MINDFULNESS FOR STRESS REDUCTION: QUALITATIVE ANALYSIS OF PERCEPTIONS FROM COLLEGE STUDENTS AND MINDFULNESS INSTRUCTORS

A Thesis

presented to

the Faculty of California Polytechnic State University,

San Luis Obispo

In Partial Fulfillment

of the Requirements for the Degree

Master of Science in Kinesiology

by

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June 2020

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ABSTRACT

Mindfulness for Stress Reduction: Qualitative Analysis of Perceptions from College Students and Mindfulness Instructors

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Although mindfulness interventions with college students have yield positive results, many students are not continuing to engage after the interventions. This may be because very little research has been done to investigate the health behavior beliefs of college students in regard to mindfulness for stress reduction. The purpose of this investigation was to identify the most influential components of the Integrated Behavioral Model (IBM) that potentially assist with predicting college student participation in mindfulness activities for stress reduction. Interviews, informed by the IBM, were conducted with 20 current college students and 5 current mindfulness instructors working with college students. The attitudes and perceived control constructs were most prominent for both samples with less participant reference to perceived norms. The most common engagement barriers for the college students, mentioned by both samples, were the lack of time and demands of school. The college student participants most often focused on the benefits of the practice whereas the instructor participants focused on the discomfort the students experience when engaging in mindfulness. Inconsistencies emerged when comparing the mindfulness definitions from the college student participants. Overall, the college student participants displayed positive health beliefs towards mindfulness for stress reduction. These findings could support future mindfulness research utilizing the IBM to further investigate college student participation in mindfulness activities.

Keywords: Mindfulness, Mindfulness for Stress Reduction, Integrated Behavioral Model, IBM

ACKNOWLEDGMENTS

To my thesis advisor, Dr. Julia Alber, who provided thoughtful guidance, immense knowledge, enthusiastic motivation, and compassionate patience throughout this whole project. The countless hours she put into supporting me through this endeavor are greatly appreciated.

To my committee members, Dr. Kelly Bennion and Dr. David Askay, who I am gratefully indebted to for their valuable input, supportive guidance, and vast knowledge. Both committee members brought unique perspectives that helped to comprehensively shape this project.

A heartfelt thank you to Miriam Silliman and Sarah Kamp who helped me with data collection and analysis. The time and energy they contributed to this study are vastly appreciated.

A sincere thank you to my parents for always being a solid pillar in my life. Their loving guidance and compassionate support anchored me through this project and the entirety of grad school. I am forever grateful.

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Chapter 1

INTRODUCTION

Stress is highly prevalent among young adults who are beginning their careers in the workforce or attending college for the first time (Beiter et al., 2015). Those young adults who are college students tend to have higher levels of chronic stress when compared to the general population (Regehr, Glancy, and Pitts 2013; Beiter et al., 2015). With this new phase in life comes new stressors and responsibilities, such as moving out on their own, financial responsibility of living expenses, or working full time. If not managed properly and consistently, these stressors can affect an individual's health and wellbeing. Chronic stress has been shown to develop into negative mental (i.e., anxiety, depression) and physical (i.e., headaches, decreased immune response) states (Regehr, Glancy, and Pitts, 2013; Beiter et al., 2015; Baghurst & Kelley, 2014). With college students specifically, excessive stress has shown to negatively impact mental health, academic performance, and concentration (Byrd & McKinney, 2012; Lee, Olson, Locke, Michelson, & Odes, 2009; Flynn & Chow, 2017)

One stress reduction technique available to young adults is mindfulness. Mindfulness has been defined as "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 2003). However, the current literature has yet to come to a consensus on the definition of mindfulness (Chiesa, 2013). For the purpose of this paper, mindfulness will be defined as a conscious awareness of the present moment by focusing on the breath and body sensations. It is through the connection with the present moment that allows an individual to objectively view the situation without distractions from habitual thought. This in turn downregulates the nervous system and reduces any present symptoms of stress. Although mindfulness is connected to various mind-body modalities (e.g., yoga, meditation) it is a separate entity from them (Davis & Hayes, 2011). Some examples of mindfulness activities, not associated with traditional mind-body practices, awareness of the present moment as you eat a meal, or noticing how your body reacts in a stressful situation as it is happening.

Although mindfulness has only been in western therapeutic settings since the late 1970s, the original mindfulness teachings date back 25 centuries to ancient Buddhist teachings (Bodhi,

2011). This ancient practice taught by the Buddha has been converted into an array of mindfulness techniques to help the modern individual thrive through the hectic demands of daily living and overcome psychological difficulties. Because of this, mindfulness has increased in popularity over the past 30 years as an effective method for reducing stress (Brown, Creswell, & Ryan, 2015; Sharma & Rush, 2014; Regehr, Glancy, & Pitts, 2013). There are currently a variety of types of mindfulness approaches to address an array of psychological conditions (Chiesa and Malinowski, 2011). Some of which are Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), Dialectical Behavior Therapy (DBT; Linehan, 1993), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). Mindfulness techniques have shown to have many benefits on physical and mental health (Chiesa, 2013). Some of which include decreased symptoms of stress in healthy individuals (Chiesa and Serretti, 2009); increased positive emotions (Keng, Smoski, and Robins, 2011); improved attention, memory, and executive functions (Chiesa, Calati, and Serretti, 2011); improved sleep (Brand et al., 2012); and increased efficacy for reduction of chronic pain (Chiesa and Serretti, 2011).

Many mindfulness-based interventions have been done with college students that yield positive results (Bamber & Schneider, 2016). However, studies show college students are not continuing to engage in mindfulness behaviors after the interventions have concluded (Langdon, Jones, & Hutton, 2011). To understand why any individual engages in a behavior their attitudes and beliefs need to be examined. Unfortunately, very little has been studied on the behavioral constraints of college students and mindfulness. Examining the attitudes and beliefs college students have towards mindfulness may support in increasing participation rates at mindfulness events.

Health behavior theories are used to investigate the variables that explain behavior (Glanz, Rimer, Viswanath, 2008). The constructs of the theories are used as tools to measure the motivations, facilitators, and barriers attached to a particular behavior. Mindfulness research utilizing health behavior theories is limited (Bamber & Schneider, 2016). As to date, no

mindfulness for stress reduction studies have been done informed by the Integrated Behavioral Model (IBM).

The IBM was developed by building upon the Theory of Planned Behavior (TPB) which was created from the Theory of Reasoned Action (TRA). The most important component of these models is the intention to perform the behavior. The stronger the intention to participate in a behavior, the more likely the individual will engage. These models have been an aid in developing content to promote health behavior campaigns that lead to engagement in behavior (Eggleston, Middlestadt, Lindeman, McCormick, and Koceja, 2011; Ajzen, 1991). The IBM specifically has yet to be utilized to explore the factors of engaging in mindfulness behaviors among any population. This may be due to the fact that the IBM is relatively new as it was created approximately fifteen years ago and is relatively new compared to the preceding models.

Applying the IBM to understand the intention to engage in any behavior can include qualitative investigations with interviews or focus groups targeting the population of interest and quantitative investigations with surveys created from the qualitative findings. Since the IBM has not been utilized in the mindfulness realm, this investigation will apply the IBM constructs qualitatively to investigate the factors that lead to engagement of mindfulness for stress reduction among college students. This paper will include chapters that focus on previous research in topics of mindfulness and health behavior theories, methods of the current investigation, data collection findings, and a discussion as to how these findings help to understand the perceptions college students have towards engaging mindfulness activities for stress reduction.

1.1 STATEMENT OF PURPOSE

The purpose of the current qualitative investigation was to explore attitudes, beliefs, and definitions of mindfulness related to mindfulness for stress reduction among a sample of college students and mindfulness instructors.

Chapter 2

LITERATURE REVIEW

2.1 STRESS

Stress reduction techniques are important to incorporate into daily living due to the effects stress has on the body and mind. Stress is a vital part of life that can have both positive and negative effects on an individual (Scheier, Carver, & Bridges, 1994; Pritchard, Wilson, & Yamnitz, 2007; Brougham, Zail, Mendoza, & Miller, 2009). The benefits of healthy, low-level stress could motivate an individual to perform at their best (Stoliker & Lafreniere, 2015). While the damaging side of unhealthy, high-level stress could negatively affect the psychological, social, and physical wellbeing of an individual (Stoliker & Lafreniere, 2015; Bamber & Schneider, 2016). Depending on the situation and duration, stress could manifest as acute or chronic stress. If not managed correctly, acute stress could develop into chronic stress which could cause many negative physiological, emotional, and behavioral outcomes. Although acute stress has its own implications, chronic stress has been found to result in an array of health detriments. Some of these effects include increased anxiety (McEwen, 2017; Keyes et al., 2012), negatively affected decision making (McEwen, 2017), elevated heart rate (Thayer, Ahs, Fredrikson, Sollers, & Wager, 2012), hypertension (Chrousos, 2009), obesity (Rizer, Fagan, Kilmon, and Rath, 2016), insomnia (Rizer, Fagan, Kilmon, and Rath, 2016), and depression (Keyes et al., 2012).

Young adults, especially college students, report some of the highest levels of stress when compared to the general population (Hales, 2009; Regehr, Glancy, & Pitts, 2013; Beiter et al., 2015). The increase in stress could be a result of the transition into adulthood where an adaptation to new surroundings and responsibilities arise whether going into the workforce or college (Bamber & Schneider, 2016). Due to these new, unfamiliar responsibilities and expectations, young adults could become overwhelmed and strained. Their lack of experience with independently managing stressors may cause them to be influenced by negative coping strategies, such as binge-drinking (Chatzisarantis & Hagger, 2007). Unmanaged stress has been shown to have adverse effects on health among young adults (Bamber & Schneider, 2016). Such effects include decreased immune response (McEwen, 2017), poor decision making (McEwen, 2017), and physical inactivity (Pedersen, Bovbjerg, & Zachariae, 2011). These effects have been

shown to be especially true for those young adults who are college students dealing with the additional demands of school responsibilities. For example, in 2014, a national survey conducted by the American College Health Association reported that most US college students felt overwhelmed, hopeless, anxious, and depressed (Ramasubramanian, 2017). This could be due to the younger generation of millennials feeling the need to over-schedule themselves and their increased desire to excel academically (McGlynn, 2008).

2.2 STRESS REDUCTION

Given the high level of stress often associated with young adults, previous studies have tested a variety of techniques to reduce stress among this population. Some of these interventions include physical activity (Baghurst & Kelley, 2014), imagery and relaxation (Stephens, 1992; Regehr, Glancy, & Pitts, 2013; Bauer, 2014), recreational music making (Bittman et al., 2005), meditation (Burns, Lee, & Brown, 2011), and mindfulness activities (Caldwell, Harrison, Adams, Quin, & Greeson, 2010). These positive health behavior interventions have provided evidence of a reduction of stress among young adults. Regehr et al. (2013) found strong evidence from twenty-four studies in their meta-analysis that cognitive, behavioral, and mindfulness-based interventions effectively reduced stress among college students. Eleven of these stress-reducing interventions yielded significant results. Of these interventions, mindfulness for stress reduction has become increasingly popular in recent years (Brown, Creswell, & Ryan, 2015).

2.3 MINDFULNESS

Mindfulness research started to take form in the 1970s and has expanded exponentially since the turn of the century (Brown, Creswell, & Ryan, 2015). It has been applied to psychological and physiological expressions of stress and how it can effectively enhance an individual. Participating in mindfulness interventions have shown positive results in reducing the negative effects of stress while promoting beneficial outcomes (Rizer, Fagan, Kilmon, & Rath, 2016). Davis and Hayes (2011) grouped these beneficial findings into three categories: affective benefits, interpersonal benefits, and intrapersonal benefits. Affective benefits includes two subcategories. First, the benefit of emotional regulation such as decreased rumination and

increased emotional regulation (Chambers, Lo, & Allen, 2008; McKim, 2008; Ramel, Goldin, Carmona, & McQuaid, 2004) and, secondly, decreased reactivity and increased versatility of responsiveness. Previous studies have shown through self-observation and focused attention gained from mindfulness practices, individuals can decrease emotional and cognitive reactivity to unpleasant stimuli as well as increase the capacity of the attentional allocation centers in the brain (Cahn & Polich, 2009; Davis & Hayes, 2011; Goldin & Gross, 2010; Moore and Malinowski, 2009; Ortner et al., 2007; Siegel, 2007). Interpersonal benefits of mindfulness practices include, but are not limited to, mindfully relating to others, increased predictability of relationship satisfaction, and better management of relationship stress (Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Wachs & Cordova, 2007). The final category, intrapersonal benefits, involves fear modulation (Siegel, 2007, 2009), increased immune response (Davidson et al., 2003), and increased cognitive processing speeds (Moore & Malinowski, 2009).

2.4 MINDFULNESS-BASED INTERVENTIONS

Mindfulness interventions for stress reduction was first developed in 1979 when Dr. Jon Kabat-Zinn created the original stress reduction focused mindfulness intervention called Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 2003). The initial intention of MBSR was to serve as a stress reduction tool for an outpatient clinic focused on individuals with pain and illness (Kabat-Zinn, 2003). The goal was to test the MBSR model as a treatment method for hospitals and medical centers of all kinds. The success of this program has led to its implementation among a variety of populations and modalities (Rizer, Fagan, Kimon, & Rath, 2016). This original program was the catalyst to many other mindfulness practices for stress reduction and therapy models. Some of the succeeding programs include Mindfulness-Based Cognitive Therapy (MBCT; Hayes, Villatte, Levin, & Hildebrandt, 2011), Acceptance Commitment Therapy (ACT; Rapgay & Bystrisky, 2009), Mindfulness-Based Relapse Prevention (MBRP; Witkiewitz, Alan, & Denise, 2005), and Compassionate Mind Therapy (CMT; Gilbert, 2009). Along with these established mindfulness-based models comes more general mindfulness-based interventions. These practices include, but not limited to, mindfulness meditation practices

(Bamber & Schneider, 2016), and Loving-Kindness Meditation (LKM; Hayes, Villatte, Levin, & Hildebrandt, 2011).

Many studies have been done to investigate the effects, if any, of these mindfulness-based interventions on reducing stress. In a systematic review by Sharma and Rush (2014) on MBSR interventions on healthy individuals of all ages, all articles reviewed (n = 17) yielded positive results with ten of the twelve studies that measured pre/post stress levels found a significant reduction in stress symptoms post-intervention. These promising results indicate mindfulness-based interventions may be effective as a stress reduction technique. However, limitations to the reviewed studies include that they were not all randomized controlled studies, some had smaller sample sizes, and there was not a constant outcome measure. Another review by Regehr, Glancy, and Pitts (2013) included seven MBSR studies in their meta-analysis of twenty-four mindfulness-based intervention studies conducted on university students. From this review, the authors concluded the MBSR interventions to be an effective technique to reduce stress even though they noted that all but one study was conducted on a majority of female participants.

Bamber and Schneider (2016) analyzed twenty-nine college student-focused studies that used mindfulness meditation practices for stress reduction not connected to MBSR or MBCT. The methods of these studies used a combination of self-reported, psychological, or physiological measurements of stress. Of these twenty-nine, only five studies found nonsignificant results in stress reduction after implementing mindfulness meditation interventions. The results from the other twenty-four studies indicate that mindfulness practices have a strong potential for effective stress reduction among college students. Although the findings are promising, the authors did observe many limitations within these studies that decrease the generalizability of these findings. Some of these limitations include non-generalizable samples, limited sample sizes, and a lack of a consistent measure of mindfulness. Bamber and Schneider also found that, at the time of their review, none of the MBSR studies had used physiological measurements of stress (e.g., cortisol levels, blood pressure, or heart rate) to verify the self-reported results. The lack of objective

measures decreases the validity of the findings as self-reported measures may lower the reliability of the data.

Even though there has been a wide variety of positive outcomes with mindfulness-based interventions among all ages, it has been noted that very little has been studied on the health beliefs and attitudes that produce engagement in mindfulness practices for stress reduction (Black, 2010). Health beliefs and attitudes that lead to engagement can be researched and measured through health behavior theories. Through the use of health behavior theory, an understanding as to *why* an individual engages in one behavior but not the other could then lead to proper health education and promotion (Rizer, Fagan, Kilmon, & Rath, 2016). These theories are made up of constructs that could help to examine the components (i.e., attitudes and beliefs) that influence the behavior of an individual. The constructs of the theories can be utilized to collect data qualitatively through interviews or focus groups with the desired population and relevant stakeholders (e.g., mindfulness instructors). A stakeholder is a leader or instructor in the field of focus. The stakeholders obtain unique knowledge of the desired populations as they are the ones to build programs, encourage engagement, and maintain focus on the task at hand. By collecting data from both the desired population and relevant stakeholders, comparisons between the two groups may show where there are disconnects between them. Identifying disconnects will assist in improving any existing or future health promotion and education.

2.5 HEALTH BEHAVIOR THEORIES

Health behavior theories have been developed to constructively understand the components that lead to behavior so one can illustrate and predict outcomes (Glanz, Rimer, & Viswanath, 2008). Theories have been used to predict health behavior outcomes for just about every behavior or tendency imaginable. Some health behaviors that have been measured using health behavior theory include cancer screening participation (Rawl, Champion, Menon, & Foster, 2000), AIDS-protective behavior (Basen-Engquist, 1992), condom use (Albarracin, Kumkale, & Johnson, 2004), smoking cessation programs (Lichtenstein & Hollis, 1992), seeking health-related information that could have positive medical benefits (Koo, Krass, & Asiani, 2006), and

attending mind-body classes such as yoga (Eggleston, Middlestadt, Lindeman, McCormick, & Koceja, 2011).

Theories investigating mindfulness health behavior in previous studies include the Transactional Model of Stress and Coping, Health Belief Model (HBM), Social Cognitive Theory (SCT), Theory of Planned Behavior (TPB), Theory of Reasoned Action (TRA), and the Self Determination Theory (SDT) (Bamber & Schneider, 2016; Langdon, Jones, Hutton, & Holttum, 2011; Rizer, Fagan, Kilmon, & Rath, 2016; Lederer & Middlestadt, 2014). The HBM is considered one of the most commonly utilized frameworks within health behavior studies and research for one-time behaviors (e.g., cancer screening). This model consists of six constructs that explain why an individual takes action to change, prevent, or maintain health behaviors (Glanz, Rimer, & Viswanath, 2008). One such construct, perceived barriers, has been indicated to be one of the most reliable predictors of health behavior (Janz & Becker, 1984; Glanz, Rimer, & Viswanath, 2008). In relation to stress reduction methods, such as mindfulness, the level of perceived barriers (i.e., commitment time, lack of perceived need to participate) affects the frequency of implementing effective stress management techniques in young adults (King, Singh, Bernard, Merianos, & Vidourek, 2012). However, one study by Rizer, Fagan, Kilmon, and Rath (2016) used qualitative methods to measure this construct with results in an insignificant relationship between perceived barriers and intention to practice mindfulness mediation. The authors of this study pointed out that the listed barriers presented in the study did not reflect the perceived barriers of the participants. Qualitative comments from the interview identified additional barriers that included conflict with religious beliefs since mindfulness originated from Buddhist teachings. This indicates that qualitative interviews rather than quantitative surveys may be best when investigating perceived barriers related to mindfulness.

The SCT is made up of many constructs; however, the most studied construct when focusing on mindfulness for stress reduction is self-efficacy. Self-efficacy is the belief an individual has about their own capability of executing behaviors to reach their desired outcomes. This could pose as a barrier to participating in mindfulness activities. Blecharz et al. (2014) found Self-efficacy was the mediator between trait mindfulness predicting sports performance. These

findings support previous results that indicated higher self-efficacy, in reference to social barriers, resulted in an increased belief in control (Aherne, Moran, & Lonsdale, 2011; Kee & Wang, 2008).

2.6 THE THEORY OF REASONED ACTION

Some studies have also applied the TRA to mindfulness. TRA model suggests that the strongest indicator of behavior is the intention toward the behavior itself. This intention originates from the attitudes about engaging in the behavior and the perceived subjective norms related to the behavior (Glanz, Rimer, & Viswanath, 2008). One study found the TRA was effective in identifying successful meditation promotion through interventions on the individual, interpersonal, and environmental level (Lederer & Middlestadt, 2014). Although this study focused on meditation, the authors included mindfulness techniques as part of the definition of meditation. The participants demonstrated positive attitudes, slightly positive behavior control, and slightly negative perceived norms towards meditating; however, their overall intuition to participate in meditation was neutral.

2.7 THE THEORY OF PLANNED BEHAVIOR AND THE INTEGRATED BEHAVIORAL MODEL

The TPB, which is an updated version of the TRA, has also been utilized to investigate how mindfulness plays a role with the intention to engage. One study by Chatzisarantis and Hagger (2007) looked at trait mindfulness rather than the practice of mindfulness to understand how trait mindfulness could affect intentions. As an individual continues to practice mindfulness, their trait mindfulness increases, and the practice will then be a characteristic of the individual rather than a practice done at a certain time of the day. They found that mindful individuals follow through on their set intentions when compared to less mindful individuals. This is possibly due to mindful individuals having an increased awareness and attention to their surroundings and internal sensations which cultivates conscious behavior.

When investigating the constructs that predict engagement in mindfulness activities, two TPB studies investigating mindfulness activities found perceived behavioral control to be the strongest predictor of behavior with attitude coming in second (Lederer & Middlestadt, 2014; Eggleston et al., 2011). subjective norms, which is the perception of social norms, did not yield significant results as a predictor of behavior. However, one study investigating mindfulness

engagement among adolescents found descriptive norms (i.e., the perception of the behaviors of others) of practicing to be the strongest predictor of engagement (Beattie, Hankonen, Salo, Knittle, & Volanen, 2019). The discrepancy of the findings could be due to the age group of the subjects and their current life situations.

Due to the lack of mindfulness research, another possible theory that may be applicable to understanding mindfulness engagement is the IBM. At the time of this paper, no mindfulness research has been conducted utilizing the constructs of the IBM. However, other health behavior research has been informed by the IBM as a tool to assist in understanding the intentions to engage in health behaviors among various populations. In regards to the college student population, the IBM has been used to understand the factors of female students meeting strength training guidelines (Patterson, Meyer, & Beville, 2015), the indicators of high-risk drinking among both male and female students (Braun & Jordan, 2014), and the differences among genders with leisure-time physical activity (Beville et al., 2014).

Although there have been studies investigating the effects of mindfulness activities and the intent to engage in such activities, the amount of research in this area is limited and requires further investigation. Additional research in this area could assist with a better understanding of the attitudes and beliefs college students have about mindfulness practices for stress reduction. From this understanding, these activities could be promoted properly to encourage consistent engagement and produce enhanced educational materials. At this time, most studies have used convenience sampling (Eggleston et al., 2011; Rizer et al., 2016) and have focused on the female population (Regehr, Glancy, & Pitts, 2013). To date, no research has been done investigating the constructs of TPB on the intention to engage in mindfulness activities among young adults. In addition, at this time, there is no mindfulness-based research utilizing the IBM.

This investigation aims to explore the attitudes and beliefs college students have about mindfulness activities for young adults. This will be done by conducting interviews among a sample of college students and mindfulness instructors (i.e., stakeholders) who work with the college student population. The interview questions will be informed by the IBM constructs, specifically the attitudes, subjective norms, and personal agency constructs.

Chapter 3

METHODS

3.1 DESIGN

The purpose of the current qualitative investigation was to explore attitudes, beliefs, and definitions of mindfulness related to mindfulness for stress reduction among a sample of college students and mindfulness instructors. Interviews informed by the IBM were utilized to explore the beliefs, attitudes, and health behaviors of college students in regard to practicing mindfulness activities for stress reduction on a regular basis. In-person interviews were conducted with a convenience sample of 20 college students and 5 leaders of mindfulness activities for college students in the San Luis Obispo, CA area.

3.2 COLLEGE STUDENTS

3.2.1 Interviews

Semi-structured, intercept interviews were conducted in-person on the California Polytechnic State University, San Luis Obispo (Cal Poly) campus with twenty young adults during the Winter 2020 quarter. To participate, the individual had to be between the ages of 18 – 25 years old and currently enrolled as a Cal Poly student. Prior participation in mindfulness activities was not required. Recruitment occurred during various times of day at various locations on the Cal Poly campus by an interviewer and a notetaker. Prior to the interview, the individual read and signed an informed consent form (Appendix A) then completed a short online demographic questionnaire containing questions on their age, sex, ethnicity, current college level, and frequency of mindfulness participation. The specific demographic questionnaire can be found in Appendix B. The interview questions were informed by the IBM to address the mindfulness for stress reduction attitudes, beliefs, and current engagement of the individual. The interviews were up to 15-minutes in length and were audio recorded using a digital voice recorder. Each participant received a $5 Starbucks gift card at the completion of the interview.

3.2.2 Questions

The college student interviews were utilized to assess the attitudes and beliefs the sample of college students hold towards applying mindfulness activities for stress reduction. The

open-ended interview questions were developed using items related to the IBM and demographics per Glanz, Jordan, Lazovich, and Bleakley (2019). All interview questions posed to the college student participants are listed in Appendix C. Each construct of the IBM will be measured with multiple questions pertaining to that area of focus. The constructs measures are attitudes, perceived norms, and personal agency. attitudes focused on the experiential attitudes of the individual. experiential attitudes were measured with two items addressing the believed benefits and disadvantages of engagement in mindfulness activities for stress reduction. perceived norms were subcategorized into injunctive and descriptive norms. One question for injunctive norms covered what others might say if the individual implements mindfulness activities into their stress reduction routines. descriptive norms measured who they believe is or is not engaging in mindfulness activities for stress reduction. personal agency focused on their perceived control. perceived control addressed two items on the level of control they perceive to have involving the engagement of this activity. These questions focused on what is encouraging or stopping the individual from engaging in the behavior.

3.3 MINDFULNESS INSTRUCTORS

3.3.1 Interviews

In-person, semi-structured interviews were conducted with five San Luis Obispo county mindfulness instructors. To participate, the mindfulness instructor had to be currently leading mindfulness activities with college student participants between the ages of 18 – 25 years of age. Instructors were recruited via email. Prior to the interview, the instructor read and signed an informed consent form (Appendix D) then completed a short online characteristics questionnaire containing questions about the mindfulness activities they lead. An example of the mindfulness instructor characteristics questionnaire can be found in Appendix E. Similar semi-structured questions used for the college students were modified to encompass the experience of the student through the perspective of the instructor. The instructor questions were phrased from the perspective of the instructor to investigate similarities and discrepancies between the student's experience and the instructor's perception of that experience. The mindfulness instructor interviews were approximately 30 minutes in length and audio recorded using a digital recording

device. Each instructor participant received a $10 Starbucks gift card at the completion of the interview.

3.3.2 Questions

The mindfulness instructor interviews assessed the mindfulness behaviors and beliefs of college students from the perspective of the mindfulness instructor as well as explored their definition of mindfulness and mindfulness course evaluation process. These questions are included to investigate discrepancies, if any, between college students and the mindfulness instructors. The open-ended interview questions were developed using items related to the IBM as per the Cohen et al. (2019) study. All interview questions posed to the mindfulness instructor participants are listed in Appendix F.

Similar to the college student interview questions, the mindfulness instructor questions were broken down into the three main constructs of the IBM. These construct categories include attitudes, perceived norms, and personal agency. Seven attitude questions were included in the interview making this category the largest of the three. These seven questions inquired about the instructor's perspective of how interested they believe college students are towards participating mindfulness activities, why they believe college students choose to engage, what they believe college students like or dislike about mindfulness, and the advantages and disadvantages they believe college students experience when engaging in mindfulness activities. Two questions for perceived norms investigated if mindfulness is socially accepted by the population and how social expectations affect their engagement. The personal agency category contained two questions focusing on what the instructor believes would help college students engage and what types of challenges they believe college students face around mindfulness activities.

3.4 DATA ANALYSIS

All twenty-five interviews were audio recorded and transcribed. Transcription was completed by a third-party company. Each type of interview (e.g., student interviews, instructor interviews) was analyzed separately through grounded theory using thematic analysis (Braun & Clark, 2006; Chapman & Chapman, 2015; Bowen, 2006). NVivo version 12 software was used to code the data and run qualitative analysis on coded data. Open coding on two randomly selected

student interviews and two randomly selected instructor interviews was conducted by two individuals to establish emerging general codes from the data. These codes were defined as per the interview context. These general codes were piloted on five different interviews per type of participant (e.g., students and instructors). Through the five rounds of the pilot coding process, inter-coder reliability was established. Main coding of all twenty-five interviews was conducted by one individual. Once main coding was complete, the existing codes were categorized into themes. Specific codes were reported in the results section if they were present in at least 50% (*n* = 10) of the student interview responses and at least 60% (*n* = 3) of the mindfulness instructor interview responses.

Chapter 4

RESULTS

The purpose of this study was to explore college students' attitudes and beliefs towards mindfulness for stress reduction. This chapter is organized into two categories, Student Interviews and Mindfulness Instructors Interviews. The first section of this chapter presents the results from the student interviews and the second section will present the mindfulness instructor interview results.

4.1 STUDENT INTERVIEWS

4.1.1 Description of Participants

Twenty of the thirty-four students invited to participate completed an interview. An overview of the participants can be found in Table 1. The reported sex of the participants was even with 50% female and 50% male. The ages ranged between 18-years-of-age to 21-years-of-age with an average age of 19.75-years-old. Majority of the student participants were White (80%), followed by Hispanic, Latino, or Spanish Origin (20%), then Asian (10%), and lastly Middle Eastern or North African (5%). Two participants selected multiple options as their ethnicity resulting in a total percentage of 115%. Thirteen majors were represented. The top 4 majors represented were Public Health (20%), Business (15%), Civil Engineering (10%), and Aerospace Engineering (10%). The average school year was 2.25 although all four levels were represented. Majority of participants (n = 16, 80%) reported their frequency of mindfulness engagement as either practicing daily or weekly.

Table 1
Demographics of College Students (*n* = 20)

Demographic Characteristic	*N*	*%*
Sex		
Female	10	50
Male	10	50
Age		
18	4	20
19	5	25
20	3	15
21	8	40
Ethnicity/Race		
White	16*	80*
Hispanic, Latino, or Spanish	4*	20*
Asian	2*	10*
Middle Eastern or North African	1*	5*
Major		
Aerospace Engineering	2	10
Anthropology and Geography	1	5
Biology	1	5
Business	3	15
Civil Engineering	2	10
Computer Engineering	1	5
English	1	5
Environmental Engineering	1	5
Landscape Architecture	1	5
Math	1	5
Mechanical Engineering	1	5
Psychology	1	5
Public Health	4	20
School Year		
First Year	7	35
Second Year	4	20
Third Year	6	30
Fourth Year	3	15
Frequency of Mindfulness Practice		
Once a quarter	1	5
Monthly	3	15
Weekly	7	35
Daily	9	45

* Percentage reflect that 2 participants selected multiple ethnicities/races.

4.1.2 Student Interview Themes

Through the coding process, thirty-six general codes were created and applied to all twenty student interviews. Once the student interview coding process was complete, the thirty-six codes were categorized into six themes. These themes include (1) barriers, (2) motivators, (3) facilitators, (4) techniques, (5) population, and (6) definition. The list of themes, the codes associated with the themes, and the frequency of use are summarized in Table 2.

Table 2
College Student Interview Themes and Codes

Theme		Code	
Theme Name	Theme Definition	Code Name	No. of Participants (%)
Barriers	The barriers and/or challenges the participants encounter when engaging in or wanting to engage in mindfulness activities.	Cost	2 (10)
		Disadvantages	19 (95)
		Knowledge	18 (90)
		Negative Feelings	13 (65)
		Not Being Supported	5 (25)
		Not Present	4 (20)
		Practice	6 (30)
		Priorities	5 (25)
		School	19 (95)
		Substance Use and Addictive Behaviors	3 (15)
		Time	19 (95)
Definition	Participant defines what mindfulness means to them.	Mindfulness	20 (100)
Facilitators	Participants describe the factors that support their engagement with mindfulness activities and events.	Accessibility	2 (10)
		Ease	1 (5)
		Family and Friends	14 (70)
		Popularity	4 (20)
		Social Acceptance	9 (45)
		Tools and Resources	13 (65)
Motivators	The motivations and reasons why participants engage in mindfulness activities.	Awareness	2 (10)
		Benefits	20 (100)
		Calm	15 (75)
		Mental Health and Learning Disabilities	12 (60)
		Need	4 (20)
		Positive Feelings	14 (70)
		Self-Care	5 (25)
		Stress	18 (90)
		Support from Others	13 (65)
		Teach	7 (35)
Population	Different populations mentioned by the participant in regard to mindfulness activities and engagement.	Special Population	19 (95)
Techniques	Different types of mindfulness techniques described by the participants.	Body	11 (55)
		Breath	11 (55)
		Meditation	13 (65)
		Mindfulness Techniques	20 (100)
		Physical Activity	18 (90)
		Present	18 (90)
		Yoga	19 (95)

4.1.2.1 Barriers

In this first theme, students described the perceived challenges when engaging in or wanting to engage in mindfulness activities for stress reduction on a regular basis. The most commonly used code under this theme was time (*n* = 19, 95%). Student participants explained that lack of time and the time it takes to engage in mindfulness activities as the ultimate barrier in regard to participating in or trying mindfulness. Almost all of the student participants (*n* = 19, 95%) mentioned the demands of school as one of the top challenges when adding mindfulness activities into their daily routines. For example, one student participant said, “I feel like the busier weeks where I feel like I just don’t have the time or I’m just overwhelmed with everything going on, I feel like I can’t just sit down and kind of take time for myself” (female, 21-year-old). A couple of participants mentioned that mindfulness could get in the way of schoolwork and other priorities. One student mentioned, “Disadvantages? I guess one thing is that if you really need to be productive and you’re taking too much time to just relax. Sometimes the stress can keep you going especially with classwork” (male, 21-year-old). Knowledge of mindfulness and how to practice it were mentioned by eighteen student participants (90%) with the focus of lack of awareness of resources and campus mindfulness events being a hindrance to their ability to engage in mindfulness activities as a way to relieve stress. Of these eighteen responses, fifteen student participants (83.33%) focused on the lack of knowledge of how to engage in mindfulness activities and about the happenings of mindfulness events. When asked what is stopping them from engaging in mindfulness activities one participant stated, “Maybe a lack of knowledge a little bit if there’s more advertisements about things going on and stuff you could do I feel like that would help more people get into it” (female, 18-year-old). One student described how a lack of knowledge of mindfulness could be a reason why an individual may not try to incorporate mindfulness into their daily routine. They said, “I feel like especially people who haven't done it in the past or haven't done it often or haven't liked it. They’re going to just shun it off and shy away because they don't really know the benefits too well” (male, 18-year-old). Thirteen student participants (65%) mentioned negative feelings from being mindful or trying mindfulness activities as a barrier to their continuous engagement. One student participant mentioned the challenge of

facing uncomfortable feelings and how that could create negative effects that may cause an individual to not desire practicing mindfulness. They said, “Your facing your stress, so I think that could be bad and you know if you’re not coming about it in the right way or you don’t have like good guidance it could make the situation worse” (female, 19-year-old). One student elaborated on this topic by saying, “I think it’s also common for people to get stressed out to do mindfulness activities, because they feel like they have to be doing something which is something that’s like happened to me before too” (female, 21-year-old). Cost was not an imperative barrier with only two students (10%) mentioning this as a concern.

4.1.2.2 Motivators

In this second theme, many student participants described motivators and reasons why they engage in mindfulness activities for stress reduction on a regular basis. The length of results from this theme denotes the increased frequency of student participant responses focused on the motivations to practice mindfulness behaviors. The benefits of participating in mindfulness for stress reduction was the most mentioned topic under this theme. All student participants (*n* = 20, 100%) described their understanding of the beneficial effects mindfulness has on the body and mind. Over twenty-eight unique benefits were mentioned throughout the student interviews. Although all student participants mentioned at least one benefit, the types of benefits varied. The most mentioned benefit was improved mental health (*n* = 13, 65%). A student focused on the benefits of improving mental health by engaging in mindfulness activities by saying, “I think people kind of forget if your mental health isn’t there then everything else won’t be as good as it can be so, it’s kind of like a cross benefit analysis you take time now to kind of destress and then you’ll be better in the long run versus just trying to push through it” (female, 21-year-old).

Stress was mentioned by 90% (*n* = 18) of the students as a major influencer in their lives. The code labeled stress was referenced the most out of all of the codes with 86 references. Stress was categorized under the motivators theme because it was mainly described as a motivator for college students to engage in mindfulness activities. One student participant explained the stress college students face when asked who should engage in mindfulness activities for stress reduction on a regular basis, “I guess college students especially, because I

think we go through the most with like emotional, relationship issues, school issues, family issues, and then also because this is like a time in your life where a lot of things are changing, you become more independent you just have a lot more on your plate responsibilities wise" (male, 19-year-old). Students acknowledged stress management as an important aspect of maintaining their overall wellbeing. Another student participant said of practicing mindfulness, "If you do it on a regular basis, it's going to lower your stress first off and then that's going to make you more happy, more relaxed and then that's going to improve your behavior and your performance at school and everything else in your life" (male, 18-year-old).

This stress reduction effect was mostly described as a sense of calmness, a way to relax, and worry less. These terms categorized as calm, under the motivators theme, were mentioned in 75% (*n* = 15) of the interviews. For example, one student participant explained the possible outcomes of a daily mindfulness practice by saying, "if you do it on a regular basis you're more calm as a person" (female, 19-year-old). Another student who has experience with a regular mindfulness practice stated, "I've been doing some of these for two years now and more of a, I wouldn't say happier life but a calmer existence" (female, 21-year-old). Feeling a sense of calmness was the most mentioned beneficial outcome of mindfulness engagement. One participant used this relaxation effect as a motivator to overcome challenges with their busy schedule. They said, "You know I have a lot of stuff going on so, if I just can take a second and just chill, and you know put everything in perspective that's my main motivation for that for sure" (female, 18-year-old).

The positive feelings associated with mindfulness was a top motivator for the student participants in this sample. Fourteen (70%) of the student participants mentioned the pleasant sensations from actively engaging in mindfulness practices. The most common terms used to describe the positive feelings were synonyms of the word 'happy' (*n* = 11, 55%). For example, a student participant explained their motivation to engage in mindfulness as, "I want to be happier" (male, 19-year-old). Another student participant explained their perception of the benefits they would experience if they practiced mindfulness on a regular basis as, "I'd probably be more relaxed, I'd probably be less stressed out. If you took the time to really look back and see the big picture, you'd probably be ultimately happier" (male, 20-year-old).

The student participants (*n* = 13, 65%) described support from others as being positive and encouraging. This student sample described support received by another as a motivator to participate. The supportive individual or group of individuals varied (i.e., roommate, family, friends, peers, etc.) with the most mentioned supportive individual being their friend(s) (*n* = 9, 45%). One student said, “I think most people would be pretty supportive, especially like college friends are a pretty good community of people who are similarly stressed out about the world, and they understand like we’re pretty, people I engage with are pretty understanding and supportive of mindfulness activities” (female, 19-year-old). Other mentioned supportive individuals include family (*n* = 7, 35%) with mother specifically mentioned twice (10%), roommate (*n* = 2, 10%), and therapist (*n* = 2, 10%). It should be noted that not every participant referenced a specific supportive individual or a group of supportive individuals when describing their support system. Seven (35%) students made statements that individuals, in general, would be supportive of their mindfulness engagement. A student responded with, “It is generally encouraged” (female, 21-year-old) when asked what others may say if she engaged in mindfulness for stress reduction purposes.

Continuing with the motivators theme, utilizing mindfulness to help with mental health and learning disabilities was mentioned in 60% (*n* = 12) of the interviews. The term ‘mental health’ was mentioned by ten participants (50%). More specifically, mindfulness was mentioned as a tool to clear the mind (*n* = 5, 25%), alleviate anxiety (*n* = 4, 20%), and to increase positive self-talk (*n* = 1, 5%). One participant mentioned their encouragement for mindfulness activities was “Just my own mental health. That's basically the number one thing” (male, 21-year-old).

4.1.2.3 Facilitators

With this next theme, student participants described the factors that support their engagement with mindfulness activities stress reduction. The student participants (*n* = 14, 70%) generally mentioned their friends and family. One student participant said it was their family and close friends that encourage them to engage in mindfulness. A student said of mindfulness, “You have to hit that basic nurturing need for yourself before you nurture other people. So I think that’s what my family advocates for is like you can’t really help others until you help yourself” (female,

20-year-old). Thirteen (65%) of the student participants mentioned tools and resources available to them to help facilitate their mindfulness routine. The top three resources mentioned were yoga at the campus recreational center (*n* = 9, 45%), the mindfulness club on campus (*n* = 6, 30%), and the health center on campus (*n* = 4, 20%). Although these resources were mentioned not all student participants utilized them to engage in mindfulness behaviors. One student participant said, “I get emails from the mindfulness club. I haven’t actually attended their club but I’ve gotten emails” (male, 19-year-old). Another student mentioned the available mindfulness support on campus by saying, “I mean I have so many resources around me that are encouraging me to for sure being on this campus” (female, 19-year-old). Other topics included under facilitators that were not mentioned as frequently were popularity (*n* = 4, 20%), accessibility (*n* = 2, 10%), and ease (*n* = 1, 5%).

4.1.2.4 Techniques

Under this theme, student participants described the types of mindfulness techniques they have utilized or are aware of to engage in mindfulness for stress reduction. The students mentioned types of mindfulness practices (e.g., yoga) as well as types of subtle body skills (e.g., being present). Three different types of mindfulness practices were mentioned, yoga, physical activity, and meditation. The most popular mindfulness practice mentioned was yoga. Almost all student participants (*n* = 19, 95%) mentioned yoga as an available tool to practice mindfulness movement. Secondly, physical activity was referenced as a mindfulness technique utilized by 90% (*n* = 18) of the student interviewees. Meditation was the third most mentioned method with thirteen participants (65%) referencing this approach. Within these practices, three main subtle body skills were referenced, present (*n* = 18, 90%), body (*n* = 11, 55%), and breath (*n* = 11, 55%). Present is referenced as the act of being present or aware while practicing mindfulness methods. A student participant mentioned the advantages of mindfulness as, “I guess being more like grounded and present, and enjoying what’s happening now” (female, 21-year-old). The body was mentioned as a mindfulness technique in three different capacities. First, being aware of the body in space (*n* = 5, 25%); secondly, moving the body as a mindfulness movement practice (*n* = 1, 5%); and, thirdly, as physical health (*n* = 9, 45%). Breath was mentioned by eleven participants

(55%) as a technique used in conjunction with other practices to help calm the body and stay present in the moment. One student participant mentioned yoga, present, body, and breath when explaining her first experience with yoga on campus. They said, “I took a yoga class at the rec center, I hadn’t taken one before I’ve never taken yoga class before, and so he took a ten-minute period I think or longer at the end, and you know told us to focus on our breathing and be present and focus on connecting your body and your mind. That was pretty cool” (female, 18-year-old).

4.1.2.5 Population

Student participants mentioned different populations that may or may not engage in mindfulness for stress reduction on a regular basis. A variety of special populations were mentioned throughout the interviews. The top three populations mentioned were stressed or busy individuals (*n* = 10, 50%), college students (*n* = 8, 40%), and the older generation (i.e., baby boomers, grandparents; *n* = 7, 35%). Stressed or busy individuals and college students were mentioned as individuals who would engage in mindfulness for stress reduction regularly. A student described who they believed would engage in mindfulness, “Definitely people that are college students, definitely should if they don't already. And then, people probably in high stressed jobs, family life or social life, and so” (male, 19-year-old). The older generation was mentioned most frequently as the population who would most likely not engage in mindfulness for stress reduction on a regular basis. One student participant (female, 21-year-old) answered with “baby boomers” when asked who might not engage in mindfulness activities. Another student stated, “People who are stubborn I feel like or just like stuck in their ways maybe might be like a grandfather or something like that” (male, 19-year-old). Although the majority of participants mentioned a specific population, three students (15%) mentioned there is not a specific demographic who would be more likely to engage in mindfulness. One student participant said, “I don’t think there is a specific person or a specific gender that makes you more likely to be mindful” (female, 20-year-old).

4.1.2.6 Definition

The student participants stated their definition of mindfulness. All student participants (*n* = 20, 100%) shared their definition of mindfulness. Synonyms of ‘awareness’ were the most

mentioned terms (*n* = 10, 50%) throughout the definitions provided. Other key terms were present (*n* = 8. 40%); stress reduction (*n* = 6, 30%); feeling current mental, emotional, and physical state (*n* = 6, 30%); an awareness of yourself (*n* = 6, 30%); and health, whether mental or physical (*n* = 4, 20%).

4.2 MINDFULNESS INSTRUCTOR INTERVIEWS

4.2.1 Description of Participants

A total of six mindfulness instructors were invited to participate in the interviews, however, only five instructors participated and completed the interview process. A breakdown of the mindfulness instructor characteristics is summarized in Table 3. On-campus instructors included yoga instructors, a university professor, and a mindfulness club leader. Off-campus instructors included yoga instructors and an MBSR instructor.

Table 3
Characteristics of Mindfulness Instructors (*n* = 5)

Characteristic	*N*	*%*
Gender		
Female	3	60
Male	2	40
Type of Activity		
Yoga	3*	60*
Meditation	4*	80*
Location		
On-campus	3*	60*
Off-campus	3*	60*
Type of Instructor		
Yoga	3*	60*
Meditation	4*	80*
MBSR	1*	20*

*Total discrepancies due to instructors teaching multiple methods and at various locations.

4.2.2 Instructor Interview Themes

Through the coding process, forty-six general codes were created and applied to all five mindfulness instructor interviews. Once the coding process of the instructor interviews was complete, the forty-six codes were categorized into seven themes. These themes include (1) barriers, (2) motivators, (3) facilitators, (4) techniques, (5) population, (6) evaluation, and (7) definition of mindfulness. The list of themes, the codes associated with the themes, and the frequency of use are summarized in Table 4.

Table 4
Mindfulness Instructor Interview Themes and Codes

Theme		Code	
Theme Name	Theme Definition	Code Name	No. of Participants (%)
Barriers	Participant mentions the barriers students are confronted with in regard to engaging in mindfulness.	Accessibility	2 (40)
		Challenge	5 (100)
		Cost	2 (40)
		Disadvantage	5 (100)
		Discomfort	5 (100)
		Knowledge	5 (100)
		Negative Feelings	5 (100)
		Not Being Supportive	1 (20)
		Not Present	3 (60)
		Priorities	4 (80)
		School	5 (100)
		Social Acceptance	5 (100)
		Social Activities and Events	3 (60)
		Stress	5 (100)
		Substance Use and Addictive Behaviors	1 (20)
		Time	5 (100)
		Unhealthy	2 (40)
Definition	Participant explains their definition of mindfulness.	Mindfulness	5 (100)
Evaluation	The participant describes how they evaluate their mindfulness activities and events.	Evaluate	5 (100)
Facilitators	Participant mentions the factors that assist the students in engaging in mindfulness activities.	Accountability	2 (40)
		Friends and Family	5 (100)
		Interests	5 (100)
		Patience	0 (0)
		Positive Feelings	3 (60)
		Popularity	3 (60)
		Support from Others	5 (100)
		Tools and Resources	5 (100)
Motivators	Participant describes the benefits and/or motivators of engaging in mindfulness activities and/or mentions reasons to engage in mindfulness activities.	Anxiety	3 (60)
		Calm	5 (100)
		Expectations	5 (100)
		Healthy	4 (80)
		Mental Benefits	4 (80)
		Mental Health and Learning Disabilities	4 (80)
		Relax	2 (40)
		Self-Care	1 (20)
		Stress Reduction	1 (20)
Population	Participant mentions a particular type of person or group of people in regard to engaging in mindfulness and/or mindfulness activities.	Female	1 (20)
		Male	1 (20)
		Special Population	2 (40)
Techniques	Participant describes or mentions mindfulness techniques and activities.	Body	5 (100)
		Breath	2 (40)
		Meditation	5 (100)
		Physical Activity	5 (100)
		Present	5 (100)
		Practice	5 (100)
		Yoga	5 (100)

4.2.2.1 Barriers

In this first instructor theme, participants mentioned their perception of the barriers students are confronted with in regard to engaging in mindfulness activities. All instructor participants (*n* = 5, 100%) mentioned challenges they have witness college students experiencing with mindfulness engagement. All instructor participants (*n* = 5, 100%) described the stress college students encounter and how they manage stress in general. Four instructor participants (80%) mentioned college students using mindfulness activities to counteract the stressors in their lives. One instructor participant said, “I think a lot of them are under a lot of stress and I think they recognize the benefit of counteracting that with some mindfulness and calming the mind down” (on-campus instructor). One instructor (on-campus instructor) explained how students have explained to them that some stress has helped the student to be more productive. Instructors (*n* = 5, 100%) explain how time is an important factor when students decide to engage or not engage in mindfulness activities. All instructors mentioned the lack of time college students have due to their demanding schedules. One instructor participant said, “Other reasons being I don’t have the time. I think that’s the biggest one. That’s an excuse a lot of people do for a lot of things” (on-campus instructor). Another instructor participant explained their perception of why some college students choose not to engage in mindfulness on a regular basis. They said, “Oh, a lot of different reasons, so one is time, that they, when, when you said, well, you all need to just meditate for half an hour every day, they'll sort of look like, are you crazy?” (on-campus instructor). Two instructors (40%) mentioned students could perceive having more time if they engaged in mindfulness for stress reduction. One instructor stated, “Maybe they'll just have more time because they won't be milling over one thing or focusing on the wrong aspect of a situation” (off-campus instructor).

Instructor participants (*n* = 5, 100%) referred to some aspect of school or the school schedule students experience in relation to mindfulness. All instructor participants (*n* = 5, 100%) mentioned school (i.e., demands of school) as a barrier some college students encounter when implementing a mindfulness regimen within their daily schedules. One instructor participant said, “I just think there’s too many other things grabbing their attention because I’m just imagining like a full schedule and all the school work that goes in that, and then also wanting to be with friends,

and exercise, and then like by the end of that like how much space is left to engage in mindfulness activities or like really truly learn what mindfulness is" (on- & off-campus instructor). One instructor mentioned how engaging in mindfulness could help to alleviate the demands of school. They said, "I would say it's a balance to their stressful schedules and assignments in classes" (on-campus instructor).

All instructor participants (*n* = 5, 100%) described the disadvantages or lack of disadvantages college students could encounter when practicing mindfulness. Due to the negative nature of the disadvantages mentioned, this code was classified under the barriers theme. Some disadvantages mentioned were low self-efficacy, the time it takes to practice, lack of mindfulness education, facing yourself during challenging times, discomfort, caring less about school, and only focusing on the physical portion of an active mindfulness practice. Instructor participants (*n* = 5, 100%) mentioned the discomfort some college students experience when engaging in mindfulness activities. All instructors mentioned sitting still and experiencing restlessness is the biggest discomfort college students encounter. All instructor participants (*n* = 5, 100%) mentioned the level of knowledge they perceive college students have regarding mindfulness or mindfulness events. There was a focus, by all instructor participants (*n* = 5, 100%), on the barriers created by the lack of knowledge college students have about mindfulness and available mindfulness activities. One instructor participant said, "I think some of it is just unfamiliar. They don't know about it. It seems kind of weird, and so they're not quite sure how to do it" (on-campus instructor).

Staying with the barriers theme, all instructor participants (*n* = 5, 100%) mentioned negative feelings college students may experience when engaging in mindfulness. Some of these negative feelings include low self-efficacy, disliking the time it takes, friends making fun of them for engaging, thinking it is boring, feeling restlessness, experiencing their ego, feeling uncomfortable being alone with their thoughts, emerging past traumas, and, if they are unhappy, recognizing how unhappy they are in that moment. Instructor participants (*n* = 5, 100%) mentioned the practice it takes to regularly engage in mindfulness activities or mentioned the act of practicing mindfulness in general. Four of the five instructors mentioned the practice it takes to

maintain a regular mindfulness practice could be a barrier for college students. One instructor participant stated, “So that might be a barrier, is the practice of doing it and just take dedication, just takes time and patience” (on-campus instructor). Majority of the instructor participants (*n* = 4, 80%) described how other priorities could influence college student participation in mindfulness activities. All comments on this topic concentrating on how other more important priorities deter college students from engaging in mindfulness on a regular basis. Some of these priorities include school, work, hanging out with friends, and social activities. Three instructor participants (*n* = 3, 60%) mentioned social activities and events as a priority over engaging in mindfulness activities. Some instructor participants (*n* = 3, 60%) mentioned how some college students are not present in the moment due to a variety of factors. These factors include focusing on the past or the future, having an active mind, and not taking the time to notice the present.

4.2.2.2 Motivators

With the motivators theme, instructor participants described the benefits and/or motivators students encounter when engaging in or wanting to engage in their mindfulness activities or mindfulness activities in general. All instructor participants (*n* = 5; 100%) listed a variety of benefits college students could experience if practicing mindfulness on a regular basis. One campus Mindfulness Club instructor described the benefits they have witnessed college students experience. They said, “I think they like it because it makes them feel calm. It makes them forget about their worries for just a few moments, and quite a bit like it. Yeah, that’s where it makes them feel calm. And it reduces general anxiety and stress” (on-campus instructor). All of the instructor participants (*n* = 5, 100%) mentioned a sense of calmness created by practicing mindfulness. It was noted by all five instructors (100%) that they believe this calming effect is why most college students engage in mindfulness. One instructor said, “I think for most of them it's stress reduction based and then they're looking for a way to get calm” (on-campus instructor). All five instructors (100%) discussed the expectations college students have of themselves or the expectations others have of the student with regard to engaging in mindfulness behaviors. This includes the expectation of their friends and family members. The instructor participants explained that these expectations affect whether or not the individual will engage in mindfulness

practices. One instructor described if the individual had a friend who meditates then it is more likely for the individual to meditate as well. Another instructor mentioned how a self-efficacy expectation could affect continuous engagement with mindfulness. The instructor participant said, “I think also lot of our students have high expectations of themselves. And so, if they don't feel like they are good at it or they find it at all challenging to start, they might just not come back” (on-campus instructor). Another instructor participant explained that social media could make it more difficult for college students to engage in mindfulness because the act of being on social media is not a mindfulness activity (on- & off-campus instructor). Four instructor participants (80%) mentioned healthy habits students engage in to create a greater sense of wellbeing. Due to the context of the healthy comments, this code was placed under the motivators theme. One instructor said about students practicing mindfulness, “I would guess some of them feel like they are doing something good for themselves” (on-campus instructor). And they continued to say, “I think some of them just feel good about taking care of themselves” (on-campus instructor).

Most instructor participants (*n* = 4, 80%) commented on the mental benefits of engaging in mindfulness activities. The mental benefits served as a motivator among this sample. Some of the mental benefits mentioned during the interviews was calming the mind, greater clarity, increased focus, decreased negative self-talk, and relieves anxiety. One instructor participant said, “I think that that is one of the reasons why they would practice more for the health benefits, mental, and physical” (off-campus instructor). Instructor participants (*n* = 4, 80%) mentioned mental health and learning disabilities of the college students. An overactive mind and anxiety were of the top two topics mentioned under this code. One instructor explained, “I think they are so used to living in the future or in the past and having anxiety that they don't realize that there is another option that they do about it. They just think that's normal” (on-campus instructor). Some instructors (*n* = 3, 60%) mentioned how some students may be experiencing anxiety and how mindfulness can be used as a tool to counteract the anxiety effects.

4.2.2.3 Techniques

In this next theme, instructor participants described or mentioned different mindfulness techniques and activities. Like the student results, two different types of techniques were

mentioned, mindfulness practices (e.g., yoga, meditation) and subtle body skills (e.g., connecting to the present moment and body sensations). Instructor participants (*n* = 5, 100%) described using physical activity as a mindfulness technique or mentioned a specific type of physical activity (i.e., yoga) college students participate in. The instructors mention the popularity of physical mindfulness practices, such as yoga or being mindful while surfing, when the individual is first starting a mindfulness practice. One instructor said, “And even like with yoga I think a lot of people come for the workout like to exercise but then I think ultimately at the end they’re like ‘oh wow I feel less stressed out’” (on- & off-campus instructor). One instructor noted that college students may be more inclined to practice mindfulness regularly, like their exercise regimens, if they knew more about the benefits and how mindfulness affects the body and mind. All instructor participants (*n* = 5, 100%) mentioned yoga as a way for college students to practice mindfulness for stress reduction. Yoga was separated from physical activity under the technique theme due to the frequency to which it was mentioned. Like physical activity, the instructors mentioned college students tend to engage in yoga for the physical practice at first and learn the mental and emotional benefits through the experience of the practice. One yoga instructor said, “They don't necessarily always realize right away but then they come in to take yoga and they realize the benefits mentally of being mindful while practicing yoga. And then I think they see the stress reduction through movement meditation and I think they become much more interested” (on-campus instructor).

Meditation was mentioned by 100% (*n* = 5) of the participants. This code is cataloged under the technique theme. Instructors share their experience of how college students react to practicing meditation, the benefits college students gain through meditation, and the lack of participation at meditation only events. Three instructor participants (60%) mentioned college students positively respond to meditation if someone educates them on what meditation is, how to practice it, and what to expect. One instructor explained, “I think students need that kind of scaffolding, here's how, and here's why. Because otherwise they just think you're just making them jump through hoops for no reason” (on-campus instructor). Three of the five instructor participants (60%) mentioned a lack of participation at their campus meditation events. One

college professor noted mainly college faculty is in attendance when hosting meditation only events. Another yoga and meditation instructor mentioned there is consistently no participants when the campus health center hosts meditation only events, and their meditation workshop on campus only drew one female attendee.

Along with the mindfulness practices mentioned, there were some subtle body skills mentioned under the technique theme. These skills include being present and connecting with the body. Instructor participants (*n* = 5, 100%) described mindfulness as being in the present moment as a component of practicing mindfulness or mentioned the act of being in the present moment. The code present is included under the theme labeled technique. All instructor participants (*n* = 5, 100%) used the phrase 'present moment' as part of their definition of mindfulness. One instructor mentioned the most basic principle of mindfulness is being present and aware. They said, "I mean when I'm like thinking of like mindfulness at its core and that it's just like paying attention to what you're doing and paying attention to your life" (on- & off-campus instructor). All five instructor participants (100%) mentioned the body in relation to connecting to the body when being mindful and utilizing the body for active mindfulness practices. Three instructor participants used the word 'body' in their definition of mindfulness. One instructor participant explained their perception of what advantages college students experience when engaging in mindfulness, "I think they like just tapping into what's going on in their body and giving back to themselves and allowing them time to rejuvenate and detach from the craziness of their lives" (off-campus instructor). One instructor distinguished the different components of what mindfulness is as an attitude as well as a practice (on-campus instructor).

4.2.2.4 Facilitators

Under the facilitators theme, instructor participants mentioned the factors that assist students in engaging in mindfulness activities. All of the instructor participants (*n* = 5, 100%) mentioned the tools and resources available to college students to assist with engaging in mindfulness practices. Some tools and resources mentioned are yoga classes at the campus gym; meditations and events at the campus wellness center; the mindfulness club on campus; and other campus events. All instructor participants (*n* = 5, 100%) referred to the support college

students receive from others in relation to engaging in mindfulness activities and events. All participants mentioned support from others would help to facilitate the engagement in mindfulness activities. All instructor participants (*n* = 5, 100%) mentioned how the friends and family of the college student influence their behaviors. The instructor participants explained the friends of the college student are more influential than the family of the student. One instructor participant said, “I don't feel like family would be the same way. I feel like friends have more of an influence on you than maybe family” (off-campus instructor).

Continuing with the facilitator them, instructor participants (*n* = 5, 100%) commented on the social acceptance of mindfulness or mentioned society in general. It was mentioned that college students are more likely to engage in mindfulness if it is socially accepted by society or specific populations. Due to this influential connection, social acceptance was categorized under the facilitators theme. All instructor participants (*n* = 5, 100%) mentioned their perception of the college student’s interest in engaging in mindfulness and mindfulness activities. All five instructors believed college students are interested in mindfulness activities in general. Three instructor participants (60%) mentioned mindfulness and mindfulness activities, such as yoga, are becoming more popular which helps facilitate engagement.

4.2.2.5 Population

Two instructor participants (40%) mentioned a specific population in relation to mindfulness. Several populations were mentioned. Those populations include females; males; campus faculty and staff; and religious individuals.

4.2.2.6 Definition

Instructor participants shared their definitions of mindfulness. All instructor participants (*n* = 5, 100%) shared their definition of mindfulness. All definitions from this sample (*n* = 5, 100%) included the word ‘present’.

4.2.2.7 Evaluation

The instructor participants explained how they evaluate or specific ways they evaluate their mindfulness activities. All instructor participants (*n* = 5, 100%) described the evaluation process, if any, used to obtain feedback from the college student participants at their mindfulness

events and activities. Only one instructor (20%) employed a formal evaluation process to assess the effectiveness of their mindfulness events.

Chapter 5

DISCUSSION

Results from this IBM informed investigation provided insight into the attitudes and beliefs towards mindfulness for stress reduction among a sample of college students and mindfulness instructors. Additionally, it provided evidence that discrepancies in how mindfulness is defined may exist. Data from this sample of college students and mindfulness instructors could be used to build on existing evidence to inform future research on how to improve college student participation in mindfulness activities. This information could also potentially inform improvements in promotional materials and program curriculums for mindfulness activities on college campuses.

Within this sample, it was evident that this sample of college students varied in how they define the term mindfulness. Although, about half of the student participants used the word 'awareness' as part of their definition, which may indicate some students view the term somewhat similarly. The lack of a clear definition could be contributed to the lack of consensus within the existing literature (Van Dam et al., 2018). A lack of agreement on how to define mindfulness could create inconsistencies in how it is studied, practiced, promoted, and taught to any population. This could contribute to the inability to compare across studies and evaluate the effectiveness of interventions. In turn, there could be a misunderstanding of how one could apply mindfulness to their lives to reap the benefits many are seeking.

The lack of understanding about how to practice mindfulness was addressed by the majority of the interviewed instructors in the study. Through their experience, it was found many college students positively responded to mindfulness practices when they were educated on how to practice and what to expect rather than relying on misinformation or misconceptions (e.g., media reporting overinterpreted study results; Van Dam et al., 2018). Per the IBM, the degree of knowledge of how to perform a behavior will be directly related to the individual performing the behavior itself. Future research should strive to come to a consensus on a definition of mindfulness to further the understanding and effectiveness of mindfulness interventions.

The definition was not the only component of mindfulness many students in the sample had low awareness of. Many students were unaware of activities available to them on campus or within the local community. The lack of knowledge about mindfulness activities and events

available to them only restricts participation and opportunity to learn mindfulness behaviors. This lack of knowledge about other events relates well to IBM's perceived control construct as students may not feel that they have control over being able to engage in mindfulness because they do not feel like they have opportunities to do so. A lack of awareness would greatly hinder the intention to engage in any behavior, not just mindfulness pursuits. Results are similar to what has been found in previous research. For example, Flood and Parker (2014) reported inadequate event information was the third greatest constraint college students expressed in regard to participating in recreational activities. This constraint was preceded by a lack of time and lack of money. The lack of awareness may be due to the lack of promotional materials posted where college students are most likely to see them (i.e., popular social media sites, heavily trafficked areas on campus). More visually available advertisements may be necessary for students to learn about events and the resources available to them. Further research on how students learn about events and activities in this population is needed to know the best avenue for promotional material placement.

This study also revealed differences in how mindfulness is practiced. Physical activity was the most common technique described by participants, followed by yoga. Although mindfulness can be practiced through movement, there are other techniques. It may be that this type of mindfulness modality is the most relatable or easiest to practice for some college students. Some college students may perceive a greater sense of awareness and stress reduction through yoga and physical activity. It has been found that greater improvement of physical, mental, and social health are perceived when one is including activity into their schedules (Caldwell, Smith, & Weissinger, 1992). Another study found participants reported greater improvement of self-reported mindfulness measures after practicing yoga when compared to body scan meditations or formal seated meditations (Carmody & Baer, 2008). Yoga may be easier for college students to engage in due to the focus of moving the body rather than cultivating stillness as with other forms of mindfulness techniques (i.e., seated meditation, body scan meditation). Previous findings indicate several types of movement-based courses, excluding yoga (e.g., Pilates, Tai Chi), could promote mindfulness and improve health benefits associated

with mindfulness (Caldwell, Harrison, Adams, Quin, & Greeson, 2010). However, these results were an outcome from a program executed regularly for an extended period of time (e.g., 15-week semester) and not from sporadic practices. In addition to the student interviews, if movement is not included, the instructors found educating the students on what to expect in less active mindfulness practices (e.g., meditation) could be helpful to their self-efficacy of practicing the type of modality. Per the IBM, self-efficacy of a behavior directly affects intention to perform the behavior. With intention being the most important determinant when an individual deciding to engage, positively influencing the self-efficacy of the individual may greatly increase the chances of participation. Given these results, it may be important to include a movement component when promoting and educating this population on mindfulness.

The most common barrier the college students in this sample mentioned was a lack of time and the time it takes to participate in mindfulness activities. This barrier highlights again the importance of IBM's perceived control construct and the need to ensure students have control over their ability to engage in mindfulness activities. Lerner, Burns, and de Róiste, (2011) found similar results when assessing the barriers college students have toward engaging in physical activity. Another study focusing on adventure program participation concluded lack of time was one of the most prominent barriers for college students when deciding to participate (Flood & Parker, 2014). Addressing the barrier of time is important for college students to help manage their schedules and health properly to promote wellbeing. Caldwell, Harrison, Adams, Quin, and Greeson (2010) discovered incorporating a home practice improved measures of overall wellbeing. If college students are educated on ways to practice mindfulness on their own time at home rather than seeking an event or activity outside of their home, it may result in increased engagement and an improvement in health. Further research on home practice retention and effective home practice interventions is necessary to understand the opportunities this could create.

The barrier of time was mainly associated with the demands of school and course workload. The interviews indicated mindfulness activities are not as much of a priority as the requirements of school. It would be ideal for school and mindfulness to be combined

synonymously rather than competing against each other. In fact, Camp (1990) found enhanced academic achievement when college students engage in cocurricular and extracurricular activities. This study found grades improved the more a student participates in activities outside of the course curriculum. Many colleges offer physical activity courses (i.e., yoga, pilates, fitness walking) where students could receive credit towards graduation. These courses may be a way for students to commit to mindful physical activities while working towards graduation requirements. Another study found students were in agreeance that these college activity courses supported their schedules while lowering stress through physical activity (Barney, Benham, & Haslem, 2014). In 2012, Cardinal, Sorenson, and Cardinal reported many four-year colleges do not include physical activity courses as a requirement for graduation. If these classes were required, it may help teach college students how to establish positive health behaviors, ways to be physically active, and methods to manage their stress levels.

In addition to barriers, there were several facilitators mentioned by participants. It was apparent mental health was the greatest motivator to engage in mindfulness for stress reduction. Motivation has been found to be one of the most important factors as to why a college student participates in any activity or program (Reardon & Bertoch, 2010). Understanding the motivations of the student could assist with promoting and creating mindfulness programs or events students would attend. A review of neurological studies on mindfulness by Marchand (2014) revealed positive changes in brain functions associated with attention, decreased perception of stress, and psychiatric disorders (i.e., social anxiety disorder) which are all functions associated with the success of college students. If college students are motivated by the benefits, specifically an improvement in mental health, it may be imperative to focus on these factors when promoting and educating this population on mindfulness. As the IBM indicates, promoting the positive outcomes (e.g., benefits) could directly affect the intention of the individual to participate in a behavior. This is represented by the attitude construct, specifically the instrumental attitude construct, of the model. This has been investigated in previous research. Flood and Parker (2014) noted a correlation between highlighting the outcome of an activity and participation rates. They

recommended focusing event advertisements on the connection between the activity and the benefits to increase participation rates.

Along with improving mental health, stress reduction was mentioned as one of the most influential motivators for mindfulness participation. Stress from school and personal responsibilities encourage students to seek stress reduction techniques to help manage stressors and reduce stress. Roberts and Danoff-Burg (2010) found college students experience a decrease in stress when engaging in mindfulness. This decrease in stress resulted in positive perceptions of health and enhanced health behaviors. Focusing on the stress reduction aspects from such activities may help encourage college students to join mindfulness pursuits. Flood and Parker (2014) suggested an emphasis on the possibility to reduce stress has great potential to increase college student participation with extracurricular activities.

When comparing responses from the college student participants to the mindfulness instructor participants there were some similarities and discrepancies. There was an agreeance between students and instructors that the greatest barrier college students face is time, specifically a lack of time. This is similar to findings from previous studies (Lerner, Burns, and de Róiste, 2011; Flood and Parker, 2014). Another similarity between the samples is that stress reduction was a motivator for college students. As mentioned previously, motivation has been found to be one of the most important factors as to why a college student participates in any activity (Reardon & Bertoch, 2010). Knowing that time and stress reduction are items of focus for both samples could assist students in overcoming time constraints and focus on the motivation of stress reduction.

One discrepancy that emerged between samples was that the instructors focused on the challenges and barriers the college students face while the students focused on the benefits and motivators they know of or have experienced with mindfulness. The barriers all instructors focused on was the discomfort, negative feelings, and challenges they perceive the students are experiencing with mindfulness activities. Interestingly, the students did not mention nearly as many discomforts or challenges as the instructors. In fact, the students focused on the motivators and benefits when discussing their experience with mindfulness. This indicates the students are

focused on the Attitudes construct of the IBM whereas the instructors are focused on the perceived control construct. It may be beneficial for the sample instructors to align their focus on the positive outcomes of mindfulness when promoting to this population. This change of focus from the negative aspects of the perceived control construct to the positive components of the attitudes construct could help to support the college students with mindfulness practices as well as increase participation rates.

This study also provided some evidence that the IBM may provide a good framework for understanding engagement in mindfulness activities among college students. However, focusing on the IBM constructs of attitudes and perceived control seems to be the most helpful overall. Addressing time and scheduling conflicts, targeted promotion of mindfulness events and activities, and incorporating mindfulness within classroom curriculum may help to improve participation rates. Focusing promotional materials and education on the benefits (e.g., improved mental health, reduction of stress) of regularly engaging in mindfulness activities could assist with the intention to engage for this sample. Overall, the participants in this study presented positive attitudes and beliefs towards mindfulness which is promising for potential increased engagement. Future research should examine the use of the IBM for predicting engagement in mindfulness activities among college students.

5.1 PRACTICAL AND RESEARCH IMPLICATIONS

While there are limitations to the current study, there are several implications for future research and practice. First, several strategies could be explored to investigate their effectiveness in promoting engagement and continuous practice of mindfulness activities among college students. Assisting this sample with time management could support them in creating time to participate in mindfulness endeavors. This may mean educating the students on how to schedule mindfulness practices into their daily routines. Since mindfulness encompasses a wide range of practices and techniques, starting this sample with short-duration (e.g., 5-minutes) breathwork could assist them in incorporating a consistent mindfulness practice without asking them to include an activity that is of longer duration (e.g., 60-minute yoga class). This may assist the students to feel they have an increased sense of perceived control towards mindfulness.

Crumley and Schutz (2011) discovered positive results when incorporating a 3 - 4 minute mindfulness breathing exercise at the being of an adult learning class. These positive outcomes may translate to the college student population; however, future research is needed to test if this would be effective.

Given the current sample, future research is needed to examine beliefs and behaviors in different populations. For example, more diverse populations could be included to understand if the study results differ compared to the current study. In addition, other factors not examined in this study could be explored. For example, religious data was not collected for this college student sample but it could possibly have an effect on beliefs towards mindfulness. Since mindfulness originated through Buddhist teachings and practices, it is possible certain religions or religious beliefs would hinder an individual from engaging in mindfulness. As mentioned previously, Rizer, Fagan, Kilmon, and Rath (2016) found, though mixed-methods measures utilizing the HBM, some participants qualitatively identified the religious origins of mindfulness as a barrier to practicing mindfulness. Although perceived norms, of the IBM, were not found to be important for this sample, perhaps other types of groups (i.e., religious individuals) would be more influenced by norms. Mindfulness is a general term that encompasses physical practices (e.g., meditation, yoga) as well as internal subtle body skills (e.g., awareness of the present moment, connection to body and breath sensations), all of which could be practiced without any sort of religious connotation. In the future, it may be beneficial to further investigate how religion plays a role in mindfulness behaviors.

5.2 LIMITATIONS

There were several limitations to this investigation. First, due to time and resource constraints, a purposive sample at one university in one city was utilized, which may affect the generalizability of the data to other locations. Secondly, a small sample size of both students and instructors was included in the interviews. More participants could result in a better understanding of the attitudes and beliefs of this population as a whole rather than focusing on the responses from this focused, smaller sample. However, this sample is comparable to previous research using qualitative methods (Meza, Altman, Martinez, & Leung, 2019; Baker, Ferszt, & Breines,

2019; Vidourek, & Burbage, 2019). Thirdly, the fact that the interviews were done in-person could have introduced social desirability bias. Because the individual was face-to-face with the interviewer, the interviewee may have presented information that is more socially accepted than had the data been collected through some form of remote data collection (i.e., online survey). However, if remote data collection was executed in place of in-person interviews, the opportunity to probe for more information from both types of participants would not have been an option. Fourthly, it is possible a certain type of student was willing to participate as in-person interviews could be intimidating so some individuals. A better representation of this sample could have been collected if a greater variety of individuals were interviewed. Fifthly, during the time of the interviews, there was an active mindfulness campaign through the health center on campus. This campaign could have influenced the participating college students to respond in a particular way. Lastly, the interview introduction presented to the participants included yoga as an example of a mindfulness activity. This priming may have influenced the increased responses noting yoga as a mindfulness activity the students are aware of on campus. However, when testing the interview process and wording, it was evident providing an example helped the participant to understand the questions being asked.

Chapter 6

CONCLUSION

Very few qualitative studies have been conducted investigating the attitudes and beliefs college students hold towards mindfulness and mindfulness activities. This qualitative study explores the attitudes and beliefs a sample of college students have towards engaging in mindfulness activities for stress reduction on a regular basis. Additionally, how the participants defined mindfulness was examined. Data from the interviews indicated attitudes and personal agency constructs were most prominent among this sample whereas Perceived Norms was not a highlighted influence. The inconsistency in how this sample defined mindfulness may suggest more education is needed. A clear understanding of mindfulness may assist in increased engagement. Focusing efforts on addressing barriers such as lack of time, school responsibilities and schedules, and lack of knowledge of events could support these college students in exploring mindfulness pursuits. Highlighting the benefits of mindfulness activities, specifically improved mental health and stress reduction, could potentially increase the number of college student participants at mindfulness events for this sample. Overall, the findings from this study could serve as a launching point for future research to investigate how to most effectively improve college student participation in mindfulness activities.

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APPENDIX A

STUDENT INFORMED CONSENT FORM

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT:

Mindfulness for Stress Reduction: The Beliefs and Attitudes of College Students Today

This form asks for your agreement to participate in a research project on mindfulness for stress reduction. Your participation involves participating in an interview, and it is expected that it will take approximately 10-15 minutes. There are no risks anticipated with your participation. Those students in college may benefit from your participation. If you are interested in participating, please review the following information:

The purpose of the study is to examine the attitudes and beliefs college students have on mindfulness for stress reduction activities. Potential benefits associated with the study include the creation of a formalized survey, improvements of promotional materials for mindfulness for stress reduction activities, and improvements in mindfulness educational materials. All interviews will be audio-recorded and transcribed for data analysis.

If you agree to participate, you will be asked to participate in a brief (10-15 minutes) interview, which will ask you questions about your beliefs and attitudes towards mindfulness for stress reduction. The researcher will take written notes regarding your answers and, with your permission, will record the interview for transcription. After participating in the interview, you will be given a $5 Starbucks gift card for participating.

Please be aware that you are not required to participate in this research, refusal to participate will not involve any penalty or loss of benefits to which you are otherwise entitled, and you may discontinue your participation at any time. You may omit responses to any questions you choose not to answer. There are no risks anticipated with your participation in this study.

Your confidentiality will be protected by the research as your name will not be used in any reports of this research. You can choose whether or not to have your interview recorded. If you agree to the interview being recorded, any spoken occurrences of your name will be replaced by a pseudonym when transcribed by trained research assistants. Audio recordings will be kept in Building 43A in a locked room where only members of the research team will have access to them. After the completion of the study, the recordings will be destroyed. Identifying information collected as part of the research, even if the identifiers are removed, will not be used or distributed for future research studies.

This research is being conducted by Beth Merlo in the Department of Kinesiology and Public Health at Cal Poly, San Luis Obispo. If you have questions regarding this study or would like to be informed of the results when the study is completed, please contact Beth Merlo at bmmerlo@calpoly.edu or (805) 756-2545.

If you have concerns regarding the manner in which the study is conducted, you may contact Dr. Michael Black, Chair of the Cal Poly Institutional Review Board, at (805) 756-2894, mblack@calpoly.edu, or Ms. Debbie Hart, Compliance Officer, at (805) 756-1508, dahart@calpoly.edu.

If you agree to voluntarily participate in this research project as described, please indicate your agreement please indicate your agreement by choosing an option and signing below. Please keep a copy of this form for your reference and thank you for your participation in this research.

Please select one:

☐ Yes, I agree to participate and have my interview be recorded.

☐ Yes, I agree to participate and have my interview be recorded but would like to review the recording transcript before it is used in the analysis.

☐ Yes, I agree to participate but do not allow my interview to be recorded.

_____	_____	_____
Signature of Volunteer	Name	Date

_____	_____	_____
Signature of Researcher	Name	Date

APPENDIX B

COLLEGE STUDENT DEMOGRAPHIC QUESTIONNAIRE

Please answer the following questions to the best of your ability. For multiple choice questions, please check a box to answer. For all other items, please use the provided line below the question to write your answer.

1. What is your age? _____

2. What is your sex? Please check one option.

    - ☐ Male
    - ☐ Female
    - ☐ Other

3. How would you describe your race and ethnicity? Select all that apply.

    - ☐ White
    - ☐ Hispanic, Latino, or Spanish origin
    - ☐ Black or African American
    - ☐ American Indian or Alaska Native
    - ☐ Middle Eastern or North African
    - ☐ Asian
    - ☐ Native Hawaiian or other Pacific Islander
    - ☐ Other (please specify): _____

4. What is your current major? _____

5. What year are you in school? Please check one option.

    - ☐ First year
    - ☐ Second year
    - ☐ Third year
    - ☐ Fourth year
    - ☐ Fifth year
    - ☐ Graduate - First year
    - ☐ Graduate - Second year
    - ☐ Other (please specify): _____

6. How often do you engage in mindfulness activities?

    - ☐ Daily
    - ☐ Weekly
    - ☐ Monthly
    - ☐ Once a quarter
    - ☐ Once a year
    - ☐ Never

APPENDIX C

INTERVIEW GUIDE FOR COLLEGE STUDENT INTERVIEWS

Directions

Press the record button on the recording device. When you start recording, remember to state Participant ID number and date of interview.

Script

"We would like to ask you some questions about your thoughts on utilizing mindfulness activities for stress reduction. There are no right or wrong answers.

As you answer these questions, focus on the mindfulness for stress reduction activities you have engaged in or had heard of.

To get started, can you tell me what mindfulness means to you?

For this interview, mindfulness is being defined as a conscious awareness of the present moment by focusing on the breath and body sensations. Some examples of mindfulness activities are quietly sitting and focusing on your breath, attending a yoga class, or being aware of the present moment as you feel a stressful situation arise."

1. What are some common mindfulness activities or events that you've seen or heard about on college campuses?

2. Have you engaged in mindfulness activities for stress reduction?
   [PROBE: if yes, give examples.]

[Attitudes]

3. What are the good things that might happen if you engaged in mindfulness activities for stress reduction on a regular basis?
   [PROBE: Are there other advantages?]

4. What are the bad things that might happen if you engaged in mindfulness activities for stress reduction on a regular basis?
   [PROBE: Are there other disadvantages?]

[Perceived Norms]

5. What would others say if you engaged in mindfulness activities for stress reduction on a regular basis?
   [PROBE: What else might they say?]

6. Who might engage in mindfulness activities for stress reduction on a regular basis?
   [PROBE: Are there any other people or groups who might engage?]

7. Who might not engage in mindfulness activities for stress reduction on a regular basis?
   [PROBE: Are there any other people or groups who might not engage?]

[Personal Agency]

8. What is encouraging you to engage in mindfulness activities for stress reduction on a regular basis?
   [PROBE: Is there anything else that would encourage you?]

9. What is stopping you from engaging in mindfulness activities for stress reduction on a regular basis?
   [PROBE: Is there anything else that is stopping you?]

APPENDIX D

MINDFULNESS INSTRUCTOR INFORMED CONSENT FORM

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT:

Mindfulness for Stress Reduction: The Beliefs and Attitudes of College Students Today

This form asks for your agreement to participate in a research project on mindfulness for stress reduction. Your participation involves participating in an interview, and it is expected that it will take approximately 25 - 30 minutes. There are no risks anticipated with your participation. Those students in college may benefit from your participation. If you are interested in participating, please review the following information:

The purpose of the study is to examine the attitudes and beliefs college students have on mindfulness for stress reduction activities. Potential benefits associated with the study include the creation of a formalized survey, improvements of promotional materials for mindfulness for stress reduction activities, and improvements in mindfulness educational materials. All interviews will be audio-recorded and transcribed for data analysis.

If you agree to participate, you will be asked to participate in a brief (25-30 minutes) interview, which will ask you questions about your perception of the beliefs and attitudes college students have towards mindfulness for stress reduction. The researcher will take written notes regarding your answers and, with your permission, will record the interview for transcription. After participating in the interview, you will be given a $10 Starbucks gift card for participating.

Please be aware that you are not required to participate in this research, refusal to participate will not involve any penalty or loss of benefits to which you are otherwise entitled, and you may discontinue your participation at any time. You may omit responses to any questions you choose not to answer. There are no risks anticipated with your participation in this study.

Your confidentiality will be protected by the research as your name will not be used in any reports of this research. You can choose whether or not to have your interview recorded. If you agree to the interview being recorded, any spoken occurrences of your name will be replaced by a pseudonym when transcribed by trained research assistants. Audio recordings will be kept in Building 43A in a locked room where only members of the research team will have access to them. After the completion of the study, the recordings will be destroyed. Identifying information collected as part of the research, even if the identifiers are removed, will not be used or distributed for future research studies.

This research is being conducted by Beth Merlo in the Department of Kinesiology and Public Health at Cal Poly, San Luis Obispo. If you have questions regarding this study or would like to be informed of the results when the study is completed, please contact Beth Merlo at bmmerlo@calpoly.edu or (805) 756-2545.

If you have concerns regarding the manner in which the study is conducted, you may contact Dr. Michael Black, Chair of the Cal Poly Institutional Review Board, at (805) 756-2894, mblack@calpoly.edu, or Ms. Debbie Hart, Compliance Officer, at (805) 756-1508, dahart@calpoly.edu.

If you agree to voluntarily participate in this research project as described, please indicate your agreement please indicate your agreement by choosing an option and signing below. Please keep a copy of this form for your reference and thank you for your participation in this research.

Please select one:

☐ Yes, I agree to participate and have my interview be recorded.

☐ Yes, I agree to participate and have my interview be recorded but would like to review the recording transcript before it is used in the analysis.

☐ Yes, I agree to participate but do not allow my interview to be recorded.

_____	_____	_____
Signature of Volunteer	Name	Date

_____	_____	_____
Signature of Researcher	Name	Date

APPENDIX E

MINDFULNESS INSTRUCTOR CHARACTERISTICS QUESTIONNAIRE

Please answer the following questions to the best of your ability. For multiple choice questions, please check a box to answer. For all other items, please use the provided line below the question to write your answer.

1. What is your organization? _____

2. What type(s) of mindfulness activities do you lead?

   _____

3. Do these mindfulness activities focus on mindfulness for stress reduction?

   - ☐ Yes
   - ☐ Yes, but it is not the main focus.
   - ☐ No

4. How long have you been implementing these types of mindfulness activities?

   _____

5. How often do you lead mindfulness activities?

   - ☐ 5 or more per week
   - ☐ 1-4 times per week
   - ☐ 5 or more per month
   - ☐ 1-4 times per month
   - ☐ 5 or more per year
   - ☐ 1-4 times per year

6. How long is each mindfulness activity?

   - ☐ 2 hours or more
   - ☐ 1.5 hours
   - ☐ 1 hour
   - ☐ 45 minutes
   - ☐ 30 minutes
   - ☐ 15 minutes or less

7. Are your mindfulness activities continuous or a one-time event?

- Continuous
- One-time event

8. On average, how many college students attend your mindfulness activities?

    - 50 or more
    - 25-49
    - 15-24
    - 10-14
    - 5-9
    - 1-4

9. How often are new students attending the mindfulness activities?

    - Always
    - Often
    - Sometimes
    - Rarely
    - Never

10. How often are there returning students attending your mindfulness activities?

    - Always
    - Often
    - Sometimes
    - Rarely
    - Never

APPENDIX F

INTERVIEW GUIDE FOR MINDFULNESS INSTRUCTOR INTERVIEWS

Directions

Hit the record button on the recording device. When recording has begun, remember to first state the Participant ID and the date of the interview.

Script

"We would like to ask you some questions about your experience leading mindfulness programs with young adults or college students. There are no right or wrong answers, just tell us what comes to mind first. As you answer these questions focus on the type of mindfulness activities you lead."

1. What does mindfulness mean to you?

2. What types of mindfulness activities do you lead on campus for college students?

3. How do you evaluate your mindfulness activities or events?
   [PROBE: Do you any sort of formal or informal feedback evaluation?]

[Attitudes]

4. From your experience, how interested are college students in mindfulness activities?
   [PROBE: Why?]

5. Why do you think college students engage in mindfulness activities?

6. Why do you think some college students choose not to engage in mindfulness activities?

7. What do you think college students like about engaging in mindfulness activities?

8. What do you think college students dislike about engaging in mindfulness activities?

9. From your experience, what advantages do college students experience from engaging in your mindfulness activities?
   [PROBE: Are there other advantages?]

10. From your experience, what disadvantages do college students experience from engaging in your mindfulness activities?
    [PROBE: Are there other disadvantages?]

[Perceived Norms]

11. Do you feel practicing mindfulness is socially accepted by college students?

12. How do you think social expectations affect college student's engagement?

[PROBE: For example, do you think it matters if their friends are also engaging or not engaging in mindfulness activities?]

[PROBE: How about if their family is engaging or not engaging?]

[Personal Agency]

13. What things have you seen help college students engage in mindfulness activities?
    [PROBE: Is there anything else that would help?]
    [EXAMPLES: time required to engage in activity, cost of the activity, location.]

14. From your experience, what types of challenges do you see college students experiencing around mindfulness activities?
    [PROBE: Is there anything else that would make it harder?]