The Buffering Effect of Mindfulness Between the Stressors and Perceived Stress in Faith-Based University Students

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ABSTRACT

The purpose of study was to research the buffering effect of mindfulness between the stressors and perceived stress in faith-based university students. Literature suggests that as mindfulness increases, stress decreases. This study attempts to provide information on college students' perceived stress levels, stressors they face, and mindfulness awareness. A multiple linear regression was conducted to examine the association between perceived stress, stressors, and mindfulness levels. A sample of 91 students in the Spring of 2018 at a faith-based university in Texas were asked to participate in an online survey. Some findings were not congruent with the literature. The results of this study found that the significant factors of perceived stress were: overwhelming responsibilities, class attendance, being female, sleep, and course load. The top stressors of students were course load and responsibility. It also showed how female students showed to be more stressed and overall students at this private university showed to be more stressed then in other studies. Though mindfulness did not buffer the effect of stressors and perceived stress, the results of this study informed the university and counseling center of the stressors of college students on campus, mindfulness levels, and perceived stress levels. Prevention is key to student success, and college counseling centers can provide prevention for students by offering one-on-one counseling, group counseling, workshops, and skills training for students.

The Buffering Effect of Mindfulness Between the Stressors and Perceived Stress in

Faith-Based University Students

A Thesis

Presented to

The Faculty of the School of Social Work

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In Partial Fulfillment

Of the Requirements for the Degree
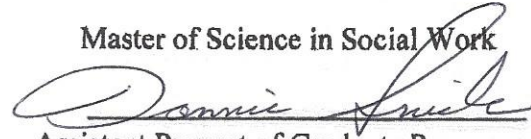
Master of Science in Social Work

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This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Council of Abilene Christian University in partial fulfillment of the requirements for the degree

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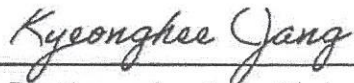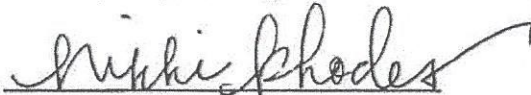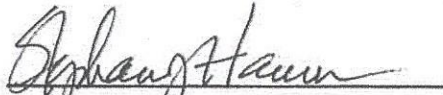
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CHAPTER I

INTRODUCTION

Problem Statement

College is a stressful time for students as they have to balance a new lifestyle with classes, homework, new living environment, more responsibilities, social life, extra curricular activities and even employment. The transition is especially difficult for those going to college straight from high school because high school is very structured, whereas in college every student's schedule is different. Students who are still in their adolescence, especially freshmen, have not fully developed coping skills to deal with stress, which can result in unhealthy behavior (Mishra & Rath, 2015). College can change and shape a student's identity due to the diverse cultures and varying populations in that individual's life (Bhujade, 2017).

Students today undergo more stress: pressure of academics, new transitions, different lifestyles, new experiences with new friends, various opportunities, boundless freedom, and a vast array of choices (Bhujade, 2017). They are continuously surrounded by new, ever evolving advances in technology. As students, they are peer pressured to be socially conscious of politics, the economy, and other social factors and context of college life (David Sam Jayakumar & Sulthan, 2013). Time management and academia are huge stressors for students as well. Emotional stressors seem to be fear of failure and identity crises (Bhujade, 2017). The pressures escalate with low social and economic

factors, undeveloped life skills, and competitiveness college environment (de Soua et al., 2016).

Although almost everyone has to deal with stress, college students undergo a time in their life filled with more stressors, which can result in more stress. Students at some point will go through a difficult situation in life, but if they can learn and be taught how to deal with challenges and manage stress in a positive way, they can develop a more positive outlook on day to day life (Crowley & Monk, 2017; Kar, Mukhtar, Ibrahim, Shian-Ling, & SIdik, 2015).

American College Health Association performed a National College Health Assessment during the fall of 2016. They asked students within the last 12 months to rate their overall level of stress, and results indicate that a total of 55.9% of college students are experiencing above-normal amounts of stress (ACHA NCHA II, 2016). College students are learning to live on their own for the first time, balancing school, work, social life, finances, eating right, exercising, and being exposed to a diversity of cultures and different ways of thinking (Bhujade, 2017; Reddy Reddy, & Reddy, 2014). So many unknowns and little coping mechanisms can cause high levels of stress on students.

When stress becomes too much to cope, there can be negative consequences. College students that undergo high levels of stress can experience anxiety, depression, mental health issues, and negative well-being (Mishra & Rath, 2015; Smith & Chin Man Chui, 2011). Stress can become harmful towards a student's health when the pressure of stress goes beyond one's ability to cope (Martinovich, 2015). Stress can affect the whole body, including one's mood, thoughts, and how one sleeps, eats, and feels about one's self (Joshi, Kiran, Singla, & Sah, 2016). When college students are facing extraneous

amounts of stress, it can affect a student academically resulting in: missing classes (Thomas & Borrayo, 2016), poor academics (Joshi, Kiran, Singla, & Sah, 2016; Smith & Chin Man Chui, 2011; Thomas & Borrayo, 2016), dropping out of college (Smith & Chin Man Chui, 2011), poor health (Joshi, Kiran, Singla, & Sah, 2016; Mishra & Rath, 2015; Thomas & Borrayo, 2016), less motivation, reduced attention, drug and alcohol use, increase in mental health problems and decrease in overall well being (Mishra & Rath, 2015). Another study found how stress can negatively impact college students, causing them to feel more anxious, nervous, restless, worthless, depressed, and hopeless, as well as causing them to experience behavioral health outcomes related to sleep and sexual behavior (Pederson, Swenberger, & Moes, 2017).

Some ways of managing stress for college students include: mindfulness courses, mindfulness programs, stress-management programs, etc. It is shown that students that practice some form of mindfulness tend to have lower stress and can manage their stress when it arises. Multiple studies have results that show by practicing mindfulness, students' stress levels decrease as their mindfulness increases (Beck, Verticchio, Seeman, Miliken, & Schaab, 2017; Crowley & Munk, 2017; Greeson, Toohey & Pearce, 2015; Kar Mukhtar, Ibrahim, Shian-Ling, & Sidik, 2015; Kinser, Braun, Deeb, Carrico & Dow, 2016). It is important to understand the negative consequences of stress in college students and that, if it becomes too much, it can result in students dropping out and affecting their life long-term (Smith & Chin Man Chui, 2011). Understanding the stress levels of students and having resources available to manage their stress is important because "student represents the society's investment for future. Their mental health and well-being are important not only in its own right but also as a factor contributing to the larger society's wellbeing" (Bhujade, 2017, p. 748).

Present Study

The research question of this study is how universities can help college students cope with various stressors they experience and therefore feel less stressed. In order to answer this research question, a comprehensive literature review was conducted. The literature provides different reasons why this population is vulnerable to stress and what could protect them from the effects of stressors. Promoting mindfulness through different programs is an emerging approach colleges are using to help students manage their stress. Although ample studies have been conducted to answer how mindfulness decreases stress in students, little research has examined how stress and mindfulness affect students in a faith-based university setting.

The purpose of this study was to investigate whether mindfulness buffers the negative influence of college life stressors on the perceived level of stress among faith-based university students. The significance of this study will inform practice in the agency whose mission and goals are to promote holistic wellness by providing counseling, consultation, training, prevention, and education. This study helped the college counseling center by understanding the stressors, stress levels, and mindfulness levels of students on campus and helped provide better services for students. The results of this study informed universities regarding the stressors of college students in faith-based university students and their mindfulness levels.

CHAPTER II

LITERATURE REVIEW

The purpose of this literature review was to explore stress, stressors in college students, mindfulness practices as coping stress strategy, and how each of these factors are related each other.

Perceived Stress among College Students

According to the American Psychological Association website, *stress* is defined as "the pattern of specific and nonspecific responses an organism makes to stimulus events that disturb its equilibrium and tax or exceed its ability to cope" ("Glossary of Psychological Terms," n.d.).

Stress is something that every person goes through in some form or fashion in life. Stress looks different for every person, but with college students, there are common stress factors they tend to face. Although some level of stress is essential for motivation (Deckro et al., 2002), too much or too little stress can decrease a person's productivity (Joshi, Kiran, Singla, & Sah, 2016). Having increased amounts of stress can cause high blood pressure, increased likelihood to abuse substances, less resistance to disease and increase in illness in the body, and depression (Joshi, Kiran, Singla, & Sah, 2016). Mishra and Rath (2015) studied the impact of perceived stress on college students and found that high levels of stress resulted in low perceived quality of life, and students who considered themselves stressed had lower levels of self-esteem, were less satisfied with themselves,

and did not consider themselves healthy. The Errisuriz, Pasch, & Perry (2016) study examined the relationship between perceived stress and dietary choices among college students. Results showed how students with higher perceived stress consumed more soda, coffee, energy drinks, pre-packaged salty snacks, frozen meals, and fast food during the week which are nutritionally poor-quality food choices (Errisuriz, Pasch, & Perry, 2016). The study also showed how perceived stress of students was significantly related to caffeine products such as soda, coffee, and energy drinks, and this could be due to academic stress and students consuming caffeine to increase their attention and performance (Errisuriz, Pasch, & Perry, 2016). Students who are coming into college as adolescents have not completely developed the skills to cope with stress which can result in unhealthy behavior such as maladjustment, reduced attention, less motivation, anxiety, withdrawal, aggression, drug and alcohol use, physical illness, depression, etc. (Mishra & Rath, 2015). In addition, Thomas & Borrayo (2016) researched the impact of perceived stress and psychosocial factors on missed class and work in college students. Results showed high stress was correlated with missing class and work because of being ill (Thomas & Borrayo, 2016). Stress can become harmful towards students when the pressure of stress goes beyond one's ability to cope (Martinovich, 2015).

Stressors among College Students

Students undergo extraneous amounts of stress while in college. Kwaah and Essilfie (2017) state, "Such events that bring stress are called stressors and a sudden change in these stressors may affect the person's physical or mental health" (p. 122). In Ross, Niebling, and Heckert's study (1999) on major sources of stress for college students, the study showed that 38% of the stressors were intrapersonal, 28% were

environmental, 19% were interpersonal, and 15% were academic. Overall, 81.1% of the stressor sources were considered daily life hassles (Heckert 1999). Another study on the sources of stress in college students results showed academic stressors were 63%, interpersonal were 17.5%, intrapersonal were 13.0%, environmental were 2.5%, and 3.5% had no stress (Ong & Cheong, 2009).

In Ross, Niebling, and Heckert's study (1999), seven sources of stressors for college students were identified, including: sleeping habits, vacations/breaks, change in eating habits, new responsibilities, increased class workload, financial difficulties, and change in social activities. Similar results were reported in the Reddy, Reddy, and Reddy, (2014) study, with the top five sources of stress being change in sleeping habits, vacations/breaks, change in eating habits, increased workload, and new responsibilities. Results of the study on stress and coping strategies showed that academic workload, constant occurrence of exams, financial difficulties, family problems, and marriage problems were major stresses of college students (Kwaah & Essilfie, 2017). A study on depression, anxiety, and academic stress found that the main stressors for college students are time, pressure, fear of failure, struggling to figure out one's identity, successful academically, and strong proficiency (Bhujade, 2017). In another study on stress and coping mechanisms in college students, the top five stressors were self-imposed stresses, emotional stresses, cognitive appraisal, pressures, and changes (Sajid, Hamid, Sabih, & Sajid, 2017). From this review, there are many forms of stressors that college students undergo. Below, this paper is going to address three significant categories of stressors that were found in the literature: major changes, social support, and academic stressors.

Stressor: Major Changes

One of the stressors college students undergo is major changes. Students are transitioning from high school lifestyle into college life (Sajid, Hamid, Sabih, & Sajid, 2017). Students are leaving the support they had at home by going into a new environment (Pierdomenico, Kadziolka, & Miller, 2017). Students' leaving home and coming to college is a major lifestyle change because living in a new place and being in a completely different environment and atmosphere are difficult (Bhujade, 2017; Reddy, Reddy, & Reddy, 2014). With students going through so many changes, it can cause a great deal of stress on them. Students also undergo the stressor of shifting from being adolescents into becoming adults (Pierdomenico, Kadziolka, & Miller, 2017). Students are experiencing many firsts by moving and leaving home; along with that comes the stress of academics, competition, the pressure to be the best, and pressures from parents and other students (Bhujade, 2017). When students are experiencing some or all the stressors from above, it can cause students to have poor health if they are not taking care of themselves in a healthy manner or utilizing healthy coping skills to deal with stress (Pierdomenico, Kadziolka, & Miller, 2017). College students have more opportunities today, but with that also comes more competition, which can cause higher levels of stress (Mishra & Rath, 2015). Students who are not handling stress very well can struggle to adjust to college life, and the stress can have a negative effect on their overall health (Shearer, Hunt, Chowdhury, & Nicol, 2016; Thomas & Borrayo, 2016). Students who were stressed out with school, causing school spillover, resulted in some participating in the unhealthy behavior such as having a higher number of sex partners (Pedersen, Swenberger, & Moes, 2017). One study done on perceived stress and dietary choices

showed that students who were more stressed chose food items that were considered

nutritionally poor, mostly because they were easier to access on limited amounts of time

(Errisuriz, Pasch & Perry 2016). Another major change students deal with while in

college is financial stress. According to Kwaah & Essilfie (2017), financial stress was

one of the main stressors for students. In the same study, results showed that financial

stress was high among married and unmarried students, with married students being more

stressed financially then unmarried students (Kwaah & Essilfie, 2017). When school

became too stressful for students, it negatively impacted the number of hours of sleep

they received each night (Pedersen, Swenberger, & Moes, 2017).

Stressor: Social Support

The second major stressor identified in the literature review was social support.

Social support can look anything from family support, friends, co-workers, relationships,

roommates, and/or community members, to counselors or counseling centers. Students

tend to go to family and friends when it comes to social support as a way to deal with

their stress (Chao, 2012). One study asked students to list how they cope with stress; one

way was by getting help from a professional such as a doctor or counselor, and another

way was talking to a friend and/or family member (Martinovich, 2015). Due to some

students moving away from home, students can go through a change in their support

system along with trying to find new support systems (Thomas & Borrayo, 2016). It can

be difficult for some students to move away from their support systems, which can make

it hard on them to make new friends and new support systems while making the transition

into college even harder (Martinovich, 2015). A study conducted by Thomas and Borrayo

(2016) showed that students became more stressed when dissatisfied with their social

support and that this affected their class attendance. Another study found that low social support in students increases their stress and harms their well-being (Chao, 2012). In one study on nursing students' stress levels, results showed one of the main stressors was lack of time for leisure activities, spending time with family, extracurricular activities, and other stressors of professional training, professional communication, and time management (de Souza et al., 2016). Another study showed how students were more stressed when there were family problems or marriage problems (Kwaah & Essilfie, 2017). One study showed how as negative effect increases, the positive effect of social support on perceived stress decreases (Çivitci, 2015). When students are facing somewhat severe negative emotions or mental health problems and lack of support, seeing a professional such as a counselor could be a support system for students. (Çivitci, 2015). Chao (2012) states that "for students to manage their perceived stress, positive social support is as essential as good soil is to plants" (p. 5).

Stressor: Academic Stressors

In addition to the other two stressors, academic stress negatively affects students and is worth addressing. Academic stress can be students' classes, GPA, homework, tests, projects, having enough time, the pressure to be perfect, and pressure to not fail. In college, there are pressures to perform a certain way and maintain a certain GPA for academics, whether it is for scholarship purposes, being competitive for future jobs, or getting into a program or graduate school. There is so much information out there today that it can be overwhelming and can increase expectations of students to know and retain more information because they have access to endless amounts of information with technology (Mishra & Rath, 2015). It was found that day-to-day stresses of intrapersonal

sources of stress was the most reported source versus major life events (Reddy, Reddy, & Reddy, 2014). This shows how our day-to-day stresses have an impact on how we deal and manage stress, which for college students would include things such as going to class, due dates, tests, projects, etc. Thomas and Borrayo (2016) showed how stress had a negative impact on students' academic performance. In another study, results showed that workload of academics and having exams on a regular basis were major stresses of college students (Kwaah & Essilfie, 2017). One study on perceived stress and dietary choices talked about how it is probable that students take in a lot of caffeine because of their academic demands and stress. (Errisuriz, Pasch, & Perry, 2016). The results of one study showed how a "high academic workload" was a major stressor for married and unmarried students (Kwaah & Essilfie, 2017). Another study found that some of the main stressors for students were having enough time, pressure, fear of failure, and excelling in academic work (Bhujade, 2017). Students also deal with the pressure of having to pick up new skills and proficiency while only being allowed to make little to no mistakes (de Souza et al., 2016).

Mindfulness as Coping

Kabat-Zinn (2001) defines *mindfulness* as "Paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (p. 23). With college students' stress levels on the rise, adding another thing on students to-do list may not seem manageable. Practicing mindfulness can be done anywhere, anytime, and implemented into daily life and to enhance overall wellbeing (Kabat, 2001).

Mindfulness can be done in many ways such as being present, being aware, breathing techniques, being aware of the body or breath, focusing on sounds, and/or word

repetition (Kinser, Braun, Deeb, Carrico, & Dow, 2016). Being mindful or in the moment while practicing mindfulness can also be described as "state mindfulness" (Mconville, McAleer, & Hahne, 2017). A well-known mindfulness practice is yoga (Kinser et al., 2016). Mindfulness can be formally or informally practiced, bringing one's attention and awareness into a holistic practice in day-to-day life (McConville, McAleer, & Hahne, 2017). Being mindful allows us to respond positively to challenges in life, rather than in negative and unhelpful ways (Kar, Mukhtar, Ibrahim, Shian-Ling, & Sidik, 2015). Students that practice mindfulness can potentially have lifelong health benefits (Rizer, Fagan, Kilmon, & Rath, 2016). Mindfulness-based interventions have been shown to decrease stress, anxiety, and depression and improve mindfulness, mood, self-efficacy, and empathy in students (McConville, McAleer, & Hahne, 2017).

Though there are many positives to mindfulness, there are also some negatives. A problem with mindfulness is students not even knowing what mindfulness is or how to use and practice it (Kinser, Braun, Deeb, Carrico, & Dow, 2016). Even though mindfulness has many benefits, issues arise for students such as finding the time, motivation, and effort to practice mindfulness (Rizer, Fagan, Kilmon, & Rath, 2016; van der Riet, Rossiter, Kirby, Dluzewska, & Harmon, 2015). Another barrier to mindfulness is that no matter how beneficial it may seem for students and having evidence-based research to prove it, students cannot be forced to practice mindfulness (McConville, McAleer, & Hahne, 2017). A study showed how students practicing mindfulness as part of their class time helped them not just understand mindfulness but also learn how to practice it, and this resulted in students feeling more comfortable with practicing mindfulness in their daily lives (Kinser, Braun, Deeb, Carrico, & Dow, 2016). Students

were not as willing to practice mindfulness until they saw the benefits of mindfulness as shown in this study (Rizer, Fagan, Kilmon, & Rath, 2016).

The review of the literature indicates that there are many recent articles that have focused on stress in college students, but not many recent articles that focused on specific stressors of college students. Some of the articles I used on stressors were written over a decade ago. There was a lot of research on mindfulness and stress on college students, but not much specifically on how mindfulness buffers stressors and therefore decreases stress. Another research gap found in the research was not many studies were done in faith-based universities. This research is needed to add to the literature about buffering effects of mindfulness between the stressors and perceived stress in faith-based university students. Based on the literature, the following hypotheses have been proposed:

- H1: Students who experienced major changes will have a higher level of stress.

- H2: Students who have more social stressors will have a higher level of stress.

- H3: Students who have more academic stressors will have a higher level of stress.

- H4: Mindfulness will buffer the effect of major changes on perceived stress.

- H5: Mindfulness will buffer the effect of social stressors on perceived stress.

- H6: Mindfulness will buffer the effect of academic stressors on perceived stress.

Conceptual Model

  The conceptual model was formulated based on the literature review, the model is shown below in Figure 1. This conceptual model shows that the stressors of major changes, social stressors, and academic stressors have an impact on perceived stress. It is hypothesized that the increase level of stressors of major changes, social stressors, and academics stressors will increase students level of perceived stress. The model also shows how mindfulness has a buffering relationship by lowering stressor levels of major changes, social stressors, academic stressors, and lowering perceived stress levels. Mindfulness has been shown in multiple studies that it lowers perceived stress in students. Little research has been done though on the relationship between stressors, perceived stress and mindfulness. It is hypothesized that mindfulness will buffer the negative influences of major changes, social stressors, academic stressors, and perceived stress. This conceptual model was created based on the literature review which was used to develop methodology part of this research study.
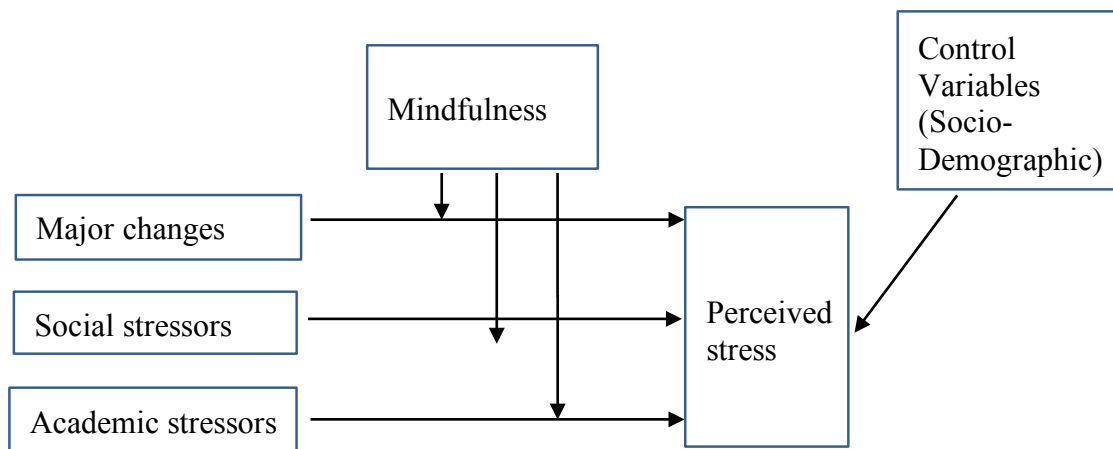
Figure 1. Conceptual model of moderating effect of mindfulness.

CHAPTER III

METHODOLOGY

Purpose

To investigate the buffering effects of mindfulness between the stressors and

perceived stress in faith-based university students, this study used the following method.

Research Design and Sample

A cross-sectional survey study was used to understand the effects of mindfulness

between the stressors and perceived stress in faith-based university students. Internal

validity is a limitation of a cross-sectional survey where the causal inference is not

warranted (Rubin & Babbie, 2016). The survey was administered to a sample of

university students who were 18 years of age or older and enrolled in a faith-based

university located in Texas for the spring of 2018. Considering the study population was

college students in the United States, this was considered convenient sampling because

this study relies on students of this university who willingly take time to take the survey.

Rubin & Babbie (2016) discussed the limitations of research findings from the

convenient sampling and argues the sample can have bias and skewed results. However,

they point out that the research using convenience sampling can still be valuable,

especially when the findings have not been overgeneralized (Rubin & Babbie, 2016).

Data Collection

For data collection, a list of all students' email addresses, to which an administrator had access, was used as the sampling frame. Emails and names were not collected when surveys were completed and submitted for data collection. The administrator sent to all students an invitation of participation to an online link from Google Docs. When a participant was linked to the online survey site, an informed consent was obtained at the beginning of the survey. Students consented by checking boxes of consent to continue to the survey. The survey took about 10-15 minutes to complete. Completion of the survey was recorded in Google Forms and remained confidential and anonymous. The survey did not include any identifiable information such as students' emails or names.

After acquiring approval for the study from the Institutional Review Board (IRB) of Abilene Christian University (ACU) (see Appendix A), the approval letter along with other paperwork was sent to the Institutional Review Board of another private university where the survey was administered. The survey was administered at a different college that was not ACU. After receiving approval from the university where the survey was conducted, data was collected. Although IRB approval was given, the letter for the private university of the study will not be included as an appendix in order to keep the agency unnamed.

Instruments

The survey includes instruments to measure students' perceived stress level (dependent variable), stressors (independent variable), their mindfulness level

(moderating variable), and demographic information (control variables). The full survey questionnaires will be attached in Appendix C.

Perceived Stress

Students' perceived stress was measured using the Perceived Stress Scale (PSS). The 10-item scale was developed by Cohen, Kamarck, and Mermelstein (1983). This was a self-report survey designed to measure perceived stress over the past month. Some example questions were, "in the last month, how often have you been upset because of something that happened unexpectedly?" and "in the last month, how often have you felt that you were unable to control important things in your life?" Each question used a five-point Likert scale, ranging from 0 = *Never* to 4 = *Very often.* Scores ranged from 0 to 40, with higher scores indicating greater perceived stress. The developers of this scale report that PSS has demonstrated reliability for coefficient alpha reliability for the PSS of .84, .85, and .86 in each of the three different samples, which were two consisting of college students and one consisting of a more heterogeneous group in a smoking-cessation program. To figure out the scoring of the PSS score add all the points together for each question. For some of the questions reverse the scores; for example, if 0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0 ("Perceived Stress Scale by Sheldon Cohen," 1994). To add the scores together it looks like this (R is the reverse score): 1, 2, 3, 4R, 5R, 6, 7R, 8R, 9, 10 ("Perceived Stress Scale by Sheldon Cohen," 1994). If the score was between 0-13, that is considered a low stress level; 14-26 was considered an average stress level; and a score of 27 or more was considered a high stress level ("Perceived Stress Scale by Sheldon Cohen," 1994).

Stressors Survey

Having reviewed some studies that measured stressors of college students, the stressor survey used in the Rafidah et al. 2009 study to format this study's stressor survey in a similar matter. The stressor survey in this study did not use the exact same questions as the Rafidah stressor survey, but used a similar structure. This study did not use an established stressor instrument because the researcher could not find a survey that focused on only stressors in college students that was shorter than 10-15 questions. Rafidah (2009) used a stress factor survey "to determine the sources of stress that have been found to influence the academic performance of students" (p. 39). This stress factor survey used a similar format as the Rafidah study used, but this survey focused on the categories of major change, social support, and academic stress. The survey consisted of eight questions asking students about stressors. Each question is measured using a five-point Likert scale, ranging from 0 = *Never* to 4 = *Very often.* This scale was used to keep consistent with the PSS scale. Some example questions included "In the last month, have you been eating healthy?" and "In the last month, have you had enough sleep?"

State of Mindfulness

The Mindful Attention Awareness Scale (MAAS) developed by Brown and Ryan (2003) will be used to measure students' state of mindfulness. The MAAS is a 15-question self-report instrument that focuses on attention and awareness in one's day-to-day life. For example, "I find it difficult to stay focused on what's happening" and "I find myself doing things without paying attention." High scores reflect more mindfulness and low scores of less mindfulness. The MAAS uses a six-point Likert scale from 1 = *almost always* to 6 = *almost never*. According to the developers, the MAAS was shown to be a

reliable and valid instrument for use in both college students and adult populations

(Cronbach's alpha =.81). The mean score of all items used to measure mindfulness.

Based on the developer's study of a sample of 91 undergraduates with the mean age of

19.8 years, the average MAAS score was 3.85 with the standard deviation of 0.68.

The average of all 15 items is the final score. The higher the score the higher the

dispositional mindfulness.

Sociodemographic Information

Participants were asked some basic demographic questions as well. Those

questions included gender, age, ethnicity, race, classification (i.e., freshman, sophomore,

junior, senior, graduate student), what religion they associate with or practiced (Christian,

Muslim, Catholic, Buddhist, Hindu, Jewish, atheist, agnostic, non-religious, other),

expected GPA for this semester, GPA for fall 2017 semester, average amount of sleep a

night, how many times a week student exercised, marital status, and current employment

status.

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Statistical Analysis

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After collecting data, descriptive analyses were conducted to examine the sample

characteristics and any patterns that might be found across different groups. Multiple

linear regression analyses were conducted to examine if mindfulness moderates the

negative effect of stressors on perceived stress after controlling for demographic

characteristics.

CHAPTER IV

FINDINGS

Participants

Table 1 shows the demographic background of the respondents of the online

survey. The study participants were university students at a private Texas University. The

descriptive statistics showed the characteristics of the sample ($N = 91$). The average age

of respondents was 24 years old with ages ranging from 18-57. The majority of

respondents (84%) were female students. Majority were white (73%) followed by

Hispanic (8%), and African American (8%). For religion, 84% considered themselves

Christian and 12% no religion. For marital status, 76% of students are single and 22%

married. For current employment status, 69% work part time and 19% are unemployed.

Additionally, 78% of students have not used the counseling services offered at the private

university, and only 22% of students have utilized the counseling services offered on

campus.

Hypothesis Testing

A multiple regression analysis was performed to test the following hypotheses

included in the proposed conceptual model. The major purpose of this study was to test

the following research hypotheses. The results are listed.

- H1: Students who experienced major changes will have a higher level of

  stress. (Supported)

- H2: Students who have more social stressors will have a higher level of stress. (Not supported)

- H3: Students who have more academic stressors will have a higher level of stress. (Supported)

- H4: Mindfulness will buffer the effect of major changes on perceived stress. (Not supported)

- H5: Mindfulness will buffer the effect of social stressors on perceived stress. (Not supported)

- H6: Mindfulness will buffer the effect of academic stressors on perceived stress. (Not supported)

The major purpose of this study was to test the hypotheses regarding the moderating effect of mindfulness. The hypotheses of moderating effect (Hypothesis 4 through 6) were not supported, indicating mindfulness did not buffer the effect of stressors on perceived stress. There might be multiple reasons of these unexpected findings.

An initial test of the proposed regression model showed mindfulness did not buffer the effect of any the stressor on perceived stress, indicating H4 through H6 were not supported. When an interaction model is not supported, it is recommended using a simpler model (i.e., a direct model). A model revision was performed by excluding all interaction terms from the regression model. A multiple linear regression analysis was conducted using this revised direct model.

Assumptions for testing a regression model were considered using Field's recommendation (Field, 2013). Tolerance values indicated that the set of predictors

included in the model did not have a multicollinearity. In addition, assumptions of

normality of errors and linear regression were investigated. The examination of residual

plots is considered a preferable method of detection for the assumptions for linear

regression including linearity and homoscedasticity. The residual plot in Figure 1

indicates the assumptions were considered met. Table 6 shows bivariate correlations

among predictors included in the revised regression model.

Table 1

Characteristics of the Sample of College Students, TX (N =91)

Variable	Category	*N*	*%*
	Range	*M*	*SD*
Age	18~57	24.52	8.30
Gender	0 Male	14	15.6
	1 Female	76	84.4
Ethnicity	1 "NH, White"	63	73.3
	2 "NH, African American"	7	8.1
	3 NH, American Indian	2	2.3
	4 NH, Asian	3	3.5
	5 NH, Pacific Islander	3	3.5
	6 NH, Other	1	1.2
	7 Hispanic (Any)	7	8.1
Religion	Catholic	2	2.2
	Christian	77	84.6
	No religion	11	12.1
	Other religion	1	1.1
Marital status	Divorced	2	2.2
	Married	20	22.0
	Single, never married	69	75.8
Employment	Full time (32-40 hrs per week)	7	7.7
	Part time (up to 31 hrs per week or less)	63	69.2
	Unemployed, currently looking for work	4	4.4
	Unemployed, not currently looking for work	17	18.7
Counseling	No	71	78.0
	Yes	20	22.0

Note. Age: Skewness (2.227) and Kurtosis (4.234)

Table 2 presents the descriptive statistics of academic related characteristics. For

classification of students it was evenly distributed while the highest proportion of

respondents were freshman students (25%). Most of students had good GPA for the last

semester (i.e., Fall of 2017): 3.5-4.0 (66%) and 3.0-3.5 GPA (18%). Students were also

asked their expected GPA for the upcoming semester (i.e., Spring of 2018) and the

highest category of GPA is expected to be lower than the last semester (from 66% to

60%) while 28% estimated a GPA of 3.5-4.0.

Table 2

Academic Characteristics of the Sample

Variable	Category	N	%
GPA previous year	1.0 ~ 1.5	1	1.1
	1.5 ~ 2.0	1	1.1
	2.0 ~ 2.5	3	3.3
	2.5 ~ 3.0	5	5.5
	3.0 ~ 3.5	16	17.6
	3.5 ~ 4.0	60	65.9
	Not sure	5	5.5
Expected GPA	2.0 ~ 2.5	2	2.2
	2.5 ~ 3.0	8	8.8
	3.0 ~ 3.5	25	27.5
	3.5 ~ 4.0	54	59.3
	not sure	2	2.2
Classification	Freshman	23	25.3
	Sophomore	19	20.9
	Junior	12	13.2
	Senior	20	22.0
	Graduate	17	18.7

Reliability Analyses to Check Internal Consistency of Composite Variables

A series of preliminary analyses were performed to check the internal consistency

of three composite variables (perceived stress and mindfulness). Cronbach's alpha is a

widely-used tool for assessing the reliability of a scale. This value refers to "the extent

that correlations among items in a domain vary, there is some error connected with the

average correlation found in any particular sampling of items" (Nunnally, 1978, p. 206).

Nunnally argued the alpha level of equal or higher than .60 considered to be indicative of

minimally adequate internal consistency.

Perceived Stress

Because some questionnaire items (4th, 5th, 7th, and 8th) were measured in the

positive statements unlike the rest, they were inverse coded. As noted in Table 3, a

revised set of answers exhibited a high internal consistency (α = .864). Therefore, the

scores on the 10 items were averaged to generate the overall score. Higher scores are

indicative of greater perceived stress. Scores range from 0-4.

Table 3

Internal Consistency of Perceived Stress (N= 91)

Variable	α	Item Total	α Without
Total	0.864		
In the last month, how often have you been upset because of something that happened unexpectedly?		2.44	.847
In the last month, how often have you felt that you were unable to control the important things in your life?		2.54	.837
In the last month, how often have you felt nervous and stressed?		3.24	.852
(Inverse score) In the last month, how often have you felt confident about your ability to handle your personal problems?		1.59	.852
(Inverse score) In the last month, how often have you felt that things were going your way?		1.98	.848
In the last month, how often have you found that you could not cope with all the things that you had to do?		2.13	.853
(Inverse score) In the last month, how often have you been able to control irritations in your life?		1.87	.862
(Inverse score) In the last month, how often have you felt that you were on top of things		2.13	.853
In the last month, how often have you been angered because of things that happened that were outside of your control?		2.18	.865
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?		2.48	.840

Mindfulness Attention Awareness Scale (MAAS)

As noted in Table 4, a set of the related answers to all questions exhibited a high internal consistency ($\alpha = .864$). Therefore, all of the scores on the 15 items were averaged to generate the overall score. Because a higher number (6 = almost never), higher scores are indicative of greater dispositional mindfulness. Scores range from 1-6.

Table 4

Internal Consistency of Mindfulness Attention Awareness Scale or MAAS (N= 91)

Variable	α	Item Total	α Without
Total	0.878		
I could be experiencing some emotion and not be conscious of it until sometime later.		3.67	.870
I break or spill things because of carelessness, not paying attention, or thinking of something else.		4.63	.878
I find it difficult to stay focused on what's happening in the present.		3.37	.870
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.		2.99	.869
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.		3.73	.875
I forget a person's name almost as soon as I've been told it for the first time.		3.19	.884
It seems I am "running on automatic," without much awareness of what I'm doing.		3.15	.863
I rush through activities without being really attentive to them.		3.55	.866
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.		3.15	.867
I do jobs or tasks automatically, without being aware of what I'm doing.		3.54	.864
I find myself listening to someone with one ear, doing something else at the same time.		3.16	.874
I drive places on "automatic pilot" and then wonder why I went there.		4.03	.869
I find myself preoccupied with the future or the past.		2.65	.872
I find myself doing things without paying attention.		3.12	.861
I snack without being aware that I'm eating		4.00	.878

Descriptive Statistics of Major Variables

Stressors

Table 5 presents descriptive statistics of major variables. Some of stressor scores were inversed because the original questions asked the questions in a positively direction: attendance, eat, and sleep. For stressor scores ranged from 0-4 with 4 being higher level of each stressor. The top stressors for students in this study include Course Load ($M =$ 2.59) and Responsibility ($M = 2.32$). The mean of Mindfulness was 3.54. The mean of the stress was 22.58.

Table 5

Descriptive Statistics of Major Variables

Category	Variable	*Min*	*Max*	*M*	*SD*	*SK*	*KT*
Stressor	Course load	0.00	4.00	2.59	1.23	-.422	-.868
	Attendance	0.00	4.00	0.40	0.79	-2.101	4.469
	Time for social	0.00	4.00	1.86	1.04	.050	-.474
	Relational	0.00	4.00	1.53	1.37	.433	-1.077
	Responsibility	0.00	4.00	2.32	1.04	-.195	-.211
	Financial	0.00	4.00	1.99	1.35	.075	-1.160
	Eat	0.00	4.00	1.80	1.04	.267	-.407
	Sleep	0.00	4.00	0.40	0.79	.015	-.420
Mindfulness	Mindfulness	1.33	5.67	3.54	0.90	-.150	.131
Stress	Stress Sum	5.00	40.00	22.58	7.15	-.130	-.298

Note. SK: Skewness, KT: Kurtosis
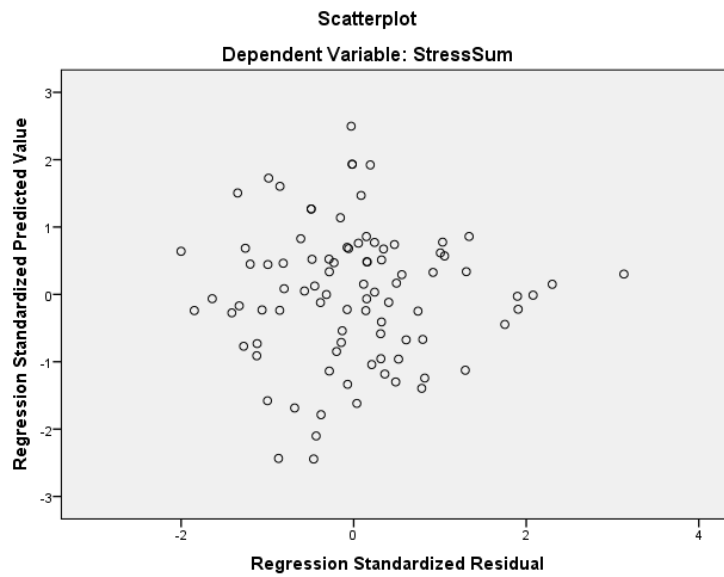
Figure 2. Residual plot

Table 6

Bivariate Correlations among Predictors Included in the MLR

	#	1	2	3	4	5	6	7	8	9	10	11	12
Stress	1	1.00											
Female	2	**.405**	1.00										
Age	3	**-.187**	**-.301**	1.00									
Mindfulness	4	**-.430**	**-.246**	-.007	1.00								
Course load	5	**.438**	**.215**	-.102	**-.288**	1.00							
Attendance	6	**.424**	**.218**	-.117	**-.271**	**.174**	1.00						
Time for social	7	**-.322**	-.094	-.135	**.302**	**-.402**	-.129	1.00					
Relational	8	**.439**	**.257**	-.166	**-.307**	**.251**	**.246**	**-.280**	1.00				
Responsibility	9	**.452**	.074	.070	**-.295**	**.169**	**.195**	**-.336**	**.246**	1.00			
Financial	10	**.295**	.104	**-.203**	**-.287**	**.258**	**.203**	-.100	**.265**	**.215**	1.00		
Eat	11	.079	.106	.047	**-.264**	.097	**.145**	**-.217**	**.196**	.096	.151	1.00	
Sleep	12	**.386**	.069	.115	**-.321**	**.351**	.096	**-.444**	**.259**	**.228**	**.261**	**.260**	1.00

Note. Significant relationship in bold

Table 6 demonstrates the results of the revised model (a direct model that excludes interaction terms). In a hierarchical regression analysis, predictors of the five categories in the table was added in the presented order (Model 1 through Model 5) so that the variance of the dependent variable explained by each category can be assessed by looking at the increased R squared (ΔR^2). Model 1 (not presented in the table) shows that demographic information explained 16.9% of variance. Model 2 presents the results of testing the effect of predictors before the inclusion of stressors. In this model, mindfulness was added to Model1 and explained 12.1% of variance.

Model 5 shows the results when all stressors were included. Interestingly, the significant effect of mindfulness on perceived stress (t = -3.832, p < .001) has become not significant (t = -0.932, p = .186) when the effects of stressors were taken into account together. The results indicate there is a possibility that mindfulness mediates the effect of stressors on stress rather than playing a moderating role.

Model 5 identifies the significant factors of perceived stress among college students in a faith-based university. According to the beta values in Model 5, the order of stronger significant factors includes having new overwhelming responsibility (beta = 0.270), class attendance (beta = 0.217), being female (beta = 0.206), sleep (beta = 0.199), and course load (beta = 0.177). The other factors were not significant. H1 (major changes including new overwhelming responsibilities) and H3 (academic stressors) were supported. H2 (social stressors included in the model) was not supported because none of the related factors were significant.

Table 7

Predictors of Perceived Stress (N= 90)

Category (ΔR^2)	Predictors	Model2			Model5		
		b	beta	t	b	beta	T
Demographic (.169***)	Female	5.619	.285	2.887**	4.053	.206	2.480*
	Age	-.089	-.104	-1.086	-.079	-.092	-1.105
Mindfulness (.121***)	Mindfulness	-2.863	-.361	-3.832***	-.932	-.117	-1.335
Academic (.137***)	Course load				1.039	.177	2.029*
	Attendance				1.972	.217	2.702**
Social (.041*)	Time for social				.093	.013	.145
	Relational				.762	.146	1.713
Other (.102**)	Responsibility				1.854	.270	3.263**
	Financial				.014	.003	.031
	Eat				-.856	-.122	-1.529
	Sleep				1.375	.199	2.222*
R^2 (Adj. R^2)		.290 (.265)			.570 (.510)		
F		11.702***			9.405***		
Tolerance		.848 through .932			.644 through .868		

* p < .05, ** p < .01, *** p < .001

Note: Detailed information from Model2 through Model 4 is not presented.
Model1: Female, Age
Model2: Female, Age, Mindfulness
Model3: Female, Age, Mindfulness, Course load, Attendance
Model4: Female, Age, Mindfulness, Course load, Attendance, Time for social, Relational
Model5: Female, Age, Mindfulness, Course load, Attendance, Time for social, Relational, Eat, and Sleep.

Other Findings

Majority of students considered themselves Christian when asked about their religion (84%), with some students claiming no religion at all (12%) which was interesting considering this university was a private Christian University.

For the Perceived Stress Scale (PSS) 10 item survey Harris Poll gathered information on 2,387 respondents in the U.S. with the mean of 14.2 points for the age group of 18-29 ("Perceived Stress Scale by Sheldon Cohen", 1994). In this survey, the mean for the PSS Scale was 22.58 points. When the average age of 24 of this sample,

students in this study had higher levels of stress by about 8 points compared to norms of the similar age group done in this study.

Highest respondent group were freshmen at 25.3% with the overall sample from freshmen-graduate students to be somewhat evenly distributed. Sophomore respondents at 20.9%, Juniors at 13.2%, Seniors at 22%, and Graduate students at 18.7%. GPA of 3.5-4.0 for fall semester of 2017 was 65.9%. Expected GPA for Spring 2018 was 59.3%. Overall drop from fall to spring by 6%. Majority of respondents responded with having a GPA for both semesters between 3.0-4.0. Perceived Stress Scale (PSS) and Mindfulness Attention Awareness Scale (MAAS) were shown to be valid and reliable Cronbach's alpha with an internal consistency for both of .864. Students in this study showed higher levels of stress compared to another study at a mean of 22.58%. Significant factors found were the stressors of responsibility, attendance, being female, sleep, and course load. This study found the less mindful students were, the higher their perceived stress was, showing that stress and mindfulness have a significant relationship when stressors were not taken into account. This significant relationship became insignificant when stressors, mindfulness, and perceived stress were analyzed together.

CHAPTER V

DISCUSSION

The research problem for this study was students' high levels of stress while in college and the negative effects it can have on students. The research question of this study was how universities can help college students cope with various stressors they experience and therefore feel less stressed or manage stress better. Although many studies have been done to answer how mindfulness decreases stress in students, little research has examined how stress and mindfulness affect students in a faith-based university setting. The purpose of this study was to research the buffering effect of mindfulness between the stressors and perceived stress in faith-based university students.

Discussion of Major Findings and Hypothesis Testing

The major purpose of this study was to test the following research hypotheses. The results are listed.

- H1: Students who experienced major changes will have a higher level of stress. (Supported)

- H2: Students who have more social stressors will have a higher level of stress. (Not supported)

- H3: Students who have more academic stressors will have a higher level of stress. (Supported)

- H4: Mindfulness will buffer the effect of major changes on perceived stress. (Not supported)

- H5: Mindfulness will buffer the effect of social stressors on perceived stress. (Not supported)

- H6: Mindfulness will buffer the effect of academic stressors on perceived stress. (Not supported)

The major purpose of this study was to test the hypotheses regarding the moderating effect of mindfulness. The hypotheses of moderating effect (Hypothesis 4 through 6) were not supported, indicating mindfulness did not buffer the effect of stressors on perceived stress. There might be multiple reasons of these unexpected findings.

One reason could be because the mindfulness buffering effect does exist but cannot be found in this study because of limitations. For example, there could have been a measurement error on the MAAS Scale because it did not actually ask students if they practiced mindfulness on a consistent basis, but rather just asked if students were mindful. Therefore, the MAAS Scale was not valid or reliable because it did not measure the practice and concept of mindfulness. Mindfulness is a broad term so having a set definition in the study of what it is and what mindfulness they are trying to accomplish should be clarified in the study. The Stressor Survey was not valid or reliable since it was designed specifically for this study, it could have had many limitations and missed important stressors. The Stressor Survey was based off another survey in a research article so the survey may have left out valid information.

A second reason could be that mindfulness is not a buffer on stressors or stress. It is important to consider that the literature review conducted for this study did not present research on mindfulness not being a buffer on stressors or stress. Mindfulness

may buffer the effects of stress but not the outcome of perceived stress. Mindfulness may be high but a student may still perceive themselves to be stressed but are not affected by their stress.

A third reason is mindfulness showed to have a correlation with stressors and perceived stress separately from each other. In table 7 mindfulness showed to have a significant correlation with all the stressors. This study also found that the less mindful students were, the higher their perceived stress was, showing that stress and mindfulness have a significant relationship when stressors were not taken into account (i.e., Model 2 at the regression table). This relationship became insignificant when stressors, mindfulness, and perceived stress were analyzed together (Model 5 at the same table).

A fourth reason could be that this study did not use an experimental study that implements an intervention of some sort. This study asked students about their mindfulness, perceived stress, and stressor levels but did not give them any tools or resources. A student cannot control outside factors; however, a student can have control over one's self. Adding workshops such as stress management could have benefit students.

A fifth reason could be that mindfulness could instead be used as a tool to manage stressors and perceived stress. For example, mindfulness does not necessarily buffer the effect of stressors on perceived stress but another outcome such as academic performance. Students having high levels of stress and high levels of stressors but being able to manage them, they are still able to perform better in school and/or work. Even if students experience a high level of stress caused by stressors, they may be still able to perform because they are mindful of their situation and able to get things done with high

levels of stress and stressors. In this case, mindfulness can manage the relationship between stressors and performance, which was not measured in this study.

Although the hypotheses regarding the moderating effects of mindfulness were not supported, the revised direct model identified significant factors of perceived stress among college students. Hypothesis 1 regarding major changes (including new overwhelming responsibilities) and hypothesis 3 regarding academic stressors were supported. However, hypothesis 2 regarding social stressors was not supported. This may be because students have healthy support systems and have not had any conflict or problems in the social stressor part of their life. Another reason could be students do not see social support as an important factor but rather being successful academically and spending most their time in their academic work was more important than social support. The significant findings of the study included overwhelming responsibility, class attendance, being female, sleep, and course load. The top stressors for students in this study were course load and responsibility. This study also found that as sleep goes up perceived stress goes down, and females showed to be more stressed.

Limitations

Limitations of this cross-sectional study which only focuses on one point in time. Secondly participation for this survey was on a voluntary basis so those who completed the survey wanted to complete survey. With this survey being a self-report questionnaire students could have exaggerated or minimized their symptoms causing bias. A third limitation included a small sample size of 91 respondents, with the majority of students being female and white. This study includes very few racial/ethnic minority students which can cause bias to the results and may not represent this student population

as a whole. A fourth limitation to this study was the survey was sent out right after students got back from spring break. This could be a limitation because 2 studies on stressors showed that when students came back from a break that was a stressor for them (Reddy, Reddy, & Reddy, 2014; Ross, Niebling, & Heckert, 1999). Another limitation is this study was done on only one campus versus multiple campuses private and public. Another limitation is the instruments used in this study. There are multiple mindfulness scales that are well researched. Using a different scale that specifically asked if students practiced mindfulness rather than everyday mindfulness awareness in the MAAS Scale different results may have been shown. Despite these limitations, the findings of this study can be useful for the counseling center and university for policy and practice to better assist and understand students' mindfulness, stress, and stressor levels.

<div align="center">**Implications of Findings**</div>

Implications for Practice

   Social workers, counselors, and others working with college students should take into consideration ways to teach students to manage or deal with the new responsibilities and course loads students face coming into college since they were most significant in this study. A way to do this would be to teach students stress management practices and tools on how to be deal with and manage themselves to help manage stress and stressors that they have no control over. This can also teach students to be empowered to take the focus off of their situations and put onto self, and realize students have no control in the world except control of themselves. Social workers, counselors, and others working with college students should also be aware of students with high course loads because this

study showed high course load as a high stressor it is important to be aware of this when working with college students.

Implications for Policy

Implications for policy include implementing one-on one-counseling and/or stressor workshops at a university counseling center to help students better manage their responsibilities, course loads, attendance, sleep and health and wellness for females which were significant factors in this study. A way the university can help students is potentially putting a policy in place for all new students such as freshman or transfer students to attend some sort of seminar, course, or workshop because literature talks about how it is harder for freshmen to transition into the college life (Mishra & Rath, 2015; Sajid, Hamid, Sabih, & Sajid, 2017). This can be done by implementing a first-year seminar, a class all new students have to take, that implements how to deal with the academics of school, but to also have students learn about mental health, such as stress management tools and practices. This could potentially help students by being able to have access to tools and resources on how to manage their mental health and stress in healthy ways and also a way for prevention of students rather than intervention (when in crisis). By offering this type of addition to first year seminar class this could potentially educate students on how stress is a normal thing to go through, but becomes negative when it impedes on their day to day functioning. In this course can also go over how transitioning into university life is a grieving process that can be a happy and sad thing at the same time. This policy would target most of the college population by making sure they are not just given academic tools to succeed but also mental health tools and practices on how to succeed overall in college.

One way to help students deal with stressors is recommending them to the counseling center that is free to students that are part-time or full-time at this particular university. The university should let new and transfer students know about the services the counseling center offers and ways they can help so students are aware of their resources on campus.

The counseling center could implement some type of survey that asked students at the end of each semester if counseling has helped them at all. This would be a good way to determine if the interventions being used at the counseling center or working or not and leave space for comments on ways the counseling center could improve in the future. This is a good way to establish evidence-based practice.

Implications for Research

The review of the literature focused on how mindfulness decreased stress and that did not prove to be accurate in this study. The findings in this study contradict what was found in the literature. This raises the question of how does mindfulness play a role in stress and stressors for college students. This research shows new data that mindfulness does not buffer the effect of perceived stress and stressors. It did, however, find a significant relationship between stress and mindfulness and found stressors for this population. This study was a cross-sectional study, this may have had an impact on the findings. Further studies should be done to look at the relationships of these variables based on longitudinal data. Data could be collected at the beginning, middle and end of semesters. Data could also be compared to the counseling students to determine if students receiving counseling services are more mindful and less stressed or managing

their stress better. Data could also look at the moderating role of perceived stress and stressors rather than the buffering effect as in this study.

A second implication would be for researchers to be clearer on what type of mindfulness they are addressing. There are many different meanings and understandings of what mindfulness is which can cause different results even though researchers are using the same term. Researchers should establish in their studies what mindfulness is and how they are using it in their research. For example, perceiving oneself as mindful, general day to day functioning of mindfulness, and intentionally practicing mindfulness daily would need to be clarified so that the findings are clearer. This will help future research to have a better understanding of what mindfulness is and better interventions for practice.

A final implication would be related to the time frame of when the study was done. This study showed a snapshot of students during the end of the semester. If researchers have students fill out a stressor survey at the beginning, middle, and end of the semesters it may provide a more holistic view of stressors of their student population and ways the university can better serve the students.

Conclusion

The research question was how universities can help college students cope with various stressors they experience and therefore feel less stressed. The purpose of this study was to research the buffering effect of mindfulness between the stressors and perceived stress in faith-based university students. Though the hypotheses on mindfulness were not supported, this research did find significant results on stressors, perceived stress, and mindfulness level of students. This study found that the significant

factors of perceived stress were: overwhelming responsibilities, class attendance, being female, sleep, and course load. The top stressors of students were course load and responsibility.

The significance of this study has informed practice for the counseling center that serves the students that participated in this study whose mission and goals are to promote holistic wellness by providing counseling, consultation, training, prevention, and education. The results of this study informed the university and counseling center of the stressors of the college students on campus, mindfulness levels, and perceived stress levels. Prevention is key to student success, college counseling centers can provide prevention for students by offering one-on-one counseling, group counseling, workshops, and skills training for students. Students need to be aware of resources offered to them when they are stressed and feel like they cannot manage. It is up to the universities to make known to all students not just the academic side and social activities the university has to offer but also support systems for students when they are in need.

REFERENCES

American College Health Association: National College Health Assessment II. (2016).

    Fall 2016 Reference Group Executive Summary. Retrieved from http://www.acha-

    ncha.org/docs/NCHA-

    II_FALL_2016_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf

Beck, A. R., Verticchio, H., Seeman, S., Milliken, E., & Schaab, H. (2017). A

    Mindfulness practice for communication sciences and disorders undergraduate

    and speech-language pathology graduate students: effects on stress, self-

    compassion, and perfectionism. *American Journal of Speech-Language*

    Pathology, *26*(3), 893-907.

Bhujade, V. M. (2017). Depression, anxiety and academic stress among college students:

    A brief review. *Indian Journal of Health & Wellbeing*, *8*(7), 748-751.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its

    role in psychological well-being. *Journal of Personality and Social Psychology*,

    84(4), 822–848.

Chao, R. C.-L. (2012). Managing Perceived Stress Among College Students: The Roles

    of Social Support and Dysfunctional Coping. *Journal of College Counseling*,

    15(1), 5-21.

Çivitci, A. (2015). The moderating role of positive and negative affect on the relationship

    between perceived social support and stress in college students. *Educational*

    Sciences: Theory and Practice, *15*(3), 565-573.

Cohen, S. Kamarch, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*(4), 385-396.

Crowley, C., & Munk, D. (2017). An examination of the impact of a college level meditation course on college student well being. *College Student Journal*, *51*(1), 91-98.

David Sam Jayakumar, G. S., & Sulthan, A. (2013). Stress symptoms: Structural equation modelling. *SCMS Journal of Indian Management*, *10*(3), 95-109.

Deckro, G., Ballinger, K., Hoyt, M., Wilcher, M., Dusek, J., Myers, P., & Benson, H. (2002). The evaluation of a mind/body intervention to reduce psychological distress and perceived stress in college students. *Journal Of American College Health*, *50*(6), 281-287.

Errisuriz, V. L., Pasch, K. E., & Perry, C. L. (2016). Perceived stress and dietary choices: The moderating role of stress management. *Eating Behaviors*, *22*, 211-216. https://doi.org/10.1016/j.eatbeh.2016.06.008

Glossary of Psychological Terms. (n.d.). Retrieved from http://www.apa.org/research/action/glossary.aspx?tab=18

Greeson, J.F., Toohey, M.J., Pearce M.J. (2015). An adapted, four-week mind-body skills group for medical students: reducing stress, increasing mindfulness, and enhancing self-care. *The Journal of Science and Healing*, *11*(3), 186-192. https://doi.org/10.1016/j.explore.2015.02.003

Joshi, A., Kiran, R., Singla, H. K., & Sah, A. N. (2016). Stress management through regulation of blood pressure among college students. *Stress Management through*

Regulation of Blood Pressure among College Students., *54*(3), 745-752.

https://doi.org/10.3233/WOR-162308

Kabat-Zinn, J. (2001). *Mindfulness meditation for everyday life*. London: Piatkus.

Kar, P. C., Mukhtar, F., Ibrahim, N., Shian-Ling, K., & Sidik, S. M. (2015). Effects of a

DVD-delivered mindfulness-based intervention for stress reduction in medical

students: A randomized controlled study. *Education in Medicine Journal*, *7*(3), 8-

20. https://doi.org/10.5959/eimj.v7i3.369

Kinser, P., Braun, S., Deeb, G., Carrico, C., & Dow, A. (2016). "Awareness is the first

step": An interprofessional course on mindfulness & mindful-movement for

healthcare professionals and students. *Complementary Therapies in Clinical

Practice*, *25*, 18-25. https://doi.org/10.1016/j.ctcp.2016.08.003

Kwaah, Y.C., & Essilfie, G. (2017). Stress and coping strategies among distance

education students at the university of cape coast, ghana. *The Turkish Online

Journal of Distance Education, 18*(3), 120-134.

https://doi.org/10.17718/tojde.328942

Martinovich, T. (2015). The efficacy of a stress management group program with tertiary

students. *Journal of the Australian & New Zealand Student Services Association*,

(45), 67-78.

McConville, J., McAleer, R., & Hahne, A. (2017). Review article: Mindfulness training

for health profession students—The effect of mindfulness training on

psychological well-being, learning and clinical performance of health professional

students: A systematic review of randomized and non-randomized controlled

trials. *Explore: The Journal of Science and Healing*, *13*(1), 26-45.

https://doi.org/10.1016/j.explore.2016.10.002

Mishra, N., & Rath, P. K. (2015). Impact of intervention on perceived stress of college

students. *Indian Journal of Health & Wellbeing*, *6*(9), 859-864.

Nunnally, J. C. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill

Ong, B., & Cheong, K. C. (2009). Sources of stress among college students-- The case of

a credit transfer program. *College Student Journal*, *43*(4), 1279-1286.

Pedersen, D. E., Swenberger, J., & Moes, K. E. (2017). School spillover and college

student health. *Sociological Inquiry*, *87*(3), 524-546.

https://doi.org/10.1111/soin.12161

Perceived Stress Scale by Sheldon Cohen. (1994). Retrieved from

http://www.mindgarden.com/documents/PerceivedStressScale.pdf

Rafidah, K., Azizah, A., Norzaidi, M. D., Chong, S. C., Salwani, M. I., & Noraini, I.

(2009). Stress and academic performance: Empirical evidence from university

students. *Academy of Entrepreneurship Journal*, *15*(1), 37-51.

Reddy, S., Reddy, P., & Reddy, D. (2014). A comparative study on sources of stress and

coping styles between graduation and post-graduation students. *Indian Journal of

Health & Wellbeing*, *5*(8), 942-947.

van der Riet, P., Rossiter, R., Kirby, D., Dluzewska, T., & Harmon, C. (2015). Piloting a

stress management and mindfulness program for undergraduate nursing students:

Student feedback and lessons learned. *Nurse Education Today*, *35*(1), 44-49.

https://doi.org/10.1016/j.nedt.2014.05.003

Rizer, C. A., Fagan, M. H., Kilmon, C., & Rath, L. (2016). The role of perceived stress and health beliefs on college students' intentions to practice mindfulness meditation. *The Role of Perceived Stress and Health Beliefs on College Students' Intentions to Practice Mindfulness Meditation.*, *47*(1), 24-31. https://doi.org/10.1080/19325037.2015.1111176

Ross, S. E., Niebling, B. C., & Heckert, T. M. (1999). Sources of stress among college students. *College Student Journal*, *33*(2), 312.

Rubin, A., & Babbie, E. R. (2016). *Essential Research Methods for Social Work* (4th ed.). Boston, MA: Cengage Learning. doi:978-1-305-10168-5

Sajid, M. B., Hamid, S., Sabih, F., & Sajid, A. (2017). Stress and coping mechanisms among college students. *Journal of Pakistan Psychiatric Society*, *14*(3), 31-34.

Shearer, A., Hunt, M., Chowdhury, M., & Nicol, L. (2016). Effects of a brief mindfulness meditation intervention on student stress and heart rate variability. *International Journal of Stress Management*, *23*(2), 232–254. https://doi.org/10.1037/a0039814

Smith, J. G., & Chin Man Chui. (2011). Mental health crisis on college campuses: Can spirituality help students taking marketing courses deal with stress and anxiety? *Journal of the Academy of Business Education*, *12*, 153-169.

de Souza, V. S., Ramos Costa, M. A., Carlos Rodrigues, A., de Freitas Bevilaqua, J., Cristina Inoue, K., de Oliveira, J. L. C., & Matsuda, L. M. (2016). Stress among nursing undergraduate students of a Brazilian public university. *Stress among Nursing Undergraduate Students of a Brazilian Public University.*, *34*(3), 518-527. https://doi.org/10.17533/udea.iee.v34n3a11

Thomas, J. J., & Borrayo, E. A. (2016). The impact of perceived stress and psychosocial

    factors on missed class and work in college students. *Journal of College*

    Counseling, *19*(3), 246-260.

APPENDIX A

IRB Approval Letter

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

March 26, 2018

Amber Glantz

Department of Social Work

5133 Ryan Circle South

Dear Amber,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled
The buffering effect of mindfulness between the stressors and perceived stress in faith-based university students

(IRB# 18-015   )is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

APPENDIX B

Informed Consent

Title of Study: The buffering effect of mindfulness between the stressors and perceived stress in faith-based university students.

You are invited to participate in a web-based online survey on perceived stress, stressors, and mindfulness in faith-based university students. You may be eligible to take part in a research study if you are a Hardin Simmons University part-time or fulltime student, and 18 years of age or older. This form provides important information about that study, including the risks and benefits to you, the potential participant. Please read this form carefully and ask any questions that you may have regarding the procedures, your involvement, and any risks or benefits you may experience. You may also wish to discuss your participation with other people, such as your family doctor or a family member.

PARTICIPATION

Your participation in this survey is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty.

PURPOSE AND DESCRIPTION:

The purpose of this study is to improve on-campus interventions for students by investigating associations between mindfulness, college life stressors, and perceived level of stress among faith based university students. This survey should take about 10-15 minutes to complete.

The research will be conducted by Amber Glantz, a social work graduate student at Abilene Christian University and Counseling Intern at Hardin Simmons University. The data you provide will be utilized to better inform the Residence Life program, as well as faculty and staff at ACU & HSU and other universities that are interested in the results. You will be asked to complete a one-time survey over the course of spring 2018 semester. Once you consent to participation in the study, you will be asked to participate in the following procedures:

- A survey will be sent to your HSU email to fill out and submit.
- No identifying information will be disclosed or used. You will be anonymous and all information will be de-identified.

RISKS & DISCOMFORTS

Some of the survey questions may cause mild to severe emotional distress. If anxious or depressive symptoms increase please seek assistance from a qualified medical profession. You may contact the Hardin Simmons University Office of Counseling Services at 325-671-2272 and or email counseling@hsutx.edu or fill out the intake form at https://www.hsutx.edu/student-life/counseling/.

If you experience any problems, you may contact Amber Glantz or Kyeonghee Jang in the social work department. The researcher cannot guarantee that you will experience any personal benefits. There are potential benefits from participating in this study. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

POTENTIAL BENEFITS:

There are potential benefits to participating in this study. Such benefits may include a better understanding of perceived stress, stressors, and mindfulness. This study may also provide better services for students. The researcher cannot guarantee that you will experience any personal benefits. There are potential benefits from participating in this study. However, the researchers hope that the information learned from this study will help others in similar situations in the future.

PRIVACY & CONFIDENTIALITY:

Information collected about you will be handled in a confidential manner in accordance with the law. The primary risk with a survey study is breach of confidentiality. However, we have taken steps to minimize this risk. You will not be asked for any personal identification data such as your name, student ID number, email address, or IP address or other identifying information to further protect your identity. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study.

Collected data will not be shared with anybody but the study team. Only results of data analyses will be reported to Hardin Simmons University Student Life and Office of Counseling Services. Aside from these required disclosures, your confidentiality will be protected by Google Docs where data will be stored in a password protected electronic format. Google Docs does not collect identifying information.

CONTACTS:

If you have questions about the research study, the Principal Investigator is:

Amber Glantz, MSSW Candidate

ajg16a@acu.edu

ACU Box 27866, Abilene, TX, 79699

If you are unable to reach the Principal Investigator or wish to speak to someone other than the Principal Investigator, you may contact:

Kyeonghee Jang, PhD, LMSW

325-674-6428

khj15a@acu.edu

ACU Box 27866, Abilene, TX 79699

If you have concerns about this study, believe you may have been injured because of this study, or have general questions about your rights as a research participant, you may contact ACU's Chair of the Institutional Review Board and Executive Director of Research, Megan Roth, Ph.D. Dr. Roth may be reached at

(325) 674-2885

megan.roth@acu.edu

320 Hardin Administration Bldg, ACU Box 29103

Abilene, TX 79699

APPENDIX C

Mindfulness, Stress, & Stressor Survey

Perceived Stress

The questions in this scale ask you about your feelings and thoughts <u>during the last month</u>. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. For each question choose from the following:

For each question choose from the following:
0 - never   1 - almost never   2 - sometimes   3 - fairly often   4 - very often

_____ l. In the last month, how often have you been upset because of something that happened unexpectedly?

_____ 2. In the last month, how often have you felt that you were unable to control the important things in your life?

_____ 3. In the last month, how often have you felt nervous and stressed?

_____ 4. In the last month, how often have you felt confident about your ability to handle your personal problems?

_____ 5. In the last month, how often have you felt that things were going your way?

_____ 6. In the last month, how often have you found that you could not cope with all the things that you had to do?

_____ 7. In the last month, how often have you been able to control irritations in your life?

_____ 8. In the last month, how often have you felt that you were on top of things?

_____ 9. In the last month, how often have you been angered because of things that happened that were outside of your control?

_____ 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Stressors

The questions below will be asked based on stressors one may experience during the last month.

For each question choose from the following:

0 - never   1 - almost never   2 - sometimes   3 - fairly often   4 - very often

_____11. In the last month, have you been eating healthy?

_____12. In the last month, have you had enough sleep?

_____13. In the last month, have you had any financial problems?

_____14. In the last month, have you experienced overwhelming new responsibilities?

_____15. In the last month, have you had enough time for social activities?

_____16. In the last month, have you experienced any serious relational problems?

_____17. In the last month, have you experienced overwhelming course load?

_____18. In the last month, have you been attending class regularly?

Mindfulness

Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience during the past month. Please answer accordingly to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1	**2**	**3**	**4**	**5**	**6**
Almost	**Very**	**Somewhat**	**Somewhat**	**Very**	**Almost**
Always	**Frequently**	**Frequently**	**Infrequently**	**Infrequently**	**Never**

_____ 19. I could be experiencing some emotion and not be conscious of it until sometime later.

_____ 20. I break or spill things because of carelessness, not paying attention, or thinking of something else.

_____ 21. I find it difficult to stay focused on what's happening in the present.

_____ 22. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.

_____ 23. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.

_____ 24. I forget a person's name almost as soon as I've been told it for the first time.

_____ 25. It seems I am "running on automatic," without much awareness of what I'm doing.

_____ 26. I rush through activities without being really attentive to them.

_____ 27. I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.

_____ 28. I do jobs or tasks automatically, without being aware of what I'm doing.

_____ 29. I find myself listening to someone with one ear, doing something else at the same time.

_____ 30. I drive places on "automatic pilot" and then wonder why I went there.

_____ 31. I find myself preoccupied with the future or the past.

_____ 32. I find myself doing things without paying attention.

_____ 33. I snack without being aware that I'm eating.

Other Information

34. Average amounts of sleep per night <u>during the last month?</u>

- 0-2 hours
- 3 hours
- 4 hours
- 5 hours
- 6 hours
- 7 hours
- 8 hours
- 9 hours
- 10 or more hours.

35. On average how many times a week do you workout <u>during the last month?</u>

0   1-2   2-3   3-4   5-6   7 or more
times

36. Expected GPA for this semester:

0 - 0.5

0.5 - 1.0

1.0 - 1.5

1.5 - 2.0

2.0 - 2.5

2.5 - 3.0

3.0 - 3.5

3.5 - 4.0.

not sure

37. Your GPA for Fall 2017:

0 - 0.5

0.5 - 1.0

1.0 - 1.5

1.5 - 2.0

2.0 - 2.5

2.5 - 3.0

3.0 - 3.5

3.5 - 4.0

Not sure

38. Your gender is:

- Male
- Female
- Other
- Prefer not to answer

39. Please type your 4-digit birth year (example: 1965, 1977, 1993, 2000):

_ _ _ _

40. Please specify your ethnicity: Are you Hispanic, Latino or Spanish origin?

- Yes
- No, not of Hispanic, Latino or Spanish origin
- I prefer not to answer

41. With which of the following do you identify? (Mark all that apply)

- White
- Black, African American
- American Indian or Alaskan Native
- Asian-Indian
- Asian-Chinese
- Asian-Filipino
- Asian-Japanese
- Asian-Korean
- Asian-Vietnamese
- Asian-Other (i.e. Hmong, Laotian, Thai, Pakistani, Cambodian, etc.)
- Pacific Islander -Native Hawaiian

- Pacific Islander -Guamanian or Chamorro
- Pacific Islander- Samoan
- Pacific Islander- Other (i.e., Fijian, Tongan, etc.)
- Other Race (Specify: _____)
- I prefer not to answer

42. classification in school

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student

43. Do you practice any type of religion a regular basis?

- Christian
- Muslim
- Catholic
- Buddhist
- Hindu
- Jewish
- Other region
- No religion

44. What is your marital status?

- single, never married
- married or domestic partnership
- widowed
- divorced
- separated

45. What is your current employment status?

- Employed full time (32-40 hours per week)
- Employed part-time (up to 31 hours per week or less)
- Unemployed and currently looking for work
- Unemployed and not currently looking for work

46. If you checked "unemployed and not currently looking for work"

- Retired

- Homemaker (stay at home, stay at home parent)
- Self-employed
- Unable to work
- full-time student
- other

47. Have you used Hardin Simmons Counseling Services within the past 12 months?

- Yes
- No