, anxiety, and depression as compared to the FFMQ-SF total score.

CHAPTER III

METHOD

Overall Description of Study

An internet-based questionnaire was sent out to current U.S. law students in order to assess levels of stress, anxiety, depression, mindfulness, and compassion for self and others. The questionnaire also contained demographic and background questions and provided open-ended questions regarding the most stress, anxiety, and depression-inducing aspects of law school. The questionnaire was given to each participant only once. The questionnaire was designed to gather the above information from a convenience sample of volunteer U.S. law students recruited primarily via email and social media website announcements.

Participants

After recruitment for the internet-based questionnaire a total of 436 participants responded. All participants were U.S. law students. In order to enter law school, students must have completed 4 years in college and are thus were at least 21 years of age. No participants were excluded based on ethnicity, gender, socioeconomic status, age, or sexuality.

Measures

Demographic and Background Questionnaire

Law students were asked about their age, gender, racial/ethnic background, sexual orientation, annual household income, marital/relationship status, number of children, highest academic level achieved by their parents, hours per week currently working at a job, previous experience with mindfulness, meditation, and compassion, year in law school, U.S. state of the law school they are attending, reason for attending law school, and the amount of student loan debt with which they anticipate graduating.

Stress, Anxiety, and Depression

To measure stress, anxiety, and depression, the current study utilized the DASS-21. This self-report scale, which was reduced to 21 questions from the DASS standard form 42 questions, contains three subscales including one each for depression, anxiety, and stress (Antony, Bieling, Cox, Enns, & Swinson, 1998). The answer selections are on a likert scale and range from 0 (never) to 3 (almost always). As noted by Antony et al. (1998), the depression scale evaluates symptoms associated with depression, such as feelings of worthlessness or sadness; the anxiety scale measures symptoms associated with anxiety disorders, such as physiological arousal, panic, and fear; and the stress scale includes items evaluating ability to handle stressors, tenseness, and level of irritation. The DASS-21 also provides a severity rating, these include normal, mild, moderate, severe, and extremely severe. Scores on the DASS-21 items are doubled in order to be equivalent to the DASS-42.

Antony et al. (1998) conducted a study to determine the psychometric properties of the DASS and DASS-21 in clinical and nonclinical populations. They found that the items in each of the three DASS-21 scales had adequate factor loadings, only for the scale to which they belong, ranging from .483 to .906. To determine reliability of the DASS-21, they assessed internal consistency by computing Cronbach's alphas, which were .94, .87, and .91 for depression, anxiety, and stress, respectively.

To assess concurrent validity, Antony et al. (1998) provided other valid measures of stress, anxiety, and depression to the participants and examined the correlations between the DASS-21 scales and these other measures. The DASS-21 depression scale correlated with the Beck Depression Inventory, found to be a psychometrically valid measure of depression, at a level of .79. The anxiety scale correlated with the Beck Anxiety Inventory, found to be a

psychometrically valid measure of anxiety, at a level of .85. The one potential limitation of this study is that a stress-specific psychometrically valid measure was not used to assess the concurrent validity of the stress scale. They used the State-Trait Anxiety Inventory-Trait version (STAI-T), which has items measuring overreactions to perceived threatening situations, which was found to be a measure of stress. The DASS-21 stress scale was correlated at a level of .68 with the STAI-T.

Zlomke (2008) found that the DASS, when administered on the Internet, maintained similar psychometric properties as when administered via paper-and-pencil. They noted that this applies only to a research setting and they did not assess the DASS-21. However, due to the psychometric similarities between the DASS and DASS-21 it is probable that the DASS-21 maintains its psychometric properties when distributed via the Internet, although no formal research has been found to show this. In addition, Norton (2007) found that the DASS-21 maintained satisfactory psychometric properties when completed by Black, Hispanic, Latino(a), and Asian participants living in America.

After participants filled out both the DASS-21 and PHQ-15, they were asked about the aspects of law school that caused them the greatest stress, anxiety, and depression in the form of open-ended questions. This gave the participants an opportunity to freely respond about their particular law school experience. These questions were “1) What were the most stressful aspects of your time in law school? 2) What were the most anxiety-provoking aspects of your time in law school? 3) What were the most depressing aspects of your time in law school?”

These open-ended questions were created after a review of multiple studies looking at various student populations and their perceived stress. Soliman (2014) used the open-ended question “What are the stress factors that you faced as a medical student?”, and then had specific

options to choose from and rate on a likert scale (Soliman, 2014, p. 34). Firth (1986) asked medical students to identify particularly stress-inducing aspects of medical school from a pre-defined list of items. Chang, Eddins-Folensbee, and Coverdale (2012) asked medical students “what (medical school) program(s) have helped you cope with stress, anxiety, or burnout? Please explain” (Chang et al., 2012, p. 178). Sharif and Masoumi (2005) asked nursing students various open-ended questions, including “What do nursing students worry about regarding clinical practice?”, “What are the best and worst things you think can happen during the clinical experience”, and “Which clinical experiences did you find enjoyable?” (Shariff & Masoumi, 2005, p. 7).

Somatic Symptoms

To measure somatic symptoms the current study utilized the PHQ-15. This self-report scale contains 15 items assessing various somatic symptoms on a likert scale ranging from 0 (not bothered at all) to 2 (bothered a lot). The PHQ-15 categorizes severity of somatic complaints using cutoffs. These cutoffs and severity levels are 5 (low), 10 (medium), and 15 (high) (Kroenke et al., 2002).

The reliability of the PHQ-15 has been assessed multiple times and has been found to have a Cronbach’s alpha ranging from 0.80 to 0.87, test-retest reliability ranging from 0.65 to 0.83, and item/total correlation of 0.48. Concurrent validity has been assessed using established measures that assess similar somatic symptoms. The PHQ-15 was correlated with scores on the BDI, a measure of depression, at 0.559, the General Health Questionnaire (GHQ-12), a measure of minor psychiatric disorders, at 0.435, the Somatic Symptom Scale-8 (SSS-8), a measure of somatic complaints, at 0.83, Patient Health Questionnaire-9 (PHQ-9), a measure of depression, at 0.59, Generalized Anxiety Disorder Scale-7 (GAD-7), a measure of anxiety, at 0.51, and the

Whitley Index (WI-7), a measure of health anxiety, at 0.61. The PHQ-15 has also shown good criterion validity, with sensitivity at 0.78 and specificity at 0.71 (Gierk et al., 2015; Han et al., 2009; Kocalevent, Hinz, & Braehler, 2013; Kroenke, Spitzer, & Williams, 2002; Kroenke, Spitzer, Williams, & Lowe, 2010).

Recent or Upcoming Occurrence of Life Stressors

The Social Readjustment Rating Scale (SRRS) is a 43-item self-report questionnaire that provides a total score for the level of stressors in one's life and information regarding the particular stressors that have occurred or will occur in the near future. Each item has a particular impact score associated with it, for example death of a spouse has a score of 100 while minor violation of the law has a score of 11 (Holmes & Rahe, 1967). The SRRS is moderately correlated with illness scores ($r = 0.12$) suggesting some validity. The SRRS was also found to have high test-retest reliability in both healthy adults ($r = 0.89$ to 0.96) and psychiatric patients ($r = 0.70$ to 0.91).

Mindfulness

The Five-Facet Mindfulness Questionnaire (FFMQ) is a 39-item self-report questionnaire that provides a total mindfulness score as well as scores across the five facets of mindfulness including observing, describing, acting with awareness, non-judgment of internal experiences, and non-reactivity to internal experiences. The answer selections are on a likert scale and range from 1 (never or very rarely true) to 5 (very often or always true). The FFMQ-Short Form (FFMQ-SF) retained the five facets of mindfulness but shortened the questionnaire to 24 items (Bohlmeijer, ten Klooster, Fledderus, Veehof, & Baer, 2011).

Baer et al. (2008) sought to determine the psychometric properties of the FFMQ in healthy samples. They found adequate-to-good reliability, with each of the five facets having

alpha coefficients ranging from .72 to .92. Additionally, to assess FFMQ validity, they compared scores on the FFMQ to the Psychological Well-Being Scale, as mindfulness interventions have frequently been found to promote such well-being. The correlations between these two measures ranged from .34 to .52. Additionally, adequate concurrent validity has been shown between the FFMQ and the Mindful Attention Awareness Scale, a psychometrically valid measure of mindfulness, with correlations ranging from .75 to .89 across mindfulness facets (Baer et al, 2006).

Bohlmeijer et al. (2011) sought to evaluate the reliability and validity of the FFMQ in an adult Dutch sample of patients with depression and fibromyalgia and to develop and assess the psychometric properties of the FFMQ-SF. They found sufficient internal consistency of the FFMQ in this sample as demonstrated by alpha coefficients ranging from .73 to .91 across the five facets of mindfulness. They also found convergent validity between the five facets of the FFMQ and other valid measures of components of mindfulness such as the Acceptance and Action Questionnaire-II, Openness on the NEO-Five-Factor Inventory, and the Mental Health Continuum-Short Form, as evidenced by significant positive correlations ranging from .11 to .54. In addition, they found discriminant validity between the FFMQ when compared to valid scales measuring components found to be related to low levels of mindfulness, such as Neuroticism on the NEO-Five-Factor Inventory, Hospital Anxiety and Depression Scale, and the Center for Epidemiological Studies Depression Scale, as evidenced by significant negative correlations ranging from -.11 to -.46.

Bohlmeijer et al. (2011) then evaluated the FFMQ-SF. They found the total facet scores of the FFMQ-SF to be highly correlated with the FFMQ, with correlations ranging from .89 to .98 across the facets. Additionally, the FFMQ-SF was found to have similar convergent and

discriminant validity when compared to the measures mentioned above, with significant positive correlations ranging from .14 to .51 and negative correlations ranging from -.11 to -.41. The FFMQ has been used in at least one online intervention and was found to have similar effectiveness compared to the paper-and-pencil version (Cavanagh et al., 2013). Due to the similar psychometric properties of the FFMQ and FFMQ-SF, it is probable that the FFMQ-SF will have similar effectiveness when filled out online as when it is filled out via paper-and-pencil.

Self-Compassion

The Self-Compassion Scale-Short Form (SCS-SF) is a shortened version of the original Self-Compassion Scale (SCS), containing only 12 items while the original contained 26 (Raes, Pommier, Neff, & Van Gucht, 2011). Both self-report scales provide a total self-compassion score as well as scores for the six components of self-compassion including mindfulness, over-identification, common humanity, self-judgment, isolation, and self-kindness. The answer selections are on a likert scale and range from 1 (almost never) to 5 (almost always). The original SCS has consistently been shown to have satisfactory psychometric properties (Neff, 2003b). Raes et al. (2011), using an English-speaking sample, found adequate internal consistency reliability using Cronbach's alpha with the SCS-SF subscales ranging from .54 to .75 and the total SCS-SF score at .87. In addition, they found adequate concurrent validity by comparing the SCS-SF total and subscale scores to those of the SCS, with the total scores' correlation at $r = .98$ and the subscales' scores ranging from .89 to .93. In addition to the United States, the SCS has been administered in at least Thailand, Taiwan, and Turkey (Deniz, 2008; Neff, 2008) and has been administered online in at least one randomized controlled trial (Neff, 2012).

Compassion for Others

Law students were asked to fill out the Santa Clara Brief Compassion Scale (SCBCS) in order to assess their current level of compassion for others that are not close friends or family. The SCBCS is a 5-item self-report questionnaire that provides a total compassion for humanity score (Hwang et al., 2008). The answer selections are on a likert scale and range from 1 (not at all true of me) to 7 (very true of me). Internal reliability of the SCBCS was .9. The SCBCS was also found have adequate concurrent validity, as the correlations between it and Sprecher and Fehr's Compassionate Love Scale, an established measure of compassion for humanity, was .96 (Hwang et al., 2008).

Intervention

Internet-Based Questionnaire

The participants were first asked to fill out the demographic and background questions. The questions assessed age, gender, racial/ethnic background, sexual orientation, marital/relationship status, location of law school, year in law school, number of children, highest academic level achieved by parents, total annual household income, hours per week working at a job, and student loan debt anticipated after graduation. After filling out the demographic information, the participants were guided to questionnaires measuring depression, anxiety, stress, mindfulness, self-compassion, and compassion for others. The questionnaires used included the DASS-21, PHQ-15, FFMQ-SF, SCS-SF, SCBCS, and the SRRS for a total of 120 questions. After filling out the DASS-21 and PHQ-15 the law student participants were asked to respond to three open-ended questions assessing the most stress, anxiety, and depression-inducing aspects of law school.

Procedure

Recruitment

In order to recruit participants, the principal researcher contacted student bar associations, via email and social media messages, from American Bar Association accredited law schools throughout the United States. This was done in order to increase the likelihood of inclusion of a diverse geographic sample of participants. Student bar associations were asked to send out emails to their student bodies and were provided with a link to the Qualtrics survey. The participants were expected to fill out the questionnaire at only one time point and expected to be asked questions related to demographic information, stress, anxiety, depression, mindfulness, and compassion for self and others. The participants were gathered and filled out the survey between the end of July 2017 and the first week of October 2017.

Informed Consent

Once participants followed the survey link, they were brought to the introduction page of the survey. This page included all information necessary and required for informed consent. Contact information for the principal investigator, faculty sponsor, and IRB were provided for any participants that had questions or concerns arise prior to and/or during the study. Once a participant clicked “yes I consent” and entered the survey, they were presumed to have read the information supplied and provided their informed consent.

Length of Study

The length of the study was approximately two months with the Qualtrics survey active between the end of July 2017 and the first week of October 2017.

Ethical Considerations

One ethical consideration is that participants may have experienced increased levels of

stress, anxiety, and depression due to the nature of the questions being asked. Participants were provided with the contact information of the principal investigator, faculty sponsor, and IRB in case concerns arose. Another major ethical consideration was that the study did not assess potential suicidality in the participants. Due to the nature of the data collection, it would not be feasible to identify which participant answered affirmatively to questions about suicidality. Therefore, questions assessing this were intentionally omitted.

CHAPTER IV

DATA ANALYSIS

Data analysis had six phases. First, there was an examination of the demographic and background questions in order to gather descriptive information of the sample of U.S. law students. This also included an analysis to determine the mean and standard deviation of each measure within the law student sample. Second, each specific hypothesis was tested. One-sample *t*-tests were utilized to compare law student participants' mean levels of stress, anxiety, and depression, as measured by the DASS-21, to the normative data of the general population provided in the aforementioned studies. Levels of compassion for self and others, as measured by the SCS-SF and SCBCS, were compared, using a one-way ANOVA, between participants in differing years of law school. A hierarchical multiple regression analysis was utilized to determine the contribution of each of the five facets of mindfulness, as measured by the FFMQ-SF, to the variance in stress, anxiety, and depression scores. An additional hierarchical multiple regression analysis was conducted to determine the contribution of self-compassion, as measured by the SCS-SF total score, and mindfulness, as measured by the FFMQ-SF total score, to the variance in stress, anxiety, and depression scores.

Using G*Power, researchers sought to determine, a-priori, the required sample size to obtain a small effect size when α is set at .05 and Power is set at .95. The G*Power analysis was conducted for a one-sample *t*-test, one-way ANOVA with four groups, hierarchical multiple regression with five tested predictors, and hierarchical multiple regression with two tested predictors. To identify a small effect size (.2) for a one-sample *t*-test the sample size needed was 272. To identify a small effect size (.25) for a one-way ANOVA with four groups a sample size of 280 was needed. To identify a small effect size (.15) for a hierarchical multiple regression

with five tested predictors a sample size of 138 was needed. To identify a small effect size (.15) for a hierarchical multiple regression with two tested predictors a sample size of 107 was needed.

Summary of Method Section

The purpose of the current study was to determine the levels of stress, anxiety, depression, mindfulness, and compassion for self and others within the U.S. law student population. The study also sought to compare levels of compassion for self and others between U.S. law students in the different individual years of law school. Another purpose of the study was to identify any potential influence of each of the five factors of mindfulness as well as self-compassion on U.S. law student stress, anxiety, and depression. The study consisted of a single survey distributed via the internet. Participants were only asked to fill out the survey once.

CHAPTER V

RESULTS

Introduction

The broad purpose of this study was to examine the levels of stress, anxiety, depression, mindfulness, and compassion for self and others in the U.S. law student population. This chapter discusses (a) the sample of participants, (b) demographic and background information of the participants, and (c) each of the four hypotheses and the statistical analyses conducted for each. Descriptive statistics for the PHQ-15 and SRRS can be found in Appendix A.

Description of Sample

A sample of 436 participants was initially collected. Out of the 436 initial responders 361 completed all demographic and background questions, 361 completed the DASS-21, 334 completed both the DASS-21 and the SCS-SF, and 321 completed all of the questionnaires, including the FFMQ-SF and SCBCS. The demographic and background data of the sample were analyzed using the 361 participants that completed the DASS-21 and demographic and background questions.

Demographic and Background Information

Demographic and background information were collected at the beginning of the survey for each participant. The demographic and background information collected was analyzed and is shown in Table 1.

Table 1

Demographic and Background Information for 361 U.S. Law Student Participants

Variable	Frequency	Percentage
Age		
21 - 30	240	66.5
31 - 40	27	7.5
41 - 50	4	1.1
Missing	90	24.9
Gender		
Men	107	29.6
Women	252	69.8
Transmen and/or Transwomen	2	.6
Racial/Ethnic Background		
Black or African American	17	4.7
Latino (Latin American, Hispanic)	45	12.5
Caucasian	259	71.7
Asian or Pacific Islander	21	5.8
Native American or Alaskan Native	2	.6
Middle Eastern	10	2.8
Other	7	1.9
Sexual Orientation		
Gay or Lesbian	16	4.4
Bisexual	23	6.4
Heterosexual	314	87.0
Queer	3	.8
Other	4	1.1
Missing	1	.3
Year in Law School		
1	102	28.3
2	123	34.1
3	128	35.5
4	5	1.4
5 or more	2	.6
Missing	1	.3

Table 1, continued

Marital/Relationship Status		
Single	282	78.1
Married/Partner	73	20.2
Separated	3	.8
Divorced	2	.6
Widowed	1	.3
Law School Location by U.S. State		
California	20	5.5
Colorado	1	.3
Connecticut	31	8.6
Illinois	118	32.7
Iowa	1	.3
Kansas	20	5.5
Louisiana	1	.3
Michigan	1	.3
Ohio	3	.8
Oregon	1	.3
Rhode Island	20	5.5
Texas	61	16.9
Virginia	53	14.7
Missing	30	8.3
Number of Children		
0	339	93.9
1	9	2.5
2	4	1.1
3	6	1.7
4 or more	3	.8
Highest Academic Level Achieved by Parents		
Some high school	14	3.9
High school diploma or equivalent	39	10.8
Associate's degree (AA)	14	3.9
Some college or equivalent	30	8.3
Bachelor's degree	117	32.4
Master's degree	62	17.2
Doctoral degree (MD, PhD, JD)	85	23.5

Table 1, continued

Total Annual Household Income		
Below \$10,000	102	28.3
\$10,000 - \$25,999	64	17.7
\$26,000 - \$40,999	34	9.4
\$41,000 - \$60,999	42	11.6
\$61,000 - \$80,999	30	8.3
\$81,000 - \$100,999	22	6.1
\$101,000 - \$199,999	40	11.1
Greater than \$200,000	21	5.8
Missing	6	1.7
Hours Per Week Working at a Job		
0	145	40.2
1-10	64	17.7
11-20	64	17.7
21-30	28	7.8
31-40	36	10.0
41 or more	23	6.4
Missing	1	.3
Student Loan Debt Anticipated After Graduation		
\$0 - \$25,000	87	24.1
\$25,001 - \$50,000	33	9.1
\$50,001 - \$75,000	36	10.0
\$75,001 - \$100,000	53	14.7
\$100,001 - \$125,000	48	13.3
\$125,001 - \$150,000	36	10.0
\$150,001 - \$175,000	21	5.8
\$175,001 or more	47	13.0

Statistical Analyses for Each Hypothesis

This section provides the information for the descriptive and inferential analyses of each hypothesis.

Hypothesis 1: Participants' Scores on the DASS-21 will be Higher than those in the Normative Data of the General Population

Table 2 shows the sample size, mean, standard deviation, minimum, and maximum values for the DASS-21 stress, anxiety, depression, and total scores. The sample size is $N = 361$.

The mean stress score is 8.38 (SD = 4.17). The mean anxiety score is 5.32 (SD = 4.16). The mean depression score is 5.26 (SD = 4.30). The mean total score is 18.96 (SD = 11.07).

Table 2

DASS-21 Descriptive Statistics (N=361)

	Minimum	Maximum	Mean	Std. Deviation
Stress	0	21	8.38	4.17
Anxiety	0	21	5.32	4.16
Depression	0	21	5.26	4.30
Total	0	63	18.96	11.07

The statistical test chosen to analyze hypothesis one was a one-sample *t*-test in order to determine if the U.S. law students' mean stress, anxiety, depression, and total scores on the DASS-21 were significantly different than the means from the normative data reported by the Crawford et al. (2011), Henry and Crawford (2005), and Sinclair et al. (2012) studies referenced above. After running the analyses the one-sample *t*-test output data were analyzed to determine the presence of significant differences and effect sizes. Effect sizes were measured using the equation, mean difference divided by standard deviation, as suggested in Green and Salkind (2013).

The normative data used for the analysis came from the Crawford et al. (2011), Henry and Crawford (2005), and Sinclair et al. (2012) studies referenced above. The sample size, mean, and standard deviation for the DASS-21 stress, anxiety, depression, and total scores are provided. Crawford et al. (2011) reported a sample size of $N = 497$ and means for stress of 3.99 (SD = 4.24), anxiety 1.74 (SD = 2.78), depression 2.57 (SD = 3.86) and total score 8.30 (SD = 9.83). Henry and Crawford (2005) reported a sample size of $N = 1,794$ and means for stress of 4.73 (SD = 4.20), anxiety 1.88 (SD = 2.95), depression 2.83 (SD = 3.87), and total score 9.43 (SD = 9.66). Sinclair et al. (2012) reported a sample size of $N = 499$ and means for stress of 4.10

(SD = 3.81), anxiety 1.99 (SD = 3.14), depression 2.85 (SD = 4.10), and total score 8.90 (SD = 10.09).

Table 3 shows the one-sample *t*-tests comparing law student stress to the stress normative data. The one-sample *t*-tests indicated that the level of law student stress ($M = 8.38$, $SD = 4.17$) was greater than the mean from the normative data for each study. Sinclair et al. (2012) mean of 4.10, $t(360) = 19.5$, $p = .000$, CI .95 = 3.85 to 4.71 with a large effect size ($d = 1.03$). Crawford et al. (2011) mean of 3.99, $t(360) = 20$, $p = .000$, CI .95 = 3.96 to 4.82 with a large effect size ($d = 1.05$). Henry and Crawford (2005) mean of 4.73, $t(360) = 16.63$, $p = .000$, CI .95 = 3.22 to 4.08 with a large effect size ($d = .87$).

Table 3

One Sample T-Test Comparing Law Student Stress to Sinclair et al. (2012), Crawford et al. (2011), & Henry & Crawford (2005) Normative Data

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		Effect Size
					Lower	Upper	
Sinclair et al. (2012)	19.50	360	.000	4.28	3.85	4.71	1.03
Crawford et al. (2011)	20.00	360	.000	4.39	3.96	4.82	1.05
Henry & Crawford (2005)	16.63	360	.000	3.65	3.22	4.08	.87

Table 4 shows the one-sample *t*-tests comparing law student anxiety to the anxiety normative data. The one-sample *t*-tests indicated that the level of law student anxiety ($M = 5.32$, $SD = 4.16$) was greater than the mean from the normative data for each study. Sinclair et al. (2012) mean of 1.99, $t(360) = 15.22$, $p = .000$, CI .95 = 2.90 to 3.76 with a large effect size ($d = .80$). Crawford et al. (2011) mean of 1.74, $t(360) = 16.36$, $p = .000$, CI .95 = 3.15 to 4.01 with a

large effect size ($d = .86$). Henry and Crawford (2005) mean of 1.88, $t(360) = 15.72$, $p = .000$, CI .95 = 3.01 to 3.87 with a large effect size ($d = .83$).

Table 4

One Sample T-Test Comparing Law Student Anxiety to Sinclair et al. (2012), Crawford et al. (2011), & Henry & Crawford (2005) Normative Data

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		Effect Size
					Lower	Upper	
Sinclair et al. (2012)	15.22	360	.000	3.33	2.90	3.76	.80
Crawford et al. (2011)	16.36	360	.000	3.58	3.15	4.01	.86
Henry & Crawford (2005)	15.72	360	.000	3.44	3.01	3.87	.83

Table 5 shows the one-sample t -tests comparing law student depression ($M = 5.26$, $SD = 4.30$) to the depression normative data. The one-sample t -tests indicated that the level of law student depression was greater than the mean from the normative data for each study. Sinclair et al. (2012) mean of 2.85, $t(360) = 10.66$, $p = .000$, CI .95 = 1.97 to 2.86 with a medium effect size ($d = .56$). Crawford et al. (2011) mean of 2.57, $t(360) = 11.89$, $p = .000$, CI .95 = 2.25 to 3.14 with a medium effect size ($d = .62$). Henry and Crawford (2005) mean of 2.83, $t(360) = 10.74$, $p = .000$, CI .95 = 1.99 to 2.88 with a medium effect size ($d = .56$).

Table 5

One Sample T-Test Comparing Law Student Depression to Sinclair et al. (2012), Crawford et al. (2011), & Henry & Crawford (2005) Normative Data

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		Effect Size
					Lower	Upper	
Sinclair et al. (2012)	10.66	360	.000	2.41	1.97	2.86	.56
Crawford et al. (2011)	11.89	360	.000	2.69	2.25	3.14	.62
Henry & Crawford (2005)	10.74	360	.000	2.43	1.99	2.88	.56

Table 6 shows the one-sample *t*-tests comparing law students' total DASS-21 score ($M = 18.96$, $SD = 11.07$) to total DASS-21 score normative data. The one-sample *t*-tests indicated that the law students' DASS-21 total score was greater than the mean from the normative data for each study. Sinclair et al. (2012) mean of 8.90, $t(360) = 17.27$, $p = .000$, $CI .95 = 8.91$ to 11.21 with a large effect size ($d = .91$). Crawford et al. (2011) mean of 8.30, $t(360) = 18.30$, $p = .000$, $CI .95 = 9.51$ to 11.81 with a large effect size ($d = .96$). Henry and Crawford mean of 9.43, $t(360) = 16.36$, $p = .000$, $CI .95 = 8.38$ to 10.68 with a large effect size ($d = .86$).

Table 6

One Sample T-Test Comparing Law Student Total DASS-21 Score to Sinclair et al. (2012), Crawford et al. (2011), & Henry & Crawford (2005) Normative Data

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		Effect Size
					Lower	Upper	
Sinclair et al. (2012)	17.27	360	.000	10.06	8.91	11.21	.91
Crawford et al. (2011)	18.30	360	.000	10.66	9.51	11.81	.96
Henry & Crawford (2005)	16.36	360	.000	9.53	8.38	10.68	.86

The results support the hypothesis that U.S. law students' stress, anxiety, depression, and total scores on the DASS-21 are higher than the means from the normative data for the general population. The U.S. law students' scores showed significant differences across the subscales and total score and that stress, anxiety, and total scores had large effect sizes, while depression had a medium effect size.

Hypothesis 2: There will be Significant Differences in the Participants' Level of Compassion for Self and Others, as Measured by the Self-Compassion Scale Short-Form and Santa Clara Brief Compassion Scale, Between Participants in Differing Years of Law School

Table 7 shows the sample size, mean, standard deviation, minimum, and maximum values for self-kindness, self-judgment, common humanity, isolation, mindfulness, over-identified, and total scores from the SCS-SF. The sample size is $N = 334$ and the mean for self-kindness is 5.46 (SD = 1.84), self-judgment is 5.31 (SD = 2.21), common humanity is 5.52 (SD = 2.06), isolation is 5.21 (SD = 2.31), mindfulness is 6.72 (SD = 1.97), over-identified is 5.05

(SD = 2.32), and total score is 33.27 (SD = 8.69).

Table 7

SCS-SF Descriptive Statistics (N = 334)

	Minimum	Maximum	Mean	Std. Deviation
Self-Kindness	2	10	5.46	1.84
Self-Judgment	0	10	5.31	2.21
Common Humanity	2	10	5.52	2.06
Isolation	0	10	5.21	2.31
Mindfulness	2	10	6.72	1.97
Over-Identified	2	10	5.05	2.32
Total	12	59	33.27	8.69

Table 8 shows the information for the participants' class level for those participants who fully completed the SCS-SF. The breakdown is as follows: 95 (28.4%) were in their first year, 112 (33.5%) were in their second year, 120 (35.9) were in their third year, 4 (1.5%) were in their fourth year, 1 (0.3%) was in their fifth year or greater, and 1 (0.3%) did not provide class level information. The participant in their fifth year or greater and the participant who did not provide class level information were removed from the hypothesis 2 inferential analysis for the SCS-SF.

Table 8

SCS-SF Law School Year

	Frequency	Percent
1	95	28.4
2	112	33.5
3	120	35.9
4	5	1.5
5 or more	1	.3
Missing	1	.3

The statistical test chosen to analyze the aspect of hypothesis two pertaining to the SCS-SF was a one-way ANOVA. This test was chosen in order to determine if U.S. law students' scores on the SCS-SF would be lower for the law students who have been in law school for more

years. A one-way ANOVA was conducted in SPSS for the SCS-SF to determine if any significant differences existed across students in different years of law school. If significant differences were shown *post-hoc* analyses would be conducted.

Table 9 shows that there were no significant differences on any of the SCS-SF subscales or the total score for law students that had been in law school for a differing number of years.

The data for each subscale and the total score is as follows: Self-Kindness, $F(3, 328) = 1.73, p = .16$; Self-Judgment, $F(3, 328) = 1.93, p = .124$; Common Humanity, $F(3, 328) = 1.77, p = .153$; Isolation, $F(3, 328) = 2.06, p = .105$; Mindfulness, $F(3, 328) = .23, p = .88$; Over-Identified, $F(3, 328) = 2.59, p = .053$; Total, $F(3, 328) = 2.03, p = .11$. Because there were no significant differences found, no *post-hoc* tests were conducted.

Table 9

One Way ANOVA Comparing SCS-SF Scores Between Law Student Year

		Sum of Squares	df	Mean Square	F	Sig.
Self-Kindness	Between Groups	17.56	3	5.85	1.73	.160
	Within Groups	1106.85	328	3.38		
	Total	1124.41	331			
Self-Judgment	Between Groups	28.06	3	9.36	1.93	.124
	Within Groups	1586.98	328	4.84		
	Total	1615.05	331			
Common Humanity	Between Groups	22.17	3	7.39	1.77	.153
	Within Groups	1370.63	328	4.18		
	Total	1392.81	331			
Isolation	Between Groups	32.81	3	10.94	2.06	.105
	Within Groups	1738.14	328	5.30		
	Total	1770.95	331			
Mindfulness	Between Groups	2.65	3	.88	.23	.879
	Within Groups	1283.86	328	3.91		
	Total	1286.51	331			
Over-Identified	Between Groups	41.24	3	13.75	2.59	.053
	Within Groups	1740.43	328	5.31		
	Total	1781.67	331			
Total	Between Groups	458.29	3	152.76	2.03	.109
	Within Groups	24663.19	328	75.19		
	Total	25121.48	331			

Table 10 shows the sample size, mean, standard deviation, minimum, and maximum values for the SCBCS. The sample size is $N = 321$ and the mean is 25.05 (SD = 7.09).

Table 10

SCBCS Descriptive Statistics (N = 321)

	Minimum	Maximum	Mean	Std. Deviation
Total	0	35	25.05	7.09

Table 11 shows the information for the participants' class level for those participants who fully completed the SCBCS; 92 (28.7%) were in their first year, 106 (33.0%) were in their second year, 117 (36.4%) were in their third year, 4 (1.2%) were in their fourth year, 1 (0.3%) were in their fifth year or greater, and 1 (0.3%) did not provide class level information. The participant in their fifth year or greater and the participant who did not provide class level information were removed from the hypothesis 2 inferential analysis for the SCBCS.

Table 11

SCBCS Law School Year

	Frequency	Percent
1	92	28.7
2	106	33.0
3	117	36.4
4	4	1.2
5 or more	1	.3
Missing	1	.3

The statistical test chosen to analyze the aspect of hypothesis two pertaining to the SCBCS was a one-way ANOVA. This test was chosen in order to determine if U.S. law students' scores on the SCBCS would be lower for the law students who have been in law school for more years. A one-way ANOVA was conducted in SPSS for the SCBCS to determine if any significant differences existed across students in different years of law school. If significant differences were shown *post-hoc* analyses would be conducted.

Table 12 shows that there were no significant differences on the SCBCS for law students that had been in law school for a differing number of years, $F(3, 315) = .675, p = .57$. Because

there were no significant differences found no post-hoc tests were conducted.

Table 12

One Way ANOVA Comparing SCBCS Scores Between Law Student Year

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	102.43	3	34.14	.68	.568
Within Groups	15934.77	315	50.59		
Total	16037.20	318			

The results do not support the hypothesis that U.S. law students' levels of compassion for self and others, as measured by scores on the SCS-SF and SCBCS, are lower for law students that have been in law school for more years.

Hypothesis 3: The Specific Facet of Mindfulness, “Non-Judgmental Awareness of Internal Experiences”, will Account for the Most Variance Across Depression, Anxiety, and Stress out of the Five Facets of Mindfulness as Measured by the FFMQ-SF

Table 13 shows the sample size, mean, standard deviation, minimum, and maximum values for the FFMQ-SF observing, describing, acting with awareness, non-judgment of internal experiences, non-reactivity to internal experiences, and total scores. The sample size is $N = 321$ and the mean for observing is 12.79 (SD = 3.80), describing is 17.31 (SD = 3.70), acting with awareness is 15.83 (SD = 3.93), non-judgmental awareness of internal experiences is 14.81 (SD = 3.90), non-reactivity to internal experiences is 13.74 (SD = 3.74), and the FFMQ-SF total score is 74.48 (SD = 11.23).

Table 13

FFMQ-SF Descriptive Statistics (N = 321)

	Minimum	Maximum	Mean	Std. Deviation
Observing	4	20	12.79	3.80
Describing	8	25	17.31	3.70
Acting with Awareness	5	25	15.83	3.93
Non-judgment of Internal Experiences	5	25	14.81	3.90
Non-Reactivity to Internal Experiences	5	25	13.74	3.74
Total	41	109	74.48	11.23

Table 14 shows the sample size, mean, standard deviation, minimum, and maximum values for the DASS-21 stress, anxiety, and depression scores. In total 361 participants fully completed the DASS-21. However, only 321 participants fully completed the DASS-21 and the FFMQ-SF. Therefore, another descriptive analysis is provided for the DASS-21 based on the $N = 321$ sample size. The mean for stress is 8.37 (SD = 4.16), anxiety is 5.23 (SD = 4.18), and depression is 5.22 (SD = 4.27).

Table 14

Hypothesis Three and Four DASS-21 Descriptive Statistics (N = 321)

	Minimum	Maximum	Mean	Std. Deviation
Stress	0	21	8.37	4.16
Anxiety	0	21	5.23	4.18
Depression	0	21	5.22	4.27

The statistical test chosen to analyze hypothesis three was a hierarchical multiple regression. A separate hierarchical multiple regression was conducted for the DASS-21 stress, anxiety, and depression scores. Each hierarchical multiple regression was conducted in five steps, one for each of the five facets of mindfulness of the FFMQ-SF. The first step entered non-judgmental awareness of internal experiences, the second then added non-reactivity to internal

experiences, the third added acting with awareness, the fourth added describing, and the fifth added observing.

Stress. Table 15 shows the results of the hierarchical multiple regression for the five facets of mindfulness and DASS-21 stress scores. Non-judgmental awareness of internal experiences explained a significant proportion of variance in stress scores, 9.2%, R^2 Change = .092; $F(1, 319) = 32.31, p = .000$. Non-reactivity to internal experiences also explained a significant proportion of variance in stress scores, 9.2%, R^2 Change = .092; $F(1, 318) = 35.77, p = .000$. Acting with awareness also explained a significant proportion of variance in stress scores, 7.6%, R^2 Change = .076; $F(1, 317) = 32.57, p = .000$. Describing and observing did not account for significant additional variance in stress scores.

Table 15

Hypothesis Three Hierarchical Multiple Regression Model Summary for Stress Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.303 ^a	.092	.089	3.97	.092	32.31	1	319	.000
2	.429 ^b	.184	.179	3.77	.092	35.77	1	318	.000
3	.510 ^c	.260	.253	3.60	.076	32.57	1	317	.000
4	.510 ^d	.260	.251	3.60	.000	.17	1	316	.685
5	.511 ^e	.261	.249	3.60	.001	.41	1	315	.522

Note.

a. Predictors: (Constant), Non-judgment of internal experiences Score

b. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score

c. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score

d. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score, Describing Score

e. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score, Describing Score, and Observing Score.

Anxiety. Table 16 shows the results of the hierarchical multiple regression for the five facets of mindfulness and DASS-21 anxiety scores. Non-judgmental awareness of internal experiences explained a significant proportion of variance in anxiety scores, 8.8%, R^2 Change = .088; $F(1, 319) = 30.83, p = .000$. Non-reactivity to internal experiences also explained a significant proportion of variance in anxiety scores, 6%, R^2 Change = .06; $F(1, 318) = 22.24, p = .000$. Acting with awareness also explained a significant proportion of variance in anxiety scores, 7.6%, R^2 Change = .076; $F(1, 317) = 31.19, p = .000$. Describing and observing did not account for significant additional variance in anxiety scores.

Table 16

Hypothesis Three Hierarchical Multiple Regression Model Summary for Anxiety Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.297 ^a	.088	.085	3.99	.088	30.83	1	319	.000
2	.384 ^b	.148	.142	3.87	.060	22.24	1	318	.000
3	.473 ^c	.224	.217	3.70	.076	31.19	1	317	.000
4	.475 ^d	.226	.216	3.70	.002	.63	1	316	.429
5	.475 ^e	.226	.213	3.70	.000	.02	1	315	.883

Note.

- a. Predictors: (Constant), Non-judgment of internal experiences Score
- b. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score
- c. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score
- d. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score, Describing Score
- e. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score, Describing Score, Observing Score

Depression. Table 17 shows the results of the hierarchical multiple regression for the five facets of mindfulness and DASS-21 depression scores. Non-judgmental awareness of internal

experiences explained a significant proportion of variance in depression scores, 11.7%, R^2 Change = .117; $F(1, 319) = 42.20, p = .000$. Non-reactivity to internal experiences also explained a significant proportion of variance in depression scores, 6.6%, R^2 Change = .066; $F(1, 318) = 25.76, p = .000$. Acting with awareness also explained a significant proportion of variance in depression scores, 7.3%, R^2 Change = .073; $F(1, 317) = 31.31, p = .000$. Describing and observing did not account for significant additional variance in depression scores.

Table 17

Hypothesis Three Hierarchical Multiple Regression Model Summary for Depression Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.342 ^a	.117	.114	4.02	.117	42.20	1	319	.000
2	.428 ^b	.183	.178	3.88	.066	25.76	1	318	.000
3	.506 ^c	.256	.249	3.70	.073	31.31	1	317	.000
4	.509 ^d	.259	.249	3.70	.002	.93	1	316	.336
5	.514 ^e	.265	.253	3.69	.006	2.56	1	315	.111

Note.

- a. Predictors: (Constant), Non-judgment of internal experiences Score
- b. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score
- c. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score
- d. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score, Describing Score
- e. Predictors: (Constant), Non-judgment of internal experiences Score, Non-reactivity to internal experiences Score, Acting with Awareness Score, Describing Score, Observing Score

The results of the hierarchical multiple regression analysis support hypothesis three in part. The hypothesis was supported with regard to non-judgmental awareness of internal experiences accounting for the most variance across anxiety and depression scores out the five facets of mindfulness as measured by the FFMQ-SF. However, with regard to stress scores, non-

judgmental awareness of internal experiences and non-reactivity to internal experiences each explained an equal amount of the variance in DASS-21 stress scores.

Hypothesis 4: Levels of Self-Compassion, as Measured by the SCS-SF Total Score, will Account for Greater Variance in Levels of Stress, Anxiety, and Depression as Compared to the FFMQ-SF Total Score

In total 334 participants fully completed the SCS-SF. However, only 321 participants fully completed the DASS-21, SCS-SF, and FFMQ-SF. Therefore, another descriptive analysis is provided for the SCS-SF based on the $N = 321$ sample size. Table 18 shows the sample size, mean, standard deviation, minimum, and maximum values for the SCS-SF self-kindness, self-judgment, common humanity, isolation, mindfulness, over-identified, and total scores. The mean for self-kindness is 5.42 ($SD = 1.81$), self-judgment is 5.37 ($SD = 2.20$), common humanity is 5.49 ($SD = 2.05$), isolation is 5.22 ($SD = 2.30$), mindfulness is 6.73 ($SD = 1.97$), over-identified is 5.07 ($SD = 2.32$), and SCS-SF total score is 33.31 ($SD = 8.74$).

Table 18

Hypothesis Four SCS-SF Descriptive Statistics ($N = 321$)

	Minimum	Maximum	Mean	Std. Deviation
Self-Kindness	2	10	5.42	1.81
Self-Judgment	2	10	5.37	2.20
Common Humanity	2	10	5.49	2.05
Isolation	2	10	5.22	2.30
Mindfulness	2	10	6.73	1.97
Over-Identified	2	10	5.07	2.32
Total SCS-SF	12	59	33.31	8.74

In total 361 participants fully completed the DASS-21. However, only 321 participants fully completed the DASS-21, SCS-SF, and FFMQ-SF. Therefore separate descriptive statistics are provided for the DASS-21. Table 18 above shows the information for the DASS-21

descriptive statistics for the 321 participants included in hypothesis 4.

The statistical test chosen to analyze hypothesis four was a hierarchical multiple regression. A separate hierarchical multiple regression was conducted for DASS-21 stress, anxiety, and depression scores. Each hierarchical multiple regression was conducted in two steps. The first step entered the SCS-SF total score and the second step added the FFMQ-SF total score.

Stress. Table 19 shows the results of the hierarchical multiple regression analysis for the SCS-SF and FFMQ-SF total scores and the DASS-21 stress scores. The SCS-SF total score explained a significant proportion of variance in stress scores, 16.4%, R^2 Change = .164; $F(1, 319) = 62.48, p = .000$. The FFMQ-SF total score also explained a significant proportion of the variance stress scores, 6.4%, R^2 Change = .064; $F(1, 318) = 26.48, p = .000$.

Table 19

Hypothesis Four Hierarchical Multiple Regression Model Summary for Stress Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.405 ^a	.164	.161	3.81	.164	62.48	1	319	.000
2	.478 ^b	.228	.223	3.67	.064	26.48	1	318	.000

Note.

a. Predictors: (Constant), SCS-SF Total Score

b. Predictors: (Constant), SCS-SF Total Score, FFMQ-SF Total Score

Anxiety. Table 20 shows the results of the hierarchical multiple regression analysis for the SCS-SF and FFMQ-SF total scores and the DASS-21 anxiety scores. The SCS-SF total score explained a significant proportion of variance in anxiety scores, 11.1%, R^2 Change = .111; $F(1, 319) = 39.92, p = .000$. The FFMQ-SF total score also explained a significant proportion of the variance in anxiety scores, 7.9%, R^2 Change = .079; $F(1, 318) = 30.98, p = .000$.

Table 20

Hypothesis Four Hierarchical Multiple Regression Model Summary for Anxiety Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	.333 ^a	.111	.108	3.94	.111	39.92	1	319	.000
2	.436 ^b	.190	.185	3.77	.079	30.98	1	318	.000

Note.

a. Predictors: (Constant), SCS-SF Total Score

b. Predictors: (Constant), SCS-SF Total Score, FFMQ-SF Total Score

Depression. Table 21 shows the results of the hierarchical multiple regression analysis for the SCS-SF and FFMQ-SF total scores and the DASS-21 depression scores. The SCS-SF total score explained a significant proportion of variance in depression scores, 22%, R^2 Change = .220; $F(1, 319) = 90.18$, $p = .000$. The FFMQ-SF total score also explained a significant proportion of variance in depression scores, 5.9%, R^2 Change = .059; $F(1, 318) = 26.17$, $p = .000$.

Table 21

Hypothesis Four Hierarchical Multiple Regression Model Summary for Depression Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.469 ^a	.220	.218	3.78	.220	90.18	1	319	.000
2	.529 ^b	.280	.275	3.64	.059	26.17	1	318	.000

Note.

a. Predictors: (Constant), SCS-SF Total Score

b. Predictors: (Constant), SCS-SF Total Score, FFMQ-SF Total Score

The results of the hierarchical multiple regression analysis support hypothesis four.

CHAPTER VI

DISCUSSION

This section will provide (a) a succinct summary of the study, (b) a discussion of the study's results, (c) interpretations and implications of the study findings as they relate to U.S. law students, (d) limitations of the study, and (e) recommendations for future research.

Study Summary

Purpose

The broad purpose of this study was to examine and draw attention to U.S. law student mental health issues and to influence future research aimed at identifying methods of reducing and preventing these mental health issues. This purpose was achieved through an examination of the levels stress, anxiety, and depression in the U.S. law student population and a comparison of these levels to that of the general population. Additionally, this study explored the levels of compassion for self and others across years in law school. Another aim of this study was to explore the impact of levels of mindfulness and compassion for self and others on law students' levels of stress, anxiety, and depression.

Literature review

Empirical studies aimed at exploring mental health issues in the U.S. law student population are few and far between (Dammeyer & Nunez, 1999). The studies that have examined the law student population suggest that law students experience clinically significant stress, anxiety, and depression and that the severity may be greater than comparable graduate and medical student populations as well as the general population (Larcombe et al., 2012; Leahy et al., 2010; Peterson & Peterson, 2013). However, two of the most relevant studies of law student stress, anxiety, and depression were conducted using Australian law student populations

(Larcombe et al., 2012; Leahy et al., 2010). These higher levels of stress, anxiety, and depression plaguing U.S. law students are likely to increase in severity and impact, developing into increased suicidality and substance use, as these students enter the legal work force (Benjamin et al., 1990; Eaton et al., 1990; Krill et al., 2016). It has also been suggested that law school acts as a means to replace law students' sense of compassion and empathy with a more rational and analytical approach (Organ, 2011; Peterson & Peterson, 2013).

Mindfulness and compassion have received much empirical support in their ability to both prevent and treat symptoms of stress, anxiety, and depression (Albertson, Neff, & Dill-Shackleford, 2015; Birnie, Speca, & Carlson, 2010; Boettcher et al., 2014; Cavanagh et al., 2013; Cavanagh et al., 2014; Chiesa & Seretti, 2009; Gilbert & Procter, 2006; Gluck & Maercker, 2011; Keng et al., 2011; Lynch et al., 2011; Shapiro, Schwartz, & Bonner, 1998; Warnecke et al., 2011). Additionally, multiple studies have suggested that both mindfulness and self-compassion are predictors of levels of stress, anxiety, and depression (Birnie, Speca, & Carlson, 2010; Cash & Whittingham, 2010; Myers et al., 2012; Neely et al., 2009; Neff & Germer, 2012). Further, it has been suggested that the mindfulness aspect non-judgmental awareness of internal experiences is the most impactful aspect of mindfulness on stress, anxiety, and depression (Cash & Whittingham, 2010). Finally, self-compassion has been shown to have one of the largest impacts on stress, anxiety, and depression as compared to other variables (Neff & Germer, 2012; Ozyesil & Akbag, 2013).

Method

This study recruited a convenience sample of U.S. law student participants, using the internet, from law schools through the United States to complete a survey gathering demographic and background information as well as information related to stress, anxiety, depression,

mindfulness, and compassion. A total of 361 participants completed all components necessary to be included into hypothesis one. A total of 334 participants completed all components necessary to be included into the first part of hypothesis two while 321 completed all components necessary to be included into the second part. A total of 321 participants completed all components necessary to be included into hypotheses three and four.

Results

The results of the analysis of the hypothesis one data showed significant differences between the participating U.S. law students' scores and the normative data on DASS-21 stress, anxiety, depression, and total scores, with medium and large effect sizes. The results of the analysis of the hypothesis two data showed no significant differences on SCS-SF or SCBCS scores between law students in different years of law school. The results of the analysis of the hypothesis three data showed that non-judgmental awareness of internal experiences, non-reactivity to internal experiences, and acting with awareness all accounted for a significant proportion of the variance of stress, anxiety, and depression scores. Non-judgmental awareness of internal experiences accounted for the most variance on anxiety and depression scores, and accounted for the same variance as non-reactivity to internal experiences for stress. The results of the analysis of the hypothesis four data showed that scores on the SCS-SF and FFMQ-SF accounted for a significant proportion of the variance of stress, anxiety, and depression, scores, with SCS-SF accounting for a greater proportion.

Interpretations and Implications

U.S. Law Students' Levels of Stress, Anxiety, and Depression

It should first be stated that this interpretation is based on a convenience sample of U.S. law students. This study did not include a random sample of all U.S. law students and the results

are likely skewed due to wording used during recruitment and participant motivation to participate. The results from this preliminary investigation do, however, suggest that this is a worthy area of future research. Results from the one-sample *t*-test analyses identified significant differences for law students' DASS-21 stress, anxiety, depression, and total scores as compared to the normative data. Additionally, law students' scores on stress, anxiety, and DASS-21 total had large effect sizes compared to their normative data counterparts, while depression showed a medium effect size.

The findings of this study are in line with previous studies suggesting high levels of stress, anxiety, and depression amongst law students (Larcombe et al., 2012; Leahy et al., 2010; Peterson & Peterson, 2013). However, these studies were conducted with Australian law students and each examined only one law school. Because hundreds of law students found the topic of this study relevant, and due to their scores on the DASS-21, the findings of this preliminary investigation suggest that further research on the mental health status of law students in the United States utilizing more rigorous random sampling is warranted.

Additionally, it has been suggested that law students experience higher levels of stress, anxiety, and depression as compared to graduate and medical students as well as the general population (Larcombe et al., 2012; Leahy et al., 2010; Peterson & Peterson, 2013). This study's findings lend support to the assertion about the general population. Specifically, findings suggest that U.S. law students that found the student relevant to themselves had higher levels of stress, anxiety, and depression are than the general population in the U.K., Australia, and the U.S. (Crawford et al., 2011; Henry & Crawford, 2005; Sinclair et al., 2012).

U.S. Law Students' Levels of Compassion for Self and Others

Results from the one-way ANOVA analysis did not identify any significant differences

for scores on the SCS-SF or the SCBCS between law students in different years of law school. These results suggest that U.S. law students' levels of compassion for self and others remains consistent and do not differ for those who have been in law school longer. This finding is somewhat contradictory to the suggestion that law school replaces law students' sense of compassion and empathy with rational and analytical reasoning (Organ, 2011; Peterson & Peterson, 2013). However, there are multiple possibilities as to why the scores on the measures of compassion for self and others did not significantly vary across years in law school.

One possibility that the compassion for other scores remained consistent across years in law school may be due to the relatively high scores that the sample of U.S. law students received on the SCBCS ($M = 25.05$, $SD = 7.09$). Upon cursory review of U.S. law student responses to the question "what was your reason for attending law school?", law students frequently responded that "helping others" was a main reason for attending law school. A more in depth analysis of this data is outside the scope of this study. However, due to the scores on the SCBCS and initial reason for entering law school, it appears that law students' compassion for others, a major reason for attending law school in the first place, is more likely to remain stable as law students progress in law school. Another possibility is that the anecdotal references in the literature are inaccurate and that, while law school teaches rationality and logic, empathy and compassion might not be replaced (Organ, 2011; Peterson & Peterson, 2013).

Regarding self-compassion, it is possible that law students' levels of self-compassion is low compared to the general population and that, due to the already low levels of their self-compassion, it does not change throughout law school. In fact, comparing the sample of U.S. law students' self-compassion total scores ($M = 33.27$, $SD = 8.69$) to those of general Dutch population ($N = 1,643$, $M = 80.13$, $SD = 12.75$) reported by Lopez et al. (2015), it appears that

law students' levels of self-compassion are likely lower than the general U.S. population. It is possible that those that choose to enter law school tend to be more perfectionistic and higher achieving, which may relate to a predisposition to be more self-critical and less self-compassionate in attempts to better themselves.

Relationship of the Facets of Mindfulness to Stress, Anxiety, and Depression in U.S. Law Students

Results from the hierarchical multiple regression analysis showed that, of the facets of mindfulness, non-judgmental awareness of internal experiences, non-reactivity to internal experiences, and acting with awareness all accounted for significant proportions of the variance of stress, anxiety, and depression scores. The results also identified that non-judgmental awareness of internal experiences accounted for the most variance for anxiety and depression, and accounted for an equal proportion of the variance for stress as non-reactivity to internal experiences. These findings are in line with prior empirical studies suggesting that mindfulness is a predictor of stress, anxiety, and depression and that non-judgmental awareness of internal experiences may have the largest impact, out of the facets of mindfulness, on stress, anxiety, and depression (Birnie, Speca, & Carlson, 2010; Cash & Whittingham, 2010; Myers et al., 2012; Neely et al., 2009; Neff & Germer, 2012). However, these findings suggest that non-judgmental awareness of internal experiences and non-reactivity to internal experiences may be equally as important when it comes to stress. It may be fruitful to provide law students with a means to increase their abilities in mindfulness, in particular non-judgmental awareness of internal experiences, as a means of preventing and reducing prolonged issues with stress, anxiety, and depression.

Relationship of Mindfulness and Self-Compassion to Stress, Anxiety, and Depression in U.S. Law Students

Results from the hierarchical multiple regression analysis showed that the total scores on the SCS-SF and FFMQ-SF accounted for a significant proportion of the variance for stress, anxiety, and depression scores. The results also identified that scores on the SCS-SF accounted for a greater proportion of the variance than scores on the FFMQ-SF across stress, anxiety, and depression. These findings suggest that levels of self-compassion are greater predictor than levels of mindfulness when it comes to levels of stress, anxiety, and depression.

These findings are in line with previous empirical studies suggesting that self-compassion is a predictor of stress, anxiety, and depression (Birnie, Speca, & Carlson, 2010; Cash & Whittingham, 2010; Myers et al., 2012; Neely et al., 2009; Neff & Germer, 2012). Additionally, these findings further support the notion that self-compassion has one of the greatest impacts on stress, anxiety, and depression as compared to other variables (Neff & Germer, 2012; Ozyesil & Akbag, 2013). Law students may benefit from learning methods to increase self-compassion in order to prevent and reduce prolonged issues with stress, anxiety, and depression.

Contributions

Although there have been many studies regarding stress, anxiety, and depression in non-clinical populations and references to the high levels of these variables in law student populations, few empirical studies have been done with the U.S. law student population. Further, though there are anecdotal references to law school taking away law students' empathy and compassion no formal empirical studies have been conducted to test this hypothesis. Additionally, though there have been multiple studies examining the relationship of compassion and mindfulness to stress, anxiety, and depression, no studies have examined if this relationship

exists within the U.S. law student population. Because of the small amount of empirical studies conducted with the U.S. law student population, the current study sought to address the prevalence and severity of stress, anxiety, and depression as well as their relationship to mindfulness and compassion in a convenience sample of the U.S. law student population.

This study explored the prevalence and severity of stress, anxiety, and depression in a convenience sample of U.S. law students and compared them to normative data. Unsurprisingly, the law student participants had significantly higher rates of stress, anxiety, depression, and total distress as measured by the DASS-21 than the normative data. This difference might represent the difficulty and pressure put on law students in law school as well as the focus on competition and ranking between students. By drawing attention to the high levels of stress, anxiety, and depression in this convenience sample U.S. law students, law schools may become more likely to provide law students with resources to address these issues. Taking steps to address these issues may help to prevent clinical issues from developing and reducing the likelihood of these issues developing into substance use and suicidal ideation.

This study also explored the levels of law student compassion for self and others across law student in law school for a differing number of years. The lack of a significant difference is an important piece of information because it suggests that law student compassion for self and others may be a more solidified construct and not easily changed by law school's focus on rationality and logic. It may also be that, while law school does teach logic and rationality, it may not systematically remove empathy and compassion.

This study also identified that, much like the general population, self-compassion and mindfulness, in particular non-judgmental awareness of internal experiences, non-reactivity to internal experiences, and acting with awareness, are important factors for U.S. law students'

stress, anxiety, and depression. Given that U.S. law students have higher levels of stress, anxiety, and depression than the general population, it may behoove law schools to incorporate aspects of mindfulness and self-compassion into the curriculum in order provide law students with a means to address these mental health issues. These skills can be taught in brief formats and can still be effective (Albertson, Neff, & Dill-Shackleford, 2015; Cavanagh et al., 2013; Gluck & Maercker, 2011; Neff & Germer, 2012; Shapira & Mongrain, 2010; Smeets et al., 2014).

Given that anxiety and depression, in particular, and also stress decrease the quality of a person's life and are economically costly to society (McManus et al., 2010), this study sheds light on a potential issue for a population that tends to wield a lot of power and responsibility in the U.S. society. In particular, positions such as judges, policy makers, legislators, prosecutors, and defense attorneys have a high likelihood of being filled by individuals that attended law school in the past. In a majority of U.S. states, state judges are required to have a formal law degree and there is an implicit requirement for federal judges to have a law degree (Quality Judges Initiative, 2017). In the 115th congress, 37.8% of the members of the House of Representatives and 55% of senators attended law school (Manning, 2017). Law students go on to wield power and responsibility and the work that they do and the decisions they make have a societal impact. This makes it imperative that law students are provided with methods for address this stress, anxiety, and depression for their benefit and for that of the country.

Limitations of the Study

This study, like other studies, had limitations that potentially affect the implications of this study's findings. First and foremost, this preliminary investigation used non-random sampling and recruitment wording that drew self-selected participants that were interested in the particular topic. However, hundreds of students found this topic relevant. Second, the data was

collected towards the between the end of July 2017 and the beginning of October 2017. During this time period law students are likely to be experiencing less of a workload due to summer break and the beginning of the semester. It is possible that the results of the study would be different if the data were collected towards the end of the semester when law students are preparing for final exams. Third, the SCS-SF has a mindfulness subscale, which may affect the contribution of the FFMQ-SF total score to the variance of stress, anxiety, and depression scores.

Fourth, the examination of law student compassion for self and others across years in law school was conducted via cross-sectional design. The accuracy of the results would increase with the utilization of a longitudinal study design following law students from first year through graduation and taking measures of self and other compassion each year. Fifth, this study did not consider the impact of a host of variables assessed by the questionnaire law students filled out. The scope of this study did not include consideration of demographic or background variables or the PHQ-15, a measurement that focuses more on physical symptoms, or the SRRS, a measurement that looks at recent stressful events.

Sixth, the influence of social desirability on self-report measures has been well documented in many empirical studies (van de Mortel, 2008). As with other studies utilizing self-reporting, it may be that law students were influenced by the social desirability in their responses to the SCBCS, a measure of compassion for others. As suggested by research focusing on the influence of social desirability on self-report measures, the validity of the results from the examination of law student scores across years in law school would increase if a social desirability scale were used (van de Mortel, 2008).

Recommendations for Future Research

The purpose of this study was to explore the prevalence and severity of law student

stress, anxiety, and depression and their relationship to compassion and mindfulness. After analysis and interpretation of this study's findings recommendations for future research directions have been identified.

First, the results of this preliminary investigation suggest that empirical research utilizing more rigorous random sampling should be conducted with the U.S. law student population. Second, the impact of demographic and background information on law students' scores on stress, anxiety, depression, mindfulness, and compassion can be analyzed. In particular, identifying reasons for attending law school may contribute to an understanding of self and other compassion across law school years. Amount of student loan debt that students anticipate may contribute significantly to levels of stress, anxiety, and depression. Much information can be gained through analysis of the relationship of this demographic and background information on each measurement. Third, exploring the differences in stress, anxiety, and depression across law school years will provide information regarding whether or not these issues increase as law students progress through law school. Fourth, given that the findings suggest that law student stress, anxiety, and depression is higher than the general population, and that self-compassion is found to be important to these issues, it may be beneficial to compare law students' levels of self-compassion to the normative data to determine if law students are lacking in this area as compared to the general population.

Fifth, in order to gain knowledge on the effect of law school on U.S. law student compassion, future studies utilizing a longitudinal study design would be beneficial in analyzing levels of compassion for self and others as law students progress through law school. Sixth, given the effectiveness of brief mindfulness and compassion-based trainings and interventions, future studies should implement these interventions in U.S. law student populations to determine

the effect that they would have on levels of stress, anxiety, and depression. A component of this could be longitudinal in nature and evaluate law students' stress, anxiety, and depression, as well as development of other mental health symptoms, as law students progress in the legal field. This study could compare law students who received mindfulness and self-compassion training to those that did not. Sixth, future research evaluating law student stress, anxiety, depression, mindfulness, and compassion for self and others would benefit from the utilization of a social desirability scale in order to increase the validity of the results.

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APPENDIX A

ADDITIONAL QUESTIONNAIRE DESCRIPTIVE INFORMATION

Table 22 shows the sample size, mean, standard deviation, minimum, and maximum values for the PHQ-15. The sample size is $N = 357$ and the mean score is 9.94 ($SD = 5.48$).

Table 22

PHQ-15

	N	Minimum	Maximum	Mean	Std. Deviation
PHQ-15 Score	357	0	29	9.94	5.48

Table 23 shows the sample size, mean, standard deviation, minimum, and maximum values for the SRRS. The sample size is $N = 342$ and the mean score is 201.79 ($SD = 140.15$).

Table 23

SRRS

	N	Minimum	Maximum	Mean	Std. Deviation
SRRS Score	342	0	1007	201.79	140.15