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Abstract

AN ABSTRACT OF THE THESIS FOR THE MASTER OF SCIENCE DEGREE IN HEALTH PROMOTION AND EDUCATION, PRESENTED ON MARCH 30, 2010, AT THE UNIVERSITY OF CINCINNATI, OHIO.

TITLE: College Students' Perceived Happiness and Involvement in Stress, Social Connections, and Spirituality

MASTERS COMMITTEE MEMBERS: Dr. Keith A. King (Chair) Dr. Amy L. Bernard

This study aimed to determine whether college students' perceived overall happiness and stress differed significantly based on frequency of using effective acute stress management techniques, emotional closeness to important others (social connections), and level of involvement in spirituality. In addition, this study examined whether college students' use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques. A convenience sample of 485 college students at a large public Midwestern university completed a 101-item instrument assessing their perceived overall happiness, perceived overall stress, frequency in using effective acute stress management techniques, perceived benefits in using effective acute stress management techniques, perceived barriers in using effective acute stress management techniques, and cues to using effective acute stress management techniques. A multivariate analysis of variance (MANOVA) revealed that perceived overall happiness differed significantly based on perceived overall stress and perceived emotional closeness to important others. Perceived overall stress differed significantly based on perceived emotional closeness to important others. Frequency in using effective acute stress management techniques differed significantly based on level of perceived benefits, barriers, and cues to using effective acute stress management techniques. Recommendations have been offered to improve college

students' happiness and decrease their stress through campus wellness programming.

Recommendations for future studies have also been offered.

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Chapter One

The Problem

Happiness and overall life satisfaction are considered major life goals in common philosophy (Annas, 1993; Ehrhardt, Saris, & Veenhoven, 2000; Helliwell & Putnam, 2004). As Aristotle and Mill (as cited in Helliwell & Putnam, 2004) asserted, the ultimate dependent variable in social science should be human well-being and in particular, subjective well-being. A comprehensive review of the literature has revealed several studies examining happiness (Bramston, Pretty, & Chipuer, 2002; Crossley & Langdridge, 2005; Diener, 1984; Fordyce, 1988; Lu & Shih, 1997; Thomas & Stock, 1988). Research suggests increasing happiness has multiple benefits (Schiffrin, & Nelson, 2010). Argyle (2001) asserted social relationships, work, and leisure are the main reasons for happiness. Besides the objective variables described, happiness also depends on how life is received and interpreted by an individual (Crossley & Langdridge, 2005). Crossley and Langdridge (2005) found college students believe the core structure of happiness consists of personal relationships factors, social factors, occupational factors, family factors, an emphasis on high self-confidence, and an emphasis on low stress. With all this stated, there are various barriers to achieving life happiness. One such barrier to happiness is stress (Schiffrin & Nelson, 2010).

Overall prevalence of stress has increased significantly over time (Antai-Otong, 2001; Wallace, 2007). Several factors have contributed to increased prevalence of stress such as daily stressors and major life stressors (Almeida, 2005). Various studies have documented the negative consequences of stress (Almeida, 2005; Brown & Harris, 1989; Natvig, Albrektsen, & Qvarnstrom, 2003; Tuck, McCain, & Elswick, 2001). For instance, Perkins (1991) found that among young adults, those who had more yuppie orientation (associated with working extremely

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long hours in high stress positions and lacking interest in traditional religious faiths) had higher levels of unhappiness. Similarly, Natvig et al. (2003) found increasing stress reduced happiness in a study of 887 adolescents. Additionally, Wallace (2007) asserted stressors are linked to migraine headaches, ulcers, heart attacks, depression, and death. Lastly, research studies have examined how major life stressors (Almeida, 2005; Brown & Harris, 1989) and daily stressors (Almeida, 2005) lead to negative consequences. Major life stressors adversely affect psychological and physical health (Almeida, 2005; Brown & Harris, 1989). Daily stressors such as interpersonal tensions and network conflicts can have a more immediate effect on well-being by causing psychological distress and physical symptoms (Almeida, 2005; Almeida, Wethington, & Kessler, 2002).

Among college students in particular, stress poses a major issue for many as they are confronted with a variety of academic, social, and personal challenges (Oman, Shapiro, Thoresen, Plante & Flinders, 2008). College student health has shown a disturbing trend of increasing student stress nationwide (Misra & McKean, 2000; Sax, 1997). In annual surveys conducted between 1985 and 1995, increasing numbers of students reported feeling overwhelmed (Oman et al., 2008). When stress is excessive or when stress is viewed negatively, students frequently experience physical and psychological impairments (Misra & McKean, 2000; Murphy & Archer, 1996). As Oman et al. stated, excessive stress adversely affects mental health. As aforementioned, research has also found stress to be a barrier to overall life happiness (Natvig et al., 2003; Schiffrin & Nelson, 2010). Thus, effective strategies are needed to prevent new stressors and to appropriately manage current stressors.

Several strategies or acute stress management techniques for alleviating stress have been identified in the professional literature such as progressive muscle relaxation, stretching

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exercises, breathing exercises, autogenic training, imagery, visualization, meditation, and mindfulness (Smith, 2007). Previous studies have found the following actions to be effective in reducing stress: stretching (Michalsen et al., 2005), progressive muscle relaxation (Chen et al., 2009), deep diaphragmatic breathing (Bughi, Sumcad, & Bughi, 2006), imagery (Lewis, 1987; Tsai & Crockett, 1993; Wynd, 1992), meditation (Oman et al., 2008), social support, positive reappraisal, and engagement in leisure activities (Blake & Vandiver, 1988; Mattlin, Wethington, & Kessler, 1990; Misra & McKean, 2000), spirituality (Graham, Furr, Flowers, & Burke, 2001), and mindfulness (Miller, Fletcher, & Kabat-Zinn, 1995; Shapiro, Schwartz, & Bonner, 1998).

One modifier of stress that also increases happiness is social connections. Social connections was operationalized by Berkman and Syme (1979) as marriage, contacts with friends and extended family members, church membership, and other group affiliations. Various terms can be found in the literature to define or explain what social connections are: social support, social networks, social capital, social bonds, and community attachments (Bruhn, 2005). It is well known that social relationships are important for health and well-being (Berkman & Syme, 1979; Bruhn, 2005). When people are deprived of human contact, or when they are unsuccessful in developing social connections with others, they experience physical and mental health problems (Bruhn, 2005). Besides the several benefits to social connections previously described, social connections also increase happiness (Bruhn, 2005). Results from a study by Helliwell & Putnam (2004) confirm many forms of social connections are strongly linked to subjective well-being. Marriage, family, ties to friends and neighbors, and workplace ties appear independently and robustly related to happiness and life satisfaction (Helliwell & Putnam, 2004). The notion that social support protects people from the harmful effects of stress is well documented (Bruhn, 2005; Coyne & DeLongis, 1986). Very happy college students are highly

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social, have stronger romantic relationships, have stronger social relationships, are more extroverted, and are more agreeable compared to the less happy groups of college students (Diener & Seligman, 2002). The importance of social connections to help college students tackle stress is well documented (Misra & McKean, 2000). Felsten (1998) states social support is beneficial for dealing with stress among college students. Social support seeking moderates the stress-depression relationship equally in men and women among college-aged students (Felsten, 1998).

Besides social connections, another modifier of stress which also increases happiness is spirituality. Spirituality is defined as a concept that involves the subjective feelings, thoughts, and behaviors that arise from a search for the sacred (Kim & Seidlitz, 2002; Larson, Swyers, & McCullough, 1998, p. 22). Various definitions of spirituality have been offered, with most involving the ultimate goal in life, the experience of a transcendent dimension that gives meaning to existence, and the capacity to experience the sacred (Dierendonck & Mohan, 2006; Giacalone & Jurkiewicz, 2003). Researchers have found spiritual involvement to be associated with happiness or well-being (Kim & Seidlitz, 2002; Tuck, McCain, & Elswick, 2001). There is a positive link between spiritual factors and happiness or well-being (Cattich & Knudson-Martin, 2009; Charmaz, 1995; Gall & Grant, 2005; Gordon et al., 2002; Rowe & Allen, 2004). Larimore, Parker, and Crowther (2002) asserted that positive spiritual beliefs provide a cognitive framework that can reduce stress. Spiritual practices aid in limiting the harmful effects of stress by developing supportive social networks and promoting healthy behaviors (Kim & Seidlitz, 2002; Waite, Hawks, & Gast, 1999). In a study of 113 college students, regardless of whether college students were affiliated with a religious group, spirituality buffered the effects of stress and daily stressors on self-reported negative affect among students (Kim & Seidlitz, 2002).

The Health Belief Model (HBM) is a theoretical framework used to explain, predict, and influence various health behaviors (Glanz & Rimer, 2005). Three components of the HBM pertinent to the present study are perceived benefits, perceived barriers, and cues to action (Rosenstock, 1974). More specifically, individuals are most likely to engage in specific behaviors when they perceive that: 1) there is benefit in performing the behavior, 2) that the benefits outweigh the barriers to performing the behavior, and 3) that there are cues to help remind them to engage in the behavior (Glanz & Rimer, 2005; Rosenstock, 1982).

Purpose of the Study

A comprehensive review of the literature found no published study which addressed the impact of acute stress management techniques, social connections, and level of spirituality on stress and happiness among college students. Therefore, this study was conducted. The purpose of this study was to examine whether college students' perceived overall happiness and stress differed significantly based on frequency of using effective acute stress management techniques, emotional closeness to important others (social connections), and level of involvement in spirituality. In addition, this study examined whether college students' use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques.

Research Questions

The following research questions were examined in this study:

- 1. To what extent are college students happy with their overall lives?
- 2. To what extent are college students stressed with their overall lives?
- 3. Does college students' perceived overall happiness differ significantly based on perceived overall stress, frequency in using effective acute stress management

techniques, perceived emotional closeness to important others (social connections), and level of involvement in spirituality?

- 4. Does college students' perceived overall stress differ significantly based on frequency in using effective acute stress management techniques, perceived emotional closeness to important others (social connections), and level of involvement in spirituality?
- 5. Does college students' frequency in using effective acute stress management techniques differ significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques?

Hypotheses

The following hypotheses were tested in this study. All hypotheses are stated in the null hypothesis format.

Hypothesis 1. There will be no significant difference in students' perceived overall happiness based on level of perceived overall stress.

Hypothesis 2. There will be no significant difference in students' perceived overall happiness based on the frequency in using effective acute stress management techniques.

Hypothesis 3. There will be no significant difference in students' perceived overall happiness based on perceived emotional closeness to important others.

Hypothesis 4. There will be no significant difference in students' perceived overall happiness based on level of involvement in spirituality.

Hypothesis 5. There will be no significant difference in students' perceived overall stress based on the frequency in using effective acute stress management techniques.

Hypothesis 6. There will be no significant difference in students' perceived overall stress based on perceived emotional closeness to important others.

Hypothesis 7. There will be no significant difference in students' perceived overall stress based on level of involvement in spirituality.

Hypothesis 8. There will be no significant difference in students' frequency in using effectives acute stress management techniques based on the level of perceived benefits in using effective acute stress management techniques.

Hypothesis 9. There will be no significant difference in students' frequency in using effective acute stress management techniques based on the level of perceived barriers in using effective acute stress management techniques.

Hypothesis 10. There will be no significant difference in students' frequency in using effective acute stress management techniques based on the level of cues to using effective acute stress management techniques.

Delimitations

This study was delimited to college students attending classes at a public Midwestern university, so it may not be generalized to students in other universities or regions around the world. To be included in the study, participants had to be full-time or part-time students at the University of Cincinnati during summer quarter 2009, because that is when data was collected. Only students who were in courses whose instructors granted permission to administer and take the survey in their classes were included in the study.

Limitations

In the interpretation of the results from this study the following limitations were acknowledged:

- 1. The results were based on self-reports and thus could have been impacted by the memory and honesty of participants.
- 2. Results were limited by the participants' ability to read and understand the questionnaire.
- 3. This study was limited to the extent that participants could recall their perceived overall happiness, perceived overall stress, frequency in using effective acute stress management techniques, perceived emotional closeness to important others, and level of involvement in spirituality.

Assumptions

It was assumed that participants were able to read, understand, and follow the instructions of the survey. It was also assumed that participants provided accurate, honest responses to the questions. To help ensure accurate recall, very few retrospective questions were included in the survey. A majority of the questions in the survey asked about recent levels of perceived overall happiness, perceived overall stress, frequency in using effective acute stress management techniques, perceived emotional closeness to important others, and level of involvement in spirituality.

Operational Definitions

Happiness. For the purposes of this study, happiness was defined as the subjective wellbeing experienced by a participant. Happiness was measured using questions one through 16 on the instrument created for this study.

Stress. For the purposes of this study, stress was defined as a feeling of tension, or anxiety. Stress was measured using questions 17 through 28 on the instrument developed for this study.

Acute stress management techniques. For the purposes of this study, acute stress management techniques were defined as coping strategies used in an acute setting to alleviate stress such as: progressive muscle relaxation, stretching exercises, breathing exercises, autogenic training, imagery, visualization, meditation, mindfulness (Smith, 2007), selfdistraction, denial, substance use, use of emotional support, use of instrumental support, disengagement, venting, planning, humor, acceptance, religion, self blame (Kim & Seidlitz, 2002), problem-focused coping, emotion-focused coping, effective time management, positive reappraisal, and engagement in leisure activities (Blake & Vandiver, 1988; Mattlin, Wethington, & Kessler, 1990; Misra & McKean, 2000). Acute stress management techniques were measured using questions 29 through 75 on the instrument developed for this study.

Perceived Emotional Closeness to Important Others (Social connections). For the purposes of this study, social connections referred to students' perceived emotional closeness to important others such as family, friends, significant others, and co-workers. Social connections was measured using questions 76 to 79 on the instrument developed for this study.

Spirituality. For the purposes of this study, spirituality was defined as a concept that involves the subjective feelings, thoughts, and behaviors that arise from a search for the sacred (Kim & Seidlitz, 2002), discussing the meaning of life, or a means to achieve inner peace such as meditation. In this study, spirituality was measured using questions 80 to 93 on the instrument developed for this study.

Chapter Two

Review of the Literature

The purpose of this study was to examine whether college students' perceived overall happiness and stress differed significantly based on frequency of using effective acute stress management techniques, emotional closeness to important others (social connections), and level of involvement in spirituality. In addition, this study examined whether college students' use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques.

A comprehensive review of the literature found no published study which addressed the impact of acute stress management techniques, social connections, and level of spirituality on stress and happiness among college students. Therefore, this study was conducted. A goal of this study is to further the knowledge on happiness and identify key ways the negative effects of stress can be mollified to increase happiness. This information can be used to assist health educators design programs that increase happiness and/or decrease stress.

Chapter one discussed the purpose, the research questions, hypotheses, delimitations, limitations, assumptions, and operational definitions for this study. This chapter presents a comprehensive review of the literature.

Happiness

The English word *happiness* is derived from the noun "hap" which is defined as "what just happens, chance, or luck, good or bad" (Griffin, 2006, p.140). Later its meaning evolved to having good hap. Griffin stated that being happy comprised of two components: one's situation and one's state of mind. He further stated that to be happy was to be glad, satisfied, or content with what one regarded as important in life. Tatarkiewicz (1976) asserted that happiness referred to one's satisfaction with life as a whole. Diener (2000) defined happiness as subjective

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well-being consisting of three components: life satisfaction, positive emotions and moods, and lack of negative emotions and moods. Seligman (2002) defined happiness as having three components: experiencing positive emotion, finding meaning in life, and being engaged in life activities.

Happiness and overall life satisfaction are considered major life goals in common philosophy (Annas, 1993; Ehrhardt, Saris, & Veenhoven, 2000; Helliwell & Putnam, 2004). Happiness has been described as a sense of well-being: the conditions of leading a successful, fortunate, or enviable life (Haybron, 2000). Life satisfaction has been described as a cognitive, judgmental process (Diener, Emmons, Larsen, & Griffin, 1985). Aristotle and Mill (as cited in Helliwell & Putnam, 2004) asserted that the ultimate dependent variable in social science should be human well-being and in particular, subjective well-being. Subjective well-being has most frequently been measured through the use of surveys involving self-reports of happiness and life satisfaction (Helliwell & Putnam).

In utilitarian moral philosophy happiness is considered the ultimate goal in human life (Ehrhardt et al., 2000; Griswold, 1995; Haybron, 2000). Griswold stated that "a life without happiness is a life not worth living" (1995, p.13). Griswold claimed that happiness is a long-term phenomenon or a state of being, not a mood. Similarly, Aristotle considered happiness or *eudaimonia* to be the sole end of all human action, and in turn, he subsequently attempted to show individuals how they should live to attain this goal (Haybron).

The Greek term *eudaimonia* encompasses more than happiness in the hedonic sense (Dierendonck & Mohan, 2006). Eudaimonic well-being results from performing things in life that challenge individuals to be the best they can be in life. Defined as such, well-being refers to optimal psychological functioning. Aristotle stated that every individual has unique, individual talents and that in realizing these talents, true happiness can be found (Dierendonck & Mohan).

A comprehensive review of the literature revealed several studies examining happiness (Argyle, 2001; Bramston, Pretty, & Chipuer, 2002; Crossley & Langdridge, 2005; Diener, 1984; Diener & Lucas, 1999; Diener & Seligman, 2002; Fordyce, 1988; Lee, Park, Uhlemann, & Patsula, 1999; Lu & Shih, 1997; Natvig, Albrektsen, & Qvarnstrom, 2003; Proctor, Linley, & Maltby, 2009; Schiffrin & Nelson, 2010; Thomas & Stock, 1988; Veenhoven, 2003). Research suggests increasing happiness has multiple benefits (Schiffrin & Nelson, 2010). Positive emotions improve personal functioning, and build personal resources such as social relationships or knowledge (Fredrickson, 1998). Furthermore, positive affect is associated with better performance ratings at work, higher salaries, and improved health (Lyubomirsky, King, & Diener, 2005). All the studies on happiness possess much practical utility since knowing how happy people function provides information that unhappy individuals can use to buffer themselves from negative consequences of unhappiness such as psychopathology (Diener & Seligman, 2002; Seligman & Csikszentmihalyi, 2000).

Vast research indicates several objective variables are significantly associated with happiness (Argyle, 2001; Crossley & Langdridge, 2005; Veenhoven, 2003). Argyle (2001) asserted social relationships, work, and leisure are the main reasons for happiness. Several scholars have argued social relationships are the most important reason for happiness (Benin & Nierstedt, 1985; Campbell, Converse, & Rodgers, 1976; Inglehart, 1990; Larson, 1978; Myers, 2000). Several studies have revealed a significant relationship between work and happiness (Andrews & Withey, 1976; Jahoda, 1981; King & Napa, 1998; Schmidt & Bedeian, 1982; Warr, 1983; Weiss, Nicholas, & Daus, 1999). Leisure activities such as sports, voluntary work, going on a holiday, and watching television are significantly correlated with happiness according to several research studies (Lu & Argyle, 1994; Robinson, 1977; Wheeler, Gorey, & Greenblatt, 1998). Leisure activities affect happiness through improved mental health, social satisfaction, and relaxation (Argyle, 2001).

Besides the objective variables described, happiness also depends on how life is received and interpreted by an individual (Crossley & Langdridge, 2005). Happy individuals typically place little importance on social comparison, however, unhappy individuals are more sensitive to the achievements and disappointments of their peers (Lyubomirsky & Ross, 1997). Happy individuals differ in their rationalization strategies towards outcomes of their decisions compared to unhappy individuals because happy individuals reduce dissonance through satisfaction with all possible outcomes whilst unhappy individuals tolerate their outcomes stating other options as worse (Lyubomirsky & Ross, 1999). How individuals appraise life situations depends on whether they are happy or unhappy because happy students recalled both positive and negative events in a more positive manner than unhappy students (Lyubomirsky & Tucker, 1998). Unhappy individuals spend more time concerned with negative events or circumstances whereas happy individuals indulge in this type of self reflection less frequently (Lyubomirsky, Tkach, & DiMatteo, 2005). Happiness is the product of unconscious, cognitive and motivational processes that are unique to each individual and result in different happiness states (Lyubomirsky & Ross, 1997; Lyubomirsky & Ross, 1999; Lyubomirsky, Tkach, & DiMatteo, 2005; Lyubomirsky & Tucker, 1998).

Additional studies have explored individuals' subjective beliefs on the reasons for happiness (Bramston et al., 2002; Diener, 1984; Diener & Lucas, 1999; Fordyce, 1988; Lee et al., 1999; Lu & Shih, 1997; Thomas & Stock, 1988). Crossley and Langdridge (2005) found

college students believe the core structure of happiness consists of personal relationships factors, social factors, occupational factors, family factors, an emphasis on high self-confidence, and an emphasis on low stress.

Diener and Seligman (2002) examined factors that influenced high happiness such as social relationships, personality, psychopathology, and other variables (e.g. religiosity and exercise) related to subjective well-being in correlation studies. The researchers sought to identify key variables that were both necessary and sufficient for happiness. Results indicated that the very happy group possessed satisfying social relationships and spent little time alone relative to average people. However, because the data was cross-sectional, causal relationships could not be determined. Thus, the study was unable to conclude whether rich social lives caused happiness, or vice versa. Nevertheless, the study showed that social relationships formed a necessary but not sufficient condition for high happiness. Simply stated, social relationships did not guarantee high happiness but high happiness did not occur without it. Furthermore, extraversion, low neuroticism, and relatively low levels of psychopathology formed necessary but not sufficient conditions for high happiness. This study showed no single key to high happiness. Instead, high happiness appeared to have several necessary preconditions before it occurred much like a symphony of music, which requires many instruments without any one of the instruments being sufficient for the full quality of music.

Diener and Seligman (2002) found that the average mood for very happy individuals was medium to moderately strong pleasant emotions much of the time, indicating that they felt happy most of the time. However, very happy individuals also reported experiencing unhappiness or neutral moods occasionally. The happiest individuals reported rarely feeling euphoric or ecstatic. Very happy individuals had the ability to move upward in mood when good situations presented themselves and react with negative moods when bad situations occurred. With all this stated, there are various barriers to achieving life happiness. One such barrier to happiness is stress (Schiffrin & Nelson, 2010).

Stress

Selye (1946), dubbed as the father of stress research, defined stress as a non-specific response of the body to a demand. He also surmised that individuals adapt themselves to stressful situations and have little control over internal and external environmental demands. Others have defined stress as the product of an imbalance between appraisals of environmental demands and individual resources (Kinman & Jones, 2005; Lazarus & Folkman, 1984). Jex, Beehr, and Roberts (1992) defined stress as a stimulus from the environment, as a response to environmental stimuli, and as a stimulus-response relationship. Stress has also been used as a metaphor for human misfortune, dissatisfaction, and suffering (Kinman & Jones, 2005).

High levels of stress tend to place strain on individuals, families, and communities (Antai-Otong, 2001). Overall prevalence of stress has increased significantly over time (Antai-Otong, 2001; Wallace, 2007). Factors contributing to such increased prevalence include environmental factors such as air pollution, noise pollution, crowding, violence in society, violence in the workplace, and a lack of loyalty by companies and employees (Antai-Otong, 2001).

Additional factors contributing to increased prevalence of stress include daily stressors and major life stressors (Almeida, 2005). Daily stressors are routine challenges of living such as the everyday concerns of work, caring for other people, and commuting between work and home (Almeida, 2005). Daily stressors also refer to unexpected small occurrences that disrupt daily life such as arguments with children, unexpected work deadlines, and malfunctioning computers (Almeida, 2005). Major life stressors include job loss, marital disruption, or the death of a loved one (Almeida, 2005). Using a U.S. national sample of adults aged 25 to 74 (N = 1031), Almeida, Wethington, and Kessler (2002) found respondents had at least one daily stressor on 40% of the study days and multiple daily stressors on 11% of the study days. Stressful events were categorized into one of seven broad classifications: interpersonal tensions, work/education, home, finances, health/accident, network (events that happen to others), and miscellaneous (Almeida, 2005; Almeida et al., 2002). Interpersonal arguments and tensions composed the most common broad class of daily stressors occurring on 22% of the study days and accounted for approximately one half of all reported daily stressors among men and women (Almeida, 2005; Almeida et al., 2002).

Various studies have documented the negative consequences of stress (Almeida, 2005; Almeida et al., 2002; Brown & Harris, 1989; Natvig et al., 2003; Perkins, 1991; Tuck, McCain, & Elswick, 2001). For instance, Perkins (1991) found that among young adults, those who had more yuppie orientation (associated with working extremely long hours in high stress positions and lacking interest in traditional religious faiths) had higher levels of unhappiness. Natvig et al. (2003) found increasing stress reduced happiness in a study of 887 adolescents. Wallace (2007) asserted stressors are linked to migraine headaches, ulcers, heart attacks, depression, and death. Stress has been shown to compromise the overall health of individuals and is associated with several acute and chronic health conditions, poor individual and occupational morale, reduced job productivity, and decreased quality of life (Antai-Otong, 2001). Acute and chronic stress has been shown to be linked to psychological and emotional problems such as anxiety, depression, irritability, frustration, anger, worrying, uncertainty, and lack of confidence (Almeida, 2005; Antai-Otong, 2001; Lazarus, 1999; Zautra, 2003). Additional negative consequences of a prolonged state of stress include reduced energy, increased muscle tension, and emotional distress (Almeida, 2005; Antai-Otong, 2001; Brown & Harris, 1989).

Research studies have examined how major life stressors (Almeida, 2005; Brown & Harris, 1989) and daily stressors (Almeida, 2005; Almeida et al., 2002) lead to negative consequences. Major life stressors adversely affect psychological and physical health (Almeida, 2005; Brown & Harris, 1989). Daily stressors such as interpersonal tensions and network conflicts can have a more immediate effect on well-being by causing psychological distress and physical symptoms (Almeida, 2005; Almeida et al., 2002). Major life stressors may be associated with prolonged physiological arousal, whereas daily hassles may be associated with spikes in arousal or psychological distress (Almeida, 2005). Daily stressors affect well-being not only by having separate, immediate, and direct effects on emotional and physical functioning, but also by piling up over a series of days to create persistent irritations, frustrations, and overloads that may result in more serious stress reactions such as anxiety and depression (Almeida, 2005; Lazarus, 1999; Zautra, 2003).

College Stress

Stress poses a major issue for many college students, as they are confronted with a variety of academic, social, and personal challenges (Oman, Shapiro, Thoresen, Plante, & Flinders, 2008). College student health has shown a disturbing trend of increasing stress nationwide (Misra & McKean, 2000; Sax, 1997). In annual surveys conducted between 1985 and 1995, increasing numbers of students reported feeling overwhelmed (Oman et al., 2008). College students typically face stressors that are academic, financial, time or health-related, or self-imposed (Goodman, 1993; LeRoy, 1988; Misra & McKean, 2000; Oman et al., 2008).

According to one-third (32%) of the nearly 50,000 students surveyed at 74 U.S. campuses in the American College Health Association-National College Health Assessment, stress was the most commonly identified impediment to academic performance (Oman et al., 2008). Academic stressors are primarily due to students feeling overwhelmed with the amount of information they have to learn and the amount of time in which they have to learn the information (Carveth, Gesse, & Moss, 1996; Misra & McKean, 2000). Studies have found that the greatest sources of academic stress are from taking and studying for exams, competing for the highest grades, and having to attain a large amount of content in a small amount of time (Abouserie, 1994; Archer & Lamnin, 1985; Britton & Tesser, 1991; Kohn & Frazer, 1986; Misra & McKean, 2000).

When stress is excessive or when stress is viewed negatively, students frequently experience physical and psychological impairments (Misra & McKean, 2000; Murphy & Archer, 1996). Oman et al. (2008) stated that excessive stress adversely affects mental health. Research studies have found that many college students experienced great distress before exams (Brown, 1991; Misra & McKean, 2000).

According to Misra and McKean (2000), reactions to stress are more severe among freshman and sophomore college students than among juniors and seniors. Misra and McKean postulated this difference among freshman and sophomores to be due to higher anxiety, lower time management behaviors, and lower leisure activities compared to juniors and seniors. Another possible cause for stress among first-year undergraduates was that they were living apart from their parents for the first time, as compared to upperclassmen (Oman et al., 2008). More advanced undergraduates faced continued pressure for academic performance, career choice decisions, and job search issues. As aforementioned, research has also found stress to be a barrier to overall life happiness (Natvig et al., 2003; Schiffrin & Nelson, 2010). Thus, effective strategies are needed to prevent new stressors and to appropriately manage current stressors.

Stress Management Techniques

Coping with stress has been conceptualized as the cognitive and behavioral responses that moderate the effects of stress on outcomes (Billings & Moos, 1981; Felsten, 1998; Lazarus & Folkman, 1984). Several coping techniques have been identified in the professional literature and include both healthy and unhealthy strategies such as self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame (Kim & Seidlitz, 2002).

Two fundamental coping strategies described in the literature are problem-focused coping and emotion-focused coping (Carver, Scheier, & Weintraub, 1989; Felsten, 1998; Folkman & Lazarus, 1980; Pearlin & Schooler, 1978). Problem-focused coping involves efforts to remove or reduce stressors through information seeking, planning, direct action, and seeking instrumental help (Felsten, 1998; Kim & Seidlitz, 2002). Emotion-focused coping involves dealing with emotional responses to stressors such as self-blame, blaming others, focusing on emotions, controlling emotions, venting emotions, fantasy or wishful thinking, seeking emotional support, and avoidance (Felsten, 1998). Avoidance involves such techniques as distraction, denial, social diversion, behavioral disengagement, and alcohol or drug use (Amirkhan, 1990; Billings & Moos, 1981; Felsten, 1998; Lazarus & Folkman, 1984; Pearlin & Schooler, 1978). Seeking social support is a way to receive instrumental help, emotional support, or social diversion (Felsten, 1998). Research has also identified several relaxation techniques used to alleviate stress (Smith, 2007). These relaxation techniques are described as being most effective when stress is most acute or severe. Some of the documented techniques for relieving stress in an acute setting include stretching exercises and progressive muscle relaxation (Smith, 2007). Often when stressed, individuals take a defensive posture via standing, crouching, or bending over a desk for an extended period of time. Stretching exercises, found in hatha yoga, target stressed posture and position (Michalsen et al., 2005; Smith, 2007).

A controlled prospective non-randomized study conducted by Michalsen et al. (2005), found women who participated in the 3-month Iyengar Hatha yoga training demonstrated significant improvements in perceived stress (P < 0.02), state anxiety(P < 0.02), trait anxiety(P < 0.01), well-being (P < 0.01), and depression (P < 0.05). Hatha yoga uses stretching, holding of postures called asanas, and breathing to effectively reduce perceived stress (Michalsen et al., 2005).

Progressive muscle relaxation is defined as a "method to bring quiet to the nervous system" (Jacobson, 1925, p. 73). The procedure for progressive muscle relaxation involves asking patients to tense and relax groups of muscles and to recognize the contrast between those states of the muscle while the "therapist often speaks in a slower, softer, deeper voice when telling participants to relax" (Scheufele, 2000, p. 209). Progressive muscle relaxation has been found to be an excellent technique to relax skeletal muscles, internal organs, and the mind (Jacobson, 1977; Romas & Sharma, 2004). American physician Edmund Jacobson spent over seven decades collecting data documenting the effectiveness of progressive muscle relaxation, and it has applicability as a prophylactic method to reduce stress and tension (Jacobson, 1977; Romas & Sharma, 2004). Chen et al. (2009) asserted that progressive muscle relaxation is

effective for reducing emotional distress. Empirical studies have found progressive muscle relaxation has a beneficial effect in the reduction of anxiety (Chen et al., 2009; Holland et al., 1991; Pender, 1985) and stress (Chen et al., 2009; Sheu, Irvin, Lin, & Mar, 2003).

Besides stretching exercises and progressive muscle relaxation, there are several other relaxation techniques described in the literature such as breathing exercises, autogenic training, imagery and visualization, meditation, and mindfulness (Smith, 2007). Breathing exercises such as diaphragmatic breathing are documented in the literature (Wallace, 2007). Diaphragmatic breathing is defined as controlled deep breathing, symbolic to a sigh. Diaphragmatic breathing is described as the easiest method for relaxation and involves the movement of the lower abdomen to enhance deeper breathing. Bughi, Sumcad, and Bughi (2006) found an intervention involving deep diaphragmatic breathing decreased prevalence of stress by 46.7% in a group of 104 medical students. This was associated with a decrease in the reported anxiety and an increase in positive well-being (Bughi et al., 2006).

Autogenic training involves evoking relaxing thoughts and images about specific body parts and processes (Smith, 2007). Autogenic training involves touching or concentrating on a specific body part, silently repeating a phrase stating the body part is "heavy," waiting without any expectations as that body part relaxes, and finally the process is terminated by flexing the body part, taking a deep breath, and opening one's eyes (Antai-Otong, 2001). Kanji, White, and Ernst (2006) found autogenic training alleviates stress in nursing students. Their randomized, controlled trial of 93 students aged 19–49 years revealed statistically significant greater reduction of state (P < 0.001) and trait (P < 0.001) anxiety in the autogenic training group compared to control groups (Kanji et al., 2006). Furthermore, in a systematic review of all controlled trials of autogenic training as a means of reducing stress and anxiety levels in human subjects, Ernst and Kanji (2000) asserted seven trials reported positive effects of autogenic training in reducing stress.

Imagery and visualization can help to evoke positive emotions in individuals (Smith, 2007). Imagery and visualization entails envisioning a serene tranquil scene and remembering how that scene smells, tastes, feels, and sounds for two to three minutes (Antai-Otong, 2001). Several randomized controlled trials have shown the effectiveness of imagery as a way to reduce stress (Lewis, 1987; Tsai & Crockett, 1993; Wynd, 1992). In a prospective cohort study of 323 medical patients, Scherwitz, McHenry, and Herrero (2005) found imagery reduced anxiety in at least half the sample. Furthermore, all patients reported imagery helped them relax and release stress (Scherwitz et al., 2005).

Meditation aids in reducing stress by enabling a calm focus on one simple task at a time. Meditation is described as a tool that is similar to diaphragmatic breathing that involves concentrating on one single thought and involves having a passive attitude (Wallace, 2007). The passive attitude is described as the ability "to self-generate one's own thoughts without attaching any emotions to those thoughts and letting them move freely in the mind" (Wallace, 2007, p. 58). Grosswald, Stixrud, Travis, and Bateh (2008) found Transcendental Meditation techniques reduced stress and anxiety in students who practiced meditation twice a day. Using a randomized controlled trial study design, Oman et al. (2008) found meditation-based stress management practices reduce stress among college undergraduates. The meditation-based stress management tools tested in the study were mindfulness-based stress reduction (MBSR) and Easwaran's Eight-Point Program (EPP).

Mindfulness is defined as awareness and focused attention, absence of elaborative thought, and nonjudgmental acceptance (Smith, 2007). Research reveals mindfulness

interventions can effectively reduce stress in various populations (Miller, Fletcher, & Kabat-Zinn, 1995; Shapiro, Schwartz, & Bonner, 1998). Shapiro, Astin, Bishop, and Cordova (2005) found an 8-week mindfulness-based stress reduction (MBSR) intervention was effective for reducing stress and increasing quality of life in a prospective, randomized controlled pilot study of 38 health care professionals, aged 18–65.

Despite the myriad of stress alleviating techniques, Felsten (1998) states in general, problem-focused coping and seeking social support are associated with positive outcomes for decreasing stress. No difference has been found in the use of problem-solving strategy between men and women (Felsten, 1998; Hamilton & Fagot, 1988; Rosario, Shinn, Morch, & Huckabee, 1988). Studies in which men and women occupy similar roles or experience similar stressors have failed to show any gender differences in the use of social support seeking (Felsten, 1998; Porter & Stone, 1995).

Felsten (1998) found that problem-solving was minimally associated with depression in college-aged men and women. Problem-solving had no main effect but interacted with stress in that those who used more problem-solving strategies had a stronger relationship between stress and depression. Thus, it appears to be a weak predictor of depression.

Avoidance coping has been shown to be a powerful predictor of depression in men and women. However, Felsten's (1998) study among college students found that it exacerbated the negative effect of stress only in males and not in females Felsten's study also revealed that avoidance is associated with more depression among college students, consistent with findings on coping and distress from other studies (Aldwin & Revenson, 1987; Aspinwall & Taylor, 1992; Billings & Moos, 1981; Bowman & Stern, 1995; Carver et al., 1989; Folkman & Lazarus, 1985). Kahn and Garrison (2009) found depressive symptoms are associated with avoidance or reduced emotional disclosure. In Study one, 831 college students completed measures of depression, measures of tendencies to avoid emotional expression, and measures of tendencies to self-disclose distress (Kahn & Garrison, 2009). Results of study one revealed depression was associated with lessened emotional self-disclosure tendencies as mediated by avoidance of emotional expression (Kahn & Garrison, 2009). In Study two, 153 of the original participants completed new measures of depression, reflected on the most significant emotional event experienced during the past week, rated their avoidance of emotions about the event, and rated their self-disclosure about the event (Kahn & Garrison, 2009). Results of study two revealed depression symptoms were negatively related to the disclosure of a specific emotional event (Kahn & Garrison, 2009).

Coping with stress is identified as a high-priority issue in the Healthy Campus 2010 initiatives of the American College Health Association (Oman et al., 2008). Among college students, many pursue the following methods to decrease stress: effective time management, social support, positive reappraisal, and engagement in leisure activities (Blake & Vandiver, 1988; Mattlin, Wethington, & Kessler, 1990; Misra & McKean, 2000).

Time management is described as a set of behaviors that facilitates productivity and alleviates stress (Lay & Schouwenburg, 1993; Misra & McKean, 2000). Some time management programs or productive study methods emphasize starting large tasks well before due dates, breaking down large tasks into small ones, and performing small tasks on a regular schedule (Misra & McKean, 2000). Despite knowing stress management techniques, many college students do not use these behaviors and find themselves in excessive distress before exams (Brown, 1991; Misra & McKean, 2000). As conceptualized by Misra and McKean (2000),

effective time management involves setting goals and priorities, listing priorities, using an organized workplace, and perceiving control over time. Misra and McKean (2000) found a negative correlation between use of effective time management behaviors and perceived academic stress. A greater buffering effect on academic stress in college students is found with students who use time management behaviors compared to those who use leisure satisfaction activities as a way to handle stress.

Leisure satisfaction is defined as the positive feeling of contentment one perceives as a result of meeting personal needs through leisure activities (Misra & McKean, 2000; Seigenthaler, 1997). Misra and McKean (2000) found an inverse relationship between leisure satisfaction and perceived academic stress. The researchers concluded that lower perceived academic stress existed in college students if they used and had satisfaction with leisure activities.

Another strategy for coping with stress among college students is spirituality (Ridnour & Hammermeister, 2008). Spiritual beliefs provide a cognitive framework that can reduce stress (Larimore, Parker, & Crowther, 2002). In fact, spirituality is a powerful coping tool that can assist students to persevere through adversity (Ridnour & Hammermeister, 2008). Graham, Furr, Flowers, and Burke (2001) found spirituality positively correlates with coping with stress. In a sample of 115 graduate students, a significant positive relationship was found between students' spiritual health and coping (Graham et al., 2001). Thus, the more vital one's spiritual health, the more numerous are the coping skills (Graham et al., 2001). Spiritual health may involve something beyond tangible resources such as: talking to a friend or seeking counseling to cope with stressful situations in life, finding meaning and purpose in one's life, experiencing peace, and feeling a connection with the universe (Graham et al., 2001).

Ridnour and Hammermeister (2008) found that spirituality was an effective coping resource to stress, consistent with findings on spiritual well-being and stress from other studies (Graham et al., 2001; Kim & Seidlitz, 2002; Larimore et al., 2002; Tuck et al., 2001; Waite, Hawks, & Gast, 1999). The results of these studies are congruent with the work of Hawks, Hull, Thalman, and Richins (1995) who suggested that spiritual well-being may very well act as a buffer against stress.

Social Connections

Social connections include marriage, contacts with friends and extended family members, church membership, and other group affiliations (Berkman & Syme, 1979). Social connections also encompass social support, social networks, social capital, social bonds, and community attachments (Bruhn, 2005).

Research has shown that social relationships are important for health and well-being (Berkman & Syme, 1979; Bruhn, 2005). Berkman and Syme (1979) found that adults with fewer social connections suffered higher rates of mortality over the succeeding nine years even after accounting for self-reports of physical health, socioeconomic status, smoking, alcohol consumption, obesity, race, life satisfaction, physical activity, and preventive health service-usage. Conversely, social isolation has been shown to be a major risk factor for morbidity and mortality, even after controlling for known biological risk factors, social status, and baseline measures of health (House, Landis, & Umberson, 1988).

Social connections provide several benefits (Bruhn, 2005) including: providing recognition and feedback from others about ourselves; providing a safety net or social support system; enhancing health, well-being, recovery from illness, and longevity; enabling the creation of new networks by expanding friendships; helping to meet basic needs of survival; aiding in learning the rules for living in a particular culture; offering care, trust, sympathy, or affirmation; and providing tangible or informational help and support (Bruhn, 2005). Interestingly, of all the various types of relationships that involve social connections, the most beneficial are marriage and cohabitation, family and kinship, friends, work relationships, neighbors, and memberships in organizations (Bruhn, 2005).

One term found in the literature to describe social connections is social capital (Bruhn, 2005). Social capital is described as the result of the bonds between family, friends, neighbors, the workplace, church, civic associations, and Internet-based virtual communities (Helliwell & Putnam, 2004). Some scholars include social trust in the definition of social capital because social trust is defined as the belief that others around you can be trusted (Helliwell & Putnam, 2004).

Many scholars regard the social network as the core element of social capital (Ferlander, 2007; Putnam, 2000; Woolcook, 1998). Ferlander (2007) defined social capital "as a resource, individual, or communal, [that is] accessed via various forms of social networks" (p. 117). Without the cognitive aspects of social capital, the social network collapses. Two important cognitive aspects of social capital include reciprocal norms and trust (Ferlander, 2007; Wellman & Frank, 2001). Norms of reciprocity are described as the various forms of exchange of social support. Social trust is defined as having confidence in other people (Ferlander).

Another term found in the literature to describe social connections is social support (Bruhn, 2005). Social support is described in four categories: emotional support, instrumental support, informational support, and social companionship (Ferlander, 2007). An example of emotional support is empathy. Providing practical help in relation to money or labor is an example of instrumental support. Giving advice or information leading to a solution to a
problem is considered an example of informational support. An example of social companionship is spending social time with others (Ferlander, 2007). The literature on social support over the past two decades suggests social support can have a direct impact on psychological well-being (Billings & Moos, 1984; Holahan & Moos, 1981; Wong & Cheuk, 2005). Researchers have found social support can buffer the negative effects of stress (Cheuk, Wong, & Rosen, 1994; Cohen & Wills, 1985; Solomon, Waysman, & Mikulincer, 1990; Wong & Cheuk, 2005). Wong and Cheuk (2005) found emotional support from one's supervisor was effective in buffering the impacts of job-related stress.

In health research, social capital is described using terminology noting its different forms: horizontal, informal, and strong social networks (Ferlander, 2007; Kim, Subramanian, & Kawachi, 2006; Lynch, Due, Muntaner, & Davey Smith, 2000; McKenzie, Whitley, & Weich, 2002; Szreter & Woolcook, 2004). Horizontal social networks involve both formal ties and informal ties (Ferlander, 2007). Examples of formal horizontal ties include "voluntary associations . . . [which facilitate] cooperation and the creation and maintenance of a civil society" since all members have equivalent status (Ferlander, 2007, p. 117–118). Examples of informal horizontal ties include relationships with family, relatives, friends, neighbors, and colleagues (Ferlander, 2007). Informal horizontal ties are crucial to individuals' overall health since they provide emotional support and sustain social networks. Examples of strong ties include: close friends or immediate family with similar social characteristics e.g. social class or religion, close friends or immediate family members with different social characteristics e.g. age, gender or ethnicity, and close work colleagues with different hierarchical positions.

Social connections help to shape individuals' quality of life (Bruhn, 2005). When individuals are deprived of human contact, or when they are unsuccessful in developing social

connections with others, they tend to experience physical and mental health problems (Bruhn, 2005). Important early social connections include the bonding between a parent and child and the bonding in early childhood friendships (Bruhn, 2005). Besides relationships to parents or friends, interactions with individuals at school or in the community also compose social connections (Bruhn, 2005). School enlarges children's social worlds to include people with social backgrounds different than their own (Bruhn, 2005). Communities today are loosely bounded, sparsely knit networks of specialized ties which encompass real-life interactions and virtual encounters (Bruhn, 2005). Social connections are the commonalities that bind a group of people (Karlan, 2007). Social connections in this context are a broader form of social capital that encompass the presence of stronger altruistic motives towards each other (Karlan, 2007). The strength of these connections could be the result of living close to someone, while social capital typically refers to the level of trust between individuals (Karlan, 2007). Social connections include social participation and social networks (Kaplan et al., 1988). Social participation refers to frequency of attendance at clubs, associations, and societies (Kaplan et al., 1988). Social networks refer to frequency of contact with friends and relatives as well as one's marital status (Kaplan et al., 1988).

Besides the several benefits to social connections previously described, social connections also tend to increase happiness (Bruhn, 2005). Diener and Seligman (2002) found that there was a direct relationship between happiness and social relationships. As Erickson (2003) stated: "People are healthier and happier when they have intimates who care about and for them. But they also do better when they know many different people casually" (p. 25). Individuals possessing more diversified networks tend to be less depressed than their counterparts (Erickson, 2003).

Bridging social capital can have a positive impact on mental health (Ferlander, 2007; Mitchell & LaGory, 2002). Bridging social capital is described as links that cut across various lines of social cleavage (Helliwell & Putnam, 2004). Strong bridging ties include close friends or immediate family with different social characteristics e.g. age, gender, or ethnicity. Weak bridging ties include acquaintances within voluntary associations with different social characteristics (Ferlander, 2007).

As aforementioned, social relationships are important for overall well-being (Bruhn, 2005). Research indicates that social connections are the most robust correlates of subjective well-being (Helliwell & Putnam, 2004). People who have close friends, friendly neighbors, and supportive coworkers are less likely to experience sadness, loneliness, low self-esteem, and problems with eating and sleeping. Helliwell and Putnam (2004) stated that subjective well being was best predicted by the "breadth and depth of one's social connections" (p. 1437).

Individuals report that quality relationships with family members, friends, or romantic partners are more important prerequisites for their happiness than money or fame (Helliwell & Putnam, 2004). The happiness effects of social connections from family members, friends, or romantic partners appear to be large, as compared with the effects of material affluence.

Results from a study by Helliwell & Putnam (2004) found that many forms of social connections are strongly linked to subjective well-being. Marriage, family, ties to friends and neighbors, and workplace ties, all appear independently and robustly related to happiness and life satisfaction. Moreover, the effects of one person's social ties on another person's happiness were neutral to positive. Helliwell and Putnam (2004) stated the impact of society-wide increases in social connections on well-being would be unambiguously and strongly positive.

The notion that social support protects individuals from the harmful effects of stress has been well documented (Bruhn, 2005; Coyne & DeLongis, 1986). Strong bonding social networks are beneficial to health because they reduce stress (Berkman & Syme, 1979; Ferlander, 2007; Veenstra, 2001). Social relationships tend to moderate the deleterious effects of stress and social support has a buffering effect on stress (House et al., 1988). Studies by Cassel (1976) and Cobb (1976) (as cited in House et al., 1988) described social support as something that promoted adaptive behavior in the face of stress and thus, buffered the negative effects of psychological stress

In a study of 222 college students, Diener and Seligman (2002) found that very happy college students had rich and satisfying social relationships and spent little time alone. Unhappy college students had social relationships that were worse than average. Diener and Seligman's study found that social relationships were an important component to overall happiness in college students. Very happy college students were highly social, had stronger romantic relationships, had stronger social relationships, were more extroverted, and were more agreeable compared to the less happy groups of college students.

The importance of social connections to help college students tackle stress has also been well documented (Misra & McKean, 2000). Underclassmen like freshman and sophomores typically have higher reactions to stress than juniors and seniors. Furthermore, freshman and sophomores lack strong social support networks and lack coping mechanisms that are more commonly used by juniors and seniors to deal with college stress (Allen & Hiebert, 1991; Misra & McKean, 2000). Social support networks provided to freshman through freshman week, special programs, advising, and counselors are helpful but not adequate (Misra & McKean, 2000).

Felsten (1998) stated that social support was beneficial for dealing with stress among college students. Social support seeking tended to moderate the stress-depression relationship equally in male and female college-aged students. Weitzman and Kawachi (2000) found that the level of social capital accessed through membership in student associations can be important in decreasing unhealthy stress coping habits, such as binge drinking in U.S. colleges. Felsten (1998) found that strong bonding ties, a specific example of social capital, provided emotional support which reduced stress in college students.

Spirituality

Research has shown spirituality to have several health benefits (Joseph, 1998; Kim & Seidlitz, 2002), including overall mental health (Ridnour & Hammermeister, 2008). Spirituality has been defined as a concept that involves the subjective feelings, thoughts, and behaviors that arise from a search for the sacred (Kim & Seidlitz, 2002; Larson, Swyers, & McCullough, 1998, p. 22). Spirituality has also been described as an element that is part of the everyday lives of most individuals that affects adjustment to minor daily life events (Kim & Seidlitz, 2002). Scholars have defined spirituality as the quest for making meaning out of one's existence and a commitment to transcendence of the ego (Herbert, Jenckes, Ford, O'Connor, & Cooper, 2001; Miller & Thoresen, 2003; Pembroke, 2008; Scheurich, 2003).

Pembroke (2008) defined spirituality as having two forms: an immanent and a transcendent form. In immanent spirituality, all the resources a spiritual person needs to find meaning and self-transcendence are found within the self (Pembroke, 2008). Transcendent spirituality is the quest for a deeper relationship with God (Pembroke, 2008). Through the relationship with God, spiritual seekers receive the divine grace that enhances their spiritual resources (Pembroke, 2008).

In definitions of spirituality, nine words tend to appear most frequently: personal, life, principle, animator, being, God (god), quality, relationship, and transcendent (Ridnour & Hammermeister, 2008). According to several scholars, spirituality is defined as a sense of relatedness or connectedness to others that provides meaning and purpose in life, the fostering of well-being through a stress buffering effect, and having a belief in a power higher than the self (Hawks et al., 1995; Ridnour & Hammermeister, 2008).

Spirituality also involves living by one's inner truth to produce positive attitudes and relationships in life (Dierendonck & Mohan, 2006; Hawley, 1993). Definitions of spirituality deal with the ultimate goal in life, the experience of a transcendent dimension that gives meaning to existence, and the capacity to experience the sacred (Dierendonck & Mohan, 2006; Giacalone & Jurkiewicz, 2003). Dierendonck & Mohan (2006) stated that different from religiosity, spirituality was associated with a focus on the essence of life, creativeness, spirit, mystical experiences, new age beliefs, and an aversion against clergy.

Thus, spirituality involves an individual, experiential focus (Dierendonck & Mohan, 2006). Spirituality signifies the inner attitude of living life directly related to the sacred and is concerned with the process of receiving strength, support, and guidance through activities such as meditating or praying. Spiritual people identify making meaning out of one's existence as a central human task and this journey often involves self-transcendence (Pembroke, 2008). Spiritual people commit themselves to a reality beyond the self which could be one's family, nature, justice in society, or peace in society (Pembroke, 2008).

Researchers have found spiritual involvement to be associated with happiness, or wellbeing (Kim & Seidlitz, 2002; Tuck et al., 2001). Studies with rheumatoid arthritis patients found people who engaged in frequent daily spiritual experiences had higher levels of positive mood and lower levels of daily negative mood (Keefe et al., 2001; Kim & Seidlitz, 2002). In another study, high scores of spirituality led to higher levels of existential well-being and quality of life among HIV patients (Tuck et al., 2001).

Larimore et al. (2002) asserted spirituality can increase happiness or satisfaction with life. Frequently there is a positive association between spirituality and well-being (Larimore et al., 2002). Furthermore, spiritual beliefs provide joy and are associated with mental health benefits (Larimore et al., 2002). Individuals who have a positive spiritual identity have meaning and purpose in life, feel self-worth, and are better able to fulfill their greatest potential (Graham et al., 2001; Richards & Bergin, 1997). Kennedy, Abbott, and Rosenberg (2002) found 78% of the 72 cardiac patients reported increased spirituality after a 2.5 day educational retreat involving spiritual principles of healing, yoga, meditation, and visualization. Furthermore, increased spirituality was positively associated with increased well-being and increased meaning in life (Kennedy et al., 2002).

There is a positive link between spiritual factors and happiness or well-being (Cattich & Knudson-Martin, 2009; Charmaz, 1995; Gall & Grant, 2005; Gordon et al., 2002; Rowe & Allen, 2004). Kennedy and Kanthamani (1995) found spiritual experiences increased interest in spiritual matters and increased sense of well-being among a convenience sample of 120 people. More specifically, the majority of respondents indicated that spiritual experiences resulted in happiness, well-being, and meaning in life (Kennedy & Kanthamani, 1995). Stranahan (2008) asserted spiritual health is related to overall well-being. Spiritual health pertains to the welfare of the inner person, and is characterized by the ability to invest energy in one's life seeking meaning and purpose, mustering inner strength to hope and cope, and enjoying transcendent relationships (Stranahan, 2008). Furthermore, spiritual wellness is associated with joy

(Stranahan, 2008). The beneficial effects of spiritual health on psychological health are well documented in the literature (Stranahan, 2008).

Spirituality has been positively linked with well-being (Dierendonck & Mohan, 2006). Spiritual well-being, existential well-being, and a spiritual outlook show a strong inverse relationship with negative moods, suggesting that spiritual variables influence well-being. Studies have indicated that overall life satisfaction tends to positively correlate with spiritual experiences and these experiences were further found to positively correlate to one's life purpose (Dierendonck & Mohan, 2006; Kass, Friedman, Lescrman, Zuttermeister, & Benson, 1991).

Such a positive relationship between positive affect and spirituality should not be surprising (Dierendonck & Mohan, 2006). Studies that have investigated well-being, spirituality, and spiritual experiences have found that individuals who have spiritual experiences tend to fall in the normal range of well-being and have a tendency to report more extreme positive feelings than their counterparts (Dierendonck & Mohan, 2006; Kennedy & Kanthamani, 1995; Kennedy, Kanthamani, & Palmer, 1994). Dierendonck and Mohan (2006) found spiritual well-being to be an element of eudaimonic well-being or happiness when spirituality was viewed as an inner resource.

Larimore et al. (2002) asserted that positive spiritual beliefs provide a cognitive framework that can reduce stress. Graham et al. (2001) found spirituality positively correlated with coping with stress in a study of 115 graduate students. Furthermore, a significant positive relationship was found between students' spiritual health and coping, indicating that the more vital one's spiritual health, the more numerous the coping skills (Graham et al., 2001). The results of this study indicate spiritual health may play an important role in coping with stress (Graham et al., 2001). Spiritual health can involve things such as talking to a friend or seeking

counseling to cope with stressful situations in life (Graham et al., 2001). Spiritual practices can limit the harmful effects of stress by helping individuals to develop supportive social networks and helping them to adopt healthy behaviors (Kim & Seidlitz, 2002; Waite et al., 1999). In a study by Tuck et al. (2001), spirituality was negatively related to perceived stress and psychological distress among HIV patients.

One postulate as to why spirituality can help individuals cope with stress is that spiritual people are less distracted by trivial problems and less likely to overemphasize them (Kim & Seidlitz, 2002). Another explanation as to why spirituality can lessen the negative emotional consequences of stress involves the use of spiritual practices such as meditation. Numerous studies have noted the psychological effects of stress reduction from diverse meditation-based interventions in adult populations (Oman et al., 2008; Walsh & Shapiro, 2006).

Meditation is perceived as beneficial for spiritual growth and personal effectiveness (Oman et al., 2008; Stein, 2003). Previous research on college students and adults supports the effectiveness of two examples of meditation management of stress (MMS) techniques called mindfulness-based stress reduction (MBSR) and Easwaran's Eight-Point Program (EPP) in reducing stress (Astin, 1997; Oman et al., 2008; Shapiro et al., 2005; Shapiro et al., 1998; Winzelberg & Luskin, 1999). MBSR and EPP teach sitting meditation and informal skills for effectively regulating attention at work or other situations throughout the day, such as mindful or focused attention (Oman & Beddoe, 2005; Oman et al., 2008). Both MBSR and EPP encourage cultivating attitudes that support meditative attention such as patience or slowing down and offer motivational support by exposing participants to readings that reflect meditative perspectives (Oman & Beddoe, 2005; Oman et al., 2008). MBSR and EPP are ways to support spiritual

growth, are nonsectarian, and can be practiced within any major religious faith or outside of all religions (Oman et al., 2008).

Research has indicated the buffering effects of spirituality on stress (Hawks et al., 1995; Ridnour & Hammermeister, 2008). In a study of 113 college students, regardless of religious group affiliation, spirituality buffered the effects of stress and daily stressors on self-reported negative affect among students (Kim & Seidlitz, 2002). Ridnour and Hammermeister (2008) found that college athletes who strongly displayed spiritual well-being presented a mentally tougher profile for sport that also supported spiritual well-being serving as a protective factor against stress.

Previous randomized controlled studies have examined the use of meditation-based interventions for college students as a way to decrease stress (Astin, 1997; Oman et al., 2008; Shapiro et al., 1998). A study of 73 medical and premedical students revealed decreases in distress and anxiety following a 7- to 8-session mindfulness meditation intervention (Shapiro et al., 1998). Winzelberg and Luskin (1999) found psychological distress decreased in college students after a 4-session training in passage meditation, the practice of meditating on a poem or other inspirational text.

Oman et al. (2008) found that college undergraduates reduced their levels of perceived stress using an integrated meditation program. The benefits in stress reduction were also found to exist at a 2-month follow-up. No significant differences in stress reduction were found among the students who used MBSR compared to the students who used EPP. These MMS programs were nonsectarian and generated wide cross-cultural interest among a self-selected group of undergraduates who demonstrated stress-reduction effects.

In a national survey by Astin et al. (2005) of more than 100,000 U.S. college students, a large majority reported an interest in spirituality (80%) or a search for meaning or purpose in life (76%), and about half (47%) considered seeking opportunities to grow spiritually as essential or very important. Approximately half of the 113 college students in Kim and Seidlitz's study lacked a religious affiliation (2002). The implication of Kim and Seidlitz's study was that boosting spirituality could be one way to help students adjust to daily stress.

Health Belief Model

The Health Belief Model (HBM) is one of the first theories predicting health behavior created by social psychologists, Hochbaum, Rosenstock, and Kegels (Glanz & Rimer, 2005). The HBM is one of three main intrapersonal (individual) theories that focus on factors such as knowledge, attitudes, beliefs, self-concept, mental history, past experiences, motivation, skills, and behavior (Cottrell, Givan, & McKenzie, 2002). The HBM is portrayed as a predictor of preventive health behavior by Cottrell et al. (2002). Researchers commonly use this model to describe the likelihood of an individual performing a preventive health behavior or action. If the perceived benefits outweigh the perceived barriers, it is likely the action will be performed based on this model.

The interplay between individual perceptions, modifying factors, and likelihood of action all affect whether a preventive health behavior is performed (Cottrell et al., 2002). As stated in a study by Rosenstock (1982), the HBM clearly describes conditions when people choose to participate in health promotion assessments and programs. In order for people to enact a recommended health behavior, they first have to believe: that there is benefit in performing the behavior, that the benefits outweigh the barriers to performing the behavior, that the action will help, and that they are susceptible to the disease or condition (Rosenstock, 1982). Six of the constructs of the health belief model are: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Glanz & Rimer, 2005). Perceived susceptibility is defined as beliefs about the chances of getting a condition. Perceived severity is defined as beliefs about the seriousness of a condition and its consequences. Perceived benefits are defined as the beliefs about the effectiveness of taking action to reduce risk or seriousness of a condition. Perceived barriers are defined as beliefs about the material and psychological costs of taking action. Cues to action are defined as factors that activate readiness to change. Self-efficacy is defined as confidence in one's ability to take action (Glanz & Rimer, 2005).

To increase the likelihood that a person successfully performs an action, an individual has to believe he or she is susceptible to a disease, that the disease will have a severe effect upon his or her life, and that the disease or condition is a threat to be avoided (Rosenstock, 1974). Furthermore, according to Rosenstock (1974), the individual has to believe the action will reduce susceptibility or severity of the disease, that the action or behavior reduces the threat of the disease, and that there are more benefits to the action compared to the barriers of performing the action.

The construct perceived benefits from the HBM describes how effective an action is at reducing the risk or seriousness of the disease (Glanz & Rimer, 2005). The perceived benefits of the action influence whether a particular action is performed by a person because they identify the positive effects a person can expect from performing a behavior (Glanz & Rimer, 2005).

The construct perceived barriers is described as the material and psychological costs of performing a behavior (Glanz & Rimer, 2005). Some examples of perceived barriers to performing a health behavior among college students are: time-consumption, fear, and not

perceiving a need for participation in the program (Bost, 2005). Perceived barriers are crucial because as a person decides whether or not to do a behavior, he or she weighs the effectiveness of the behavior against the perception that the behavior is expensive, inconvenient, dangerous, or unpleasant (Rosenstock, 1974).

The construct cues to action is explained as a factor that elicits a person to do the action or behavior that benefits an individual's health (Glanz & Rimer, 2005). An example of a cue to action in the health field is: a reminder from a doctor to get a mammogram (Glanz & Rimer, 2005). Other examples of cues to action include interpersonal interactions or perception of body image (Rosenstock, 1974). Interpersonal interaction is an example of an external cue to action whereas body image perception is an example of an internal cue to action (Rosenstock, 1974).

For the present study, three constructs of the HBM were used: perceived benefits, perceived barriers, and potential cues to action. More specifically, this study measured whether college students deemed they were susceptible to stress, whether they deemed stress to be severe, and whether they deemed stress to be a barrier to their happiness.

Summary

The purpose of this chapter was to provide a comprehensive review of the research regarding happiness, stress, stress management techniques, social connections, and spirituality. The theoretical framework of the health belief model was also examined. Primary goals of this study were to identify factors associated with increased happiness and determine strategies that can be used to mollify the negative effects of stress. Such information could be used to assist health educators in developing and implementing programs that increase happiness and/or decrease stress.

Happiness is a key purpose of life for many individuals and is, therefore, worthy of research attention. Happiness has been described as life satisfaction and is deemed to be an ultimate goal of life according to several renowned scholars. Current gaps in the literature exist with respect to factors associated with happiness. Thus, more research is warranted.

Research has shown stress to be associated with many negative consequences such as unhappiness, depression, and psychological distress among adults. Among college students, stress is associated with academic burdens, financial burdens, and negative affect. Stress is one of the most common impediments to academic performance among college students. Thus, techniques to reduce or effectively manage stress are needed.

There are several types of stress management techniques that help individuals cope with stressors in their lives. Some examples of coping strategies include venting, humor, distraction, positive reframing, self-distraction, and substance use. Two main schools of coping strategies that are described are problem-focused coping and emotion-focused coping. Relaxation strategies such as stretching, progressive muscle relaxation, breathing exercises, autogenic training, imagery and visualization, meditation, and mindfulness are effective ways of alleviating stress in an acute setting. Problem-focused coping and seeking social support are associated with decreased stress. Another stress management technique is time management. Time management buffers the effects of stress among college students and is an effective way to deal with stress. Leisure satisfaction and spirituality are other stress management techniques used by college students.

One modifier of stress that may also increase happiness is the existence of social connections. Social connections can include relationships such as marriage, contacts with friends and extended family members, church membership, and other group affiliations. These

connections can also involve: social support, social networks, social capital, social bonds, and community attachments. Research indicates that social relationships are important for health and well-being. When people are deprived of or unsuccessful in developing social connections with others, they tend to experience physical and mental health problems. Social connections can help to increase individuals' feelings of happiness. Social support also can protect individuals from the harmful effects of stress and increase the likelihood for happiness. For example, very happy college students tend to be highly social, have stronger romantic relationships, have stronger social relationships, are more extroverted, and are more agreeable compared to less happy college students.

Spirituality involves a search for meaning beyond human existence that creates a sense of connectedness with the world. Spirituality can increase happiness or life satisfaction by providing individuals a new perspective that gives them hope. Spiritual well-being is an inner resource that can be cultivated through meditation and can assist individuals in decreasing stress. A majority of college students are interested in learning more about spirituality.

The Health Belief Model (HBM) has been used to predict a wide array of health behaviors in individuals. The main constructs of the HBM used in the present study were perceived benefits, perceived barriers, and potential cues to action. The present study used the HBM to examine whether perceived benefits, barriers, and cues to using acute stress management techniques were associated with individuals' self-reported stress and overall happiness. In addition, individuals' level of spirituality and social connections were also examined to determine possible relationships with stress and happiness.

Chapter Three

Methods

The purpose of this study was to examine whether college students' perceived overall happiness and stress differed significantly based on frequency of using effective acute stress management techniques, emotional closeness to important others (social connections), and level of involvement in spirituality. In addition, this study examined whether college students' use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques.

A comprehensive review of the literature found no published study which addressed the impact of acute stress management techniques, social connections, and level of spirituality on stress and happiness among college students. Therefore, this study was conducted. A goal of this study is to further the knowledge on happiness and identify key ways the negative effects of stress can be mollified to increase happiness. This information can be used to assist health educators design programs that increase happiness and/or decrease stress.

Chapter one discussed the purpose, the research questions, hypotheses, delimitations, limitations, assumptions and operational definitions for this study. Chapter two provided a comprehensive review of the literature. This chapter describes the methods that were used in this study.

Participants

The participants of this study were a convenience sample of college students attending classes at a public, Midwestern university. To be included in the study, participants had to be full or part-time students at the university during summer quarter 2009, because that is when data was collected.

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Only students who were in courses whose instructors granted the researcher permission to administer the survey in their classes were part of the study. An email was sent to course instructors to request permission to administer the survey several weeks prior to the date the survey was administered. The participants represented various majors, both genders, and various class levels (freshman to senior status). The participants were from both undergraduate and graduate level course programs.

A power analysis was conducted to determine the sample size needed to represent the 37,072 students at the University of Cincinnati as of fall 2008 using the Creative Research Systems sample-size calculator with a confidence level of 95% and a confidence interval of five. Results of this analysis indicated that 380 students needed to be surveyed to result in a representative sample.

Instrumentation

A four page, 101-item survey instrument was developed for this study. The instrument consisted of eight subscales and a demographic segment. The researchers developed the entire instrument so that questions 1 to 16 measured perceived overall happiness, questions 17 to 28 measured perceived overall stress, questions 29 to 39 measured frequency in using effective acute stress management techniques, questions 47 to 57 measured perceived benefits in using effective acute stress management techniques, questions 58 to 66 measured perceived barriers in using effective acute stress management techniques, question 75 measured perceived helpfulness of stress management techniques in reducing stress, questions 76 to 79 measured perceived helpfulness of stress management techniques in reducing stress, questions 83 to 93 measured perceived level of involvement in spirituality (spirituality). The demographics section consisted of

questions 94 to 101. The demographic questions related to sex, age, year in school, race, where the student currently lived, with whom the student currently lived, enrollment (full-time or parttime), and whether the student was a member of a student group.

The Perceived Overall Happiness subscale assessed students' overall happiness and required them to indicate how happy or unhappy they felt with each of 16 statements by using a five-point, Likert-type scale (1 = extremely unhappy, 5 = extremely happy). A sixth response option was also provided (not applicable) for each statement. A sample question from the subscale was: "Overall, how happy or unhappy do you feel with your life in general?" Individual item scores were totaled to achieve an overall happiness score. The potential range of scores was 16 to 80.

The Perceived Overall Stress subscale consisted of 12 items, questions 17 to 28. On the survey, this section required participants to indicate how stressed they felt about items using a five-point, Likert-type scale (1 = not stressed at all, 5 = extremely stressed). A sixth response option was also provided (not applicable) for each statement. A sample question from the stress subscale was: "Overall, how stressed do you feel with your life in general?" Individual item scores were totaled to achieve an overall stress score. The potential range of scores was 12 to 60.

The Frequency in Using Effective Acute Stress Management Techniques subscale consisted of 18 items, questions 29 to 46, and required participants to indicate how frequently they used specific acute stress management techniques by using a five-point, Likert-type scale. (1 = never (0% of the time), 2 = rarely (1-49% of the time), 3 = sometimes (50% of the time), 4 = most of the time (51-99% of the time), 5 = always (100% of the time)). A sample question fromthis subscale was: "In the moment you feel stressed, how often do you use the following toreduce your stress?" Of the 18 items, 11 were defined as effective acute stress management

techniques, based on the literature. These effective techniques included items 29 to 39: taking deep breaths, counting to ten, praying, meditating, listening to music, contracting and relaxing muscles, stretching, running or exercising, trying to look at the big picture, talking to or calling someone to vent, and imagining or visualizing something pleasant. Seven of the items were defined as ineffective acute stress management techniques based on the literature. These included items 40 to 46: crying, eating, yelling, taking a nap or sleeping, smoking, drinking alcohol, and using other drugs. An overall subscale score was developed for effective techniques only. Thus, the frequency in using effective acute stress management techniques subscale score ranged from 11 to 55.

The Perceived Benefits in Using Effective Acute Stress Management Techniques subscale consisted of 11 items (all effective techniques), questions 47 to 57. This subscale required participants to indicate how helpful they felt each of the 11 effective acute stress management techniques were in reducing their stress by using a four-point scale (1 = not helpful, 2 = slightly helpful, 3 = moderately helpful, and 4 = extremely helpful). A fifth response (I have never tried this) was also provided for each statement. A sample question from this benefits subscale was: "When you feel stressed, how helpful are each of the following in reducing your stress?" 11 items listed in questions 47 to 57 were effective acute stress management techniques: taking deep breaths, counting to ten, praying, meditating, listening to music, contracting and relaxing muscles, stretching, running or exercising, trying to look at the big picture, talking to or calling someone to vent, and imagining or visualizing something pleasant. Individual item scores were totaled to achieve an overall benefits subscale score. The potential range of scores was 11 to 44.

The Perceived Barriers in Using Effective Acute Stress Management Techniques subscale consisted of 9 items, questions 58 to 66. This subscale required participants to indicate how large of a barrier each of the 9 listed items were in preventing them from using an effective acute stress management technique to reduce stress by using a four- point scale (1 = not a barrier, 2 = slight barrier, 3 = moderate barrier, and 4 = extreme barrier). A sample question from this barrier subscale was: "How large of a barrier is each of the following in preventing you from using positive techniques to reduce your stress in the moment you feel stressed?" 9 items were listed in questions 58 to 66: not aware of the techniques, do not know how to use the techniques, embarrassed to use the techniques in public, embarrassed to use the techniques in private, satisfied with how currently handling stress, too lazy to use the techniques, and get caught up in the moment. Individual item scores were totaled to achieve an overall barriers subscale score. The potential range of scores was 9 to 36.

The Cues to Using Effective Acute Stress Management Techniques subscale consisted of 8 items, questions 67 to 74. This subscale required participants to indicate how helpful each of the 8 listed items were in getting them to use an effective acute stress management technique to reduce stress by using a four- point scale (1 = not helpful, 2 = slightly helpful, 3 = moderately helpful, and 4 = extremely helpful). A fifth response (I have never tried this) was also provided for each statement A sample question from this cues subscale was: "How helpful is each of the following in getting you to use a positive technique to reduce stress in the moment you feel stressed?" Eight items were listed in questions 67 to 74: posting reminders, reflecting at the beginning of the day, having friends or family members use positive stress management techniques, having friends or family members remind you, reading about how to use positive

stress management techniques, taking time throughout the day to remind yourself, seeing movies or videos or television programs showing people using positive stress management techniques, and journaling or writing. Individual item scores were totaled to achieve an overall cues subscale score. The potential range of scores was 8 to 32.

The Perceived Emotional Closeness to Important Others (social connections) subscale was created based on four questions of the instrument, questions 76 to 79, and required participants to indicate how emotionally close they felt toward certain groups of individuals by using a four-point scale (1 = not close at all, 2 = minimally close, 3 = moderately close, and 4 = extremely close). A fifth response option was also provided (not applicable). An example of a question from this subscale was: "Overall, how emotionally close do you feel towards..." Four items were listed in questions 76 to 79: your parent(s)/legal guardian(s), your friends, your significant other(s), and your co-workers. Individual item scores were totaled to achieve an overall subscale score. The potential range of scores was 4 to 16.

The Level of Involvement in Spirituality (spirituality) subscale consisted of 11 items, questions 83 to 93, and required participants to indicate how frequently they engaged in spiritual activities by using a six-point scale (1 = never, 2 = less than once a year, 3 = at least once a year, 4 = at least once a month, 5 = at least once a week, and 6 = at least once a day). An example of a question from subscale was: "In the past year, how often did you…" 11 items were listed in questions 83 to 93: pray, reflect on life, talk to others about spiritual issues, meditate, read sacred or religious texts, read books on spirituality that are not sacred, think about spiritual issues, attend a place of worship, feel a sort of connection with God or a higher power, feel that God or a higher power is in control of your life, and attend a class or workshop on spirituality or religious issues. Individual item scores were totaled to achieve an overall subscale score. The potential range of scores was 11 to 66.

Before distributing the survey for data collection, reliability and validity was determined for each of the subscales of the survey. Face validity was established before content validity was established. Face validity was established by asking the thesis committee members to review the instrument in order to determine if it appeared to adequately measure the topics at hand. Based on comments of the thesis committee members, revisions were made.

Content validity was established by a panel of six experts. Three panelists were university professors, of whom two were experts in instrumentation and one was an expert in adult behavior. Since this study examined behaviors of college students an expert in adult behavior was selected. Three panelists were experts from the university system and two were well-versed with the target population (college students) while one was an adult psychologist. The adult psychologist was part of the panel because the study examined the relationship between perceived benefits, perceived barriers, and cues to using effective acute stress management techniques.

In order to establish the content validity for the questions on the instrument, several steps were taken. First, the objective of each of these respective sections was listed before the questions on the instrument. Second, a draft of the questions for the instrument was created. Third, the selected panel of six experts was asked to complete the qualitative review.

In the qualitative review, the experts were given a description of the study as well as directions for completing the qualitative review. The description of the study listed the purpose of the study, how the data was going be collected (using the instrument), and any necessary descriptions of the instrument to make sure the panel of experts understood the purpose of the

instrument. The directions on the qualitative review of the instrument stated approximately how long it would take the experts to complete the qualitative review, and that the results would be tabulated. The directions on the qualitative review requested each expert not to answer the questions of the questionnaire but instead to respond whether each individual question should be kept as is, revised, or deleted. The experts were also asked to make any necessary wording changes directly to the question. The directions for the qualitative review also asked each expert for suggestions of other questions that should be added to the questionnaire if the expert felt all the necessary questions had not been asked. After each expert completed the qualitative review, he or she was asked to email it back to singhma@email.uc.edu, the email address of one of the people who created the instrument, as an attached MS Word file.

After the results of the qualitative review were obtained, more steps were taken to continue to establish content validity for the instrument. The instrument was revised based on the recommendations of the panel of experts. Once the revised instrument was created, the quantitative review was conducted by the same panel of experts from the qualitative review.

In the quantitative review, directions for the panel of six experts were provided on the questionnaire. The experts were asked to rate each question on the usefulness for the study. The experts were asked to rate each question as either: 1 = essential, 2= useful but not essential, or 3 = not necessary. After completing the quantitative review, the experts were asked to email it back to singhma@email.uc.edu as an attached MS Word file. Appropriate revisions were made to the instrument based on the results of the quantitative review.

To establish stability reliability for the instrument, a test-retest design was used. The survey was distributed to a convenience sample of 30 college students at the university on an afternoon. One week later, the survey was again distributed to the same 30 individuals. Pearson

correlation coefficients on pre- and post-test responses were used to determine stability reliability. The draft of the instrument was revised after this pilot testing.

To establish internal consistency reliability, Cronbach Alphas were computed for each of the subscales (perceived overall happiness, perceived overall stress, frequency in using effective acute stress management techniques, perceived benefits in using effective acute stress management techniques, perceived barriers in using effective acute stress management techniques, cues to using effective acute stress management techniques, perceived emotional closeness to important others (social connections), and level of involvement in spirituality (spirituality)).

Procedures

This study was conducted using students from the University of Cincinnati (UC) and was approved by the researcher's thesis committee. Prior to data collection, the study proposal, the entire survey instrument, cover letters, email request letters, informal consent forms, and formal consent forms were submitted to the University of Cincinnati Institutional Review Board (IRB). IRB approved the study.

A convenience sample of 30 general education courses were selected by the researcher at UC. The researcher contacted the instructors teaching the selected classes during summer quarter 2009 by sending an email. Instructors were initially made aware of this study and the importance of their participation in the study via this email. The email was sent to their UC email address. This email briefly introduced the researcher, stated the purpose of this study, and explained the expectations of the participants throughout the study. The email also requested the instructors' permission for the survey to be distributed during the instructor's class at a mutually convenient date and time. Along with this first email, the survey instrument and an attached

cover letter explaining the study was sent to the instructors. All the cover letters were written on UC letterhead, explained the purpose and importance of the study, the need for their participation, and assured anonymity and confidentiality.

Another email letter was sent after the initial email to the instructors who were willing to participate in this research study. This second email confirmed the date and time when the survey instrument would be distributed to the college students in that respective instructor's class.

The researcher administered the survey instrument at the established date and time. Before distributing the instrument to the students, the researcher explained the purpose of the study, informed the students that their responses would be kept confidential and anonymous, that their participation was completely voluntary, and that by completing the survey they were giving the researcher permission to use their responses in the study. All the students who chose to participate received an instrument with an attached cover letter. The cover letter stated the purpose of the study, that their responses would be kept confidential and anonymous, that their participation was completely voluntary, and that by completing the survey they were granting the researcher permission to use their responses in the study.

In order to maintain the confidentiality and anonymity of the students, they were informed to not put their name, social security number, or UC identification number on the survey instrument. The students were instructed to place their completed surveys face down in an envelope that was placed on the instructor's desk. The college students took about 10 to 25 minutes to complete the surveys. The researcher sealed the envelope once all the completed surveys were submitted. The researcher counted the number of completed and usable surveys. After counting the number of completed surveys, the researcher kept the surveys in a sealed envelope until data analysis and data entry began.

Another 30 general education courses at UC were selected by convenience sampling by the researcher and this entire process was repeated until 380 completed surveys were obtained. Care was taken to ensure there was no duplication in the courses that were selected. Classes that did not meet regularly such as internship, practicum, service learning, independent study, and seminar classes were not selected.

Due to the nature of the study, more than 380 completed surveys were obtained. In fact, 485 completed surveys were obtained. All 485 completed surveys were kept in a locked, secure place until data entry and data analysis was conducted. All the surveys were shredded once data analysis was completed.

Data Analysis

All collected data was entered into SPSS (Statistical Package for the Social Sciences Version 16.0 for Windows). Descriptive statistics including frequencies, means, standard deviations, and ranges of scores were used to describe the demographic and background characteristics of the respondents. Potential interaction effects between demographic variables were tested using Chi Square analyses, correlations, and analyses of variance (ANOVAs). If significant interactions were found, then covariates were used in subsequent analyses.

A series of multivariate analyses of variance (MANOVAs) were performed to test hypotheses. More specifically, these MANOVAs assessed whether students' perceived happiness and stress differed based on frequency in using effective acute stress management techniques, perceived emotional closeness to important others (social connections), and level of

involvement in spirituality (spirituality). MANOVAs were also performed to examine whether frequency in using effective acute stress management techniques differed based on students' perceived benefits, barriers, and cues to using these techniques.

Regarding scale scores, a perceived overall happiness score was computed ranging from 16 to 80, a perceived overall stress score was computed ranging from 12 to 60, a frequency in using effective acute stress management techniques score was computed ranging from 11 to 55, a perceived benefits in using effective acute stress management techniques score was computed ranging from 11 to 44, a perceived barriers in using effective acute stress management techniques score was computed ranging from 9 to 36, a cues to using effective acute stress management techniques score was computed ranging from 8 to 32, a perceived emotional closeness to important others (social connections) score was computed ranging from 4 to 16, and a level of involvement in spirituality (spirituality) score was computed ranging from 11 to 66.

In order to properly conduct these MANOVAs, certain scale scores were dichotomized. The total scale scores for the following variables: perceived overall stress, frequency in using effective acute stress management techniques, perceived benefits in using effective acute stress management techniques, perceived barriers in using effective acute stress management techniques, cues to using effective acute stress management techniques, perceived emotional closeness to important others (social connections), and level of involvement in spirituality (spirituality) were dichotomized into high and low levels based on respondent results. When MANOVAs were found to be significant, then univariate F-tests were subsequently performed to identify the specific items in the subscale that were significant. An alpha level of .05 was utilized for all data analyses to avoid committing a Type I error.

Chapter Four

Results and Discussion

The purpose of this study was to examine whether college students' perceived overall happiness and stress differed significantly based on frequency of using effective acute stress management techniques, emotional closeness to important others (social connections), and level of involvement in spirituality. In addition, this study examined whether college students' use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques.

A comprehensive review of the literature found no published study which addressed the impact of acute stress management techniques, social connections, and level of spirituality on stress and happiness among college students. Therefore, this study was conducted. A goal of this study is to further the knowledge on happiness and identify key ways the negative effects of stress can be mollified to increase happiness. This information can be used to assist health educators design programs that increase happiness and/or decrease stress.

Chapter one discussed the purpose, the research questions, hypotheses, delimitations, limitations, assumptions and operational definitions for this study. Chapter two provided a comprehensive review of the literature. Chapter three described the methods used in this study. This chapter presents the results of this study.

Participants

A total of 83 instructors were emailed to request permission to administer the survey in their classrooms during summer quarter of the 2008-09 academic year. These 83 instructors taught various courses in the College of Arts and Sciences and College of Engineering at a Midwestern University. Of this total distribution, eight instructors granted permission at a date

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and time that was impossible for the researcher so these classrooms were not surveyed. Twentythree instructors granted permission at a convenient date and time and were surveyed. Fifteen instructors did not grant permission to administer the survey, 35 instructors did not reply to the email, one instructor did not reply to the email request because no longer employed at the university, and one instructor was curious about IRB approval but did not respond to the second email requesting permission. Therefore, of 83 instructors who received an email requesting permission to survey their class, 23 granted permission and were included in the study. Of the 23 classes that were surveyed, a total of 485 students completed the survey (100% response rate). All completed surveys were included in final data analysis.

Demographic Characteristics

Of the students who completed surveys, 60.9% were male and 39.1% were female (Table 4.1). Ages ranged from 17 to 53 with a mean of 21 years (M = 21.79, SD = 3.986). Regarding grade level, 2.9% were freshman, 22.1% were sophomores, 37.9% were juniors, 30.8% were seniors, and 6.2% were graduate students. In terms of race, 7.5% were African American, 3.8% were Asian, 84.5% were Caucasian/White, 0.2% were Hawaiian/Pacific Islander, 1.0% were Hispanic/Latino, 0.2% were Native American/American Indian, 1.7% were Multi-Racial, and 1.0% were Other. Most students lived in an apartment (45.0%) or at home (41.4%). Most students lived with friend(s) or roommate(s) (46.6%) or with family (35.2%). A majority (90.8%) of the students were enrolled full-time, whereas 9.2% were part-time. Regarding involvement with student organizations, 66.0% of students were not involved in a student organization and only 34.0% were involved in a student organization.

Perceived Overall Happiness

Students were asked to report how happy or unhappy they felt overall with each of 16

Item	n	%
Sex		
Male	294	60.9
Female	189	39.1
Grade Level		
Freshman	14	2.9
Sophomore	106	22.1
Junior	182	37.9
Senior	148	30.8
Graduate Student	30	6.2
Race		
African American	36	7.5
Asian	18	3.8
Caucasian/White	404	84.5
Hawaiian/Pacific Islander	1	0.2
Hispanic/Latino	5	1.0
Native American/American Indian	1	0.2
Multi-Racial	8	1.7
Other (specify)	5	1.0
Current Living Situation		
Home	195	41.4
Dormitory	33	7.0
Apartment	212	45.0
Other (specify)	31	6.6
Current Living Situation		
Family	166	35.2
Friend(s)/Roommate(s)	220	46.6
Significant Other	42	8.9
Self	43	9.1
Enrollment		
Full-time	436	90.8
Part-time	44	9.2
Student Organization Involvement		
Yes	164	34.0
No	318	66.0

Table 4.1 Demographic Characteristics of Students

N=485; % = Valid percentage; Missing values excluded from analysis.

statements by using a five-point Likert-type scale (1 = extremely unhappy; 2 = unhappy; 3 = neither happy nor unhappy; 4 = happy; 5 = extremely happy). A sixth response was also provided (not applicable) for each statement. The sixth response (not applicable) was not included in the data analysis. Students felt happiest with "parent(s)/legal guardian(s)" (M = 4.22; SD = .857), "friends" (M = 4.16; SD = .752), with their individual "personality" (M = 4.14; SD = .722), with a "significant other" (M = 4.09; SD = 1.009), and "at home" (M = 4.02; SD = .735) (Table 4.2). The students were most unhappy with their "financial situation" (M = 2.98; SD = 1.156), "at work" (M = 3.56; SD = .885), "at school" (M = 3.57; SD = .882), with their "physical appearance" (M = 3.58; SD = .875), and with "co-workers" (M = 3.73; SD = .795) (Table 4.2).

A Perceived Overall Happiness score was calculated by summing individual happiness items 1-16 on the survey. The potential range of scores was 16 to 80. The actual range was 16-80 with a mean for Overall Happiness of 57.21 (M = 57.21, SD = 8.709).

Perceived Overall Stress

Students were requested to report how stressed their felt about items using a five-point Likert-type scale (1 = not stressed at all; 2 = slightly stressed; 3 = moderately stressed; 4 = very stressed; 5 = extremely stressed). A sixth response option was also provided (not applicable) for each statement. The sixth response (not applicable) was not included in the data analysis. Students felt the most stress "regarding school" (M= 3.40; SD = 1.051), "with lack of time (feeling rushed)" (M= 3.12; SD = 1.227), with their "career" (M= 3.06; SD = 1.317), with their "future" (M= 2.95; SD = 1.156), and with "life in general" (M= 2.82; SD = .922) (Table 4.3). Students felt the least stress with "friends" (M= 1.54; SD = .765), with "parent(s)/legal guardian(s)" (M= 1.71; SD = .948), with "co-workers" (M= 1.72; SD = .889), "regarding home" (M= 1.90; SD = .936), and with a "significant other" (M= 1.93; SD = 1.065) (Table 4.3).

Overall, how happy or unhappy do you feel	M	SD
With your parent(s)/legal guardian(s)	4.22	.857
With your friends	4.16	.752
With your personality	4.14	.722
With your significant other	4.09	1.009
At home	4.02	.735
With your life in general	4.00	.628
With yourself	3.85	.738
With your ability to communicate with others	3.84	.876
With your accomplishments in life thus far	3.80	.882
With where you are in life	3.77	.799
With your health	3.74	.948
With your co-workers	3.73	.795
With your physical appearance	3.58	.875
At school	3.57	.882
At work	3.56	.885
With your financial situation	2.98	1.156

 Table 4.2 Perceived Overall Happiness

N = 485; Missing values excluded.

Means based on 5-point scale (1 = Extremely unhappy; 2 = Unhappy; 3 = Neither happy nor unhappy; 4 = Happy; 5 = Extremely happy).

Overall, how stressed do you feel	М	SD
Regarding school	3.40	1.051
With lack of time (feeling rushed)	3.12	1.227
With your career	3.06	1.317
With your future	2.95	1.156
With your life in general	2.82	.922
With your financial situation	2.81	1.237
Regarding work	2.40	1.083
With your significant other	1.93	1.065
Regarding home	1.90	.936
With your co-workers	1.72	.889
With your parent(s)/legal guardian(s)	1.71	.948
With your friends	1.54	.765

Table 4.3 Perceived Overall Stress

N = 485; Missing values excluded.

Means based on 5-point scale (1 = Not stressed at all; 2 = Slightly Stressed; 3 = Moderately Stressed; 4 = Very Stressed; 5 = Extremely Stressed).

A Perceived Overall Stress score was calculated by summing items 17 to 28 on the survey. The potential range of scores was 12 to 60. The actual range of scores was 12 to 56 with a mean of 27.38 (SD = 7.617). Perceived Overall Stress was dichotomized into two levels: High Stress (range = 25-56), and Low Stress (range = 12-24). Results indicated that 61.0% of the students reported having high stress and 39.0% reported having low stress.

Frequency in Using Effective Acute Stress Management Techniques

Students were asked to indicate how often they used effective stress management techniques in the moment they felt stressed via a five-point, Likert-type scale (1 = never (0%); 2 = rarely (1-49%); 3 = sometimes (50%); 4 = most of the time (51-99\%); 5 = always (100%)). In the moment of most acute stress, students most frequently listened to "music" (M = 3.36; SD = 1.027), tried to "look at the big picture" (M = 3.12; SD = 1.118), talked to or called "someone to vent" (M = 2.93; SD = 1.259), ran or performed some type of "exercise" (M = 2.69; SD = 1.170), and took "deep breaths" (M = 2.62; SD = 1.102) (Table 4.4). The least frequently used effective acute stress management techniques were "count to ten" (M = 1.30; SD = .626), "meditate" (M = 1.64; SD = .919), "contract and relax muscles" (M = 2.05; SD = 1.113), "pray" (M = 2.14; SD = 1.255), and "imagine/visualize something pleasant" (M = 2.20; SD = 1.051) (Table 4.4).

A Frequency in Using Effective Acute Stress Management Techniques subscale score was calculated by summing items 29 to 39 on the survey. The potential range of scores was 11 to 55. The actual range of scores was 11 to 55 (M = 26.03, SD = 6.369). Frequency in Using Effective Acute Stress Management Techniques was dichotomized into two levels: one equals High Frequency in Using Effective Acute Stress Management Techniques (range = 23–55), and one equals Low Frequency in Using Effective Acute Stress Management Techniques (range = 11–22). Results indicated that 72.0% of the students reported low frequency in using effective

In the moment you feel stressed how often do	M	SD
you use the following to reduce your stress?		
Listen to music	3.36	1.027
Try to look at the big picture	3.12	1.118
Talk to or call someone to vent	2.93	1.259
Run or exercise	2.69	1.170
Take deep breaths	2.62	1.102
Stretch	2.27	1.105
Imagine/ visualize something pleasant	2.20	1.051
Pray	2.14	1.255
Contract and relax muscles	2.05	1.113
Meditate	1.64	.919
Count to ten	1.30	.626

Table 4.4 Frequency in Using Effective Acute Stress Management Techniques

N = 485; Missing values excluded.

Means based on a 5-point scale (1 = Never (0%); 2 = Rarely (1-49%); 3 = Sometimes (50%); 4 = Most of the Time (51-99%); 5 = Always (100%)).

acute stress management techniques and 28.0% reported high frequency in using effective acute stress management techniques.

Perceived Benefits in Using Effective Acute Stress Management Techniques

Student were asked to indicate the degree of benefits of using the effective acute stress management techniques via a four-point scale (1 = not helpful; 2 = slightly helpful; 3 = moderately helpful; 4 = extremely helpful). A fifth response was also provided (I have never tried this) for each statement. The fifth response (I have never tried this) was not included in the data analysis. The most beneficial effective acute stress management techniques for reducing stress were "run or exercise" (M= 3.18; SD = 1.134), "listen to music" (M= 3.03; SD = .930), "talk to or call someone to vent" (M= 3.02; SD = 1.147), "try to look at the big picture" (M= 2.93; SD = 1.040), and "contract and relax muscles" (M= 2.82; SD = 1.489) (Table 4.5). Students indicated the least beneficial effective acute stress management techniques included "take deep breaths" (M= 2.57; SD = 1.099), "count to ten" (M= 2.59; SD = 1.793), "imagine/visualize something pleasant" (M= 2.66; SD = 1.361), "stretch" (M= 2.75; SD = 1.342), and "pray" (M= 2.78; SD = 1.450) (Table 4.5).

A Perceived Benefits in Using Effective Acute Stress Management Techniques subscale score was calculated by summing items 47 to 57 on the survey. The potential range of scores was 11 to 44. The actual range of scores was 11 to 44 (M= 30.58, SD = 9.110). Perceived Benefits in Using Effective Acute Stress Management Techniques was dichotomized into two levels: High Perceived Benefits in Using Effective Acute Stress Management Techniques (range = 23–44), and Low Perceived Benefits in Using Effective Acute Stress Management Techniques (range = 11–22). Results indicated that 50.1% of the students reported high perceived benefits in
Perceived Benefit	M	SD
Run or exercise	3.18	1.134
Listen to music	3.03	.930
Talk to or call someone to vent	3.02	1.147
Try to look at the big picture	2.93	1.040
Contract and relax muscles	2.82	1.489
Meditate	2.80	1.624
Pray	2.78	1.450
Stretch	2.75	1.342
Imagine/visualize something pleasant	2.66	1.361
Count to ten	2.59	1.793
Take deep breaths	2.57	1.099

Table 4.5 Perceived	Benefits in Us	ing Effective A	cute Stress Mar	agement Techniques
	Denentes in Co.		leate our coo man	agement reeningues

N = 485; Missing values excluded. Means based on a 4-point scale (1 = Not Helpful; 2 = Slightly Helpful; 3 = Moderately Helpful; 4 = Extremely Helpful).

using effective acute stress management techniques and 49.9% reported low perceived benefits in using effective acute stress management techniques.

Perceived Barriers in Using Effective Acute Stress Management Techniques

Students were requested to indicate the magnitude of the barrier they faced in using effective acute stress management techniques via a four-point scale (1 = not a barrier; 2 = slight barrier; 3 = moderate barrier; 4 = extreme barrier). Effective acute stress management techniques were described as positive techniques for this section. The largest barriers to using effective acute stress management techniques were "get caught up in the moment" (M= 2.31; SD = .993), "do not have enough time to use the techniques" (M= 2.19; SD = .979), "do not think the techniques will work" (M= 2.12; SD = .909), "am satisfied with how I handle my stress" (M = 1.94; SD = .940), and "embarrassed to use the techniques in public" (M= 1.82; SD = .917) (Table 4.6). The smallest barriers to using the effective acute stress management techniques included "embarrassed to use the techniques in private" (M= 1.21; SD = .560), "do not know how to use the techniques" (M= 1.56; SD = .772), "not aware of the techniques" (M= 1.61; SD = .844), and "am too lazy to use the techniques" (M= 1.75; SD = .882) (Table 4.6).

A Perceived Barriers in Using Effective Acute Stress Management Techniques score was calculated by summing items 58 to 66 on the survey. The potential range of scores was 9 to 36. The actual range of scores was 9 to 36 with a mean of 16.41 (M = 16.41, SD = 4.440). Perceived Barriers in Using Effective Acute Stress Management Techniques was dichotomized into two levels: High Perceived Barriers in Using Effective Acute Stress Management Techniques (range = 19–36), and Low Perceived Barriers in Using Effective Acute Stress Management Techniques (range = 9–18). Results indicated that 28.8% of the students reported high perceived barriers in

		1	
Perceived Barrier	M	SD	
Get caught up in the moment	2.31	.993	
Do not have enough time to use the techniques	2.19	.979	
Do not think the techniques will work	2.12	.909	
Am satisfied with how I handle my stress	1.94	.940	
Embarrassed to use the techniques in public	1.82	.917	
Am too lazy to use the techniques	1.75	.882	
Not aware of the techniques	1.61	.844	
Do not know how to use the techniques	1.56	.772	
Embarrassed to use the techniques in private	1.21	.560	

Table 4.6 Perceived	Barriers in	Using Effective	Acute Stress	Management	Techniques
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N = 485; Missing values excluded. Means based on a 4-point scale (1 = Not a Barrier; 2 = Slight Barrier; 3 = Moderate Barrier; 4 = Extreme Barrier).

using effective acute stress management techniques and 71.2% reported low perceived barriers in using effective acute stress management techniques.

Cues to Using Effective Acute Stress Management Techniques

Students were requested to report how helpful certain cues were at getting them to use an effective acute stress management technique to reduce stress by using a four-point scale (1 = not helpful; 2 = slightly helpful; 3 = moderately helpful; 4 = extremely helpful). A fifth response (I have never tried this) was listed but was not used in the data analysis. The most helpful cues which led students to use effective acute stress management techniques were "having friends/family member use positive stress management techniques" (M = 2.50; SD = 1.010), "having friends/family members help remind you to use positive stress management techniques" (M = 2.35; SD = 1.020), "taking time throughout the day to remind yourself of positive stress management techniques" (M = 2.30; SD = .934), and "journaling/writing" (M = 2.16; SD =1.108) (Table 4.7). The least helpful cues in getting students to use effective acute stress management techniques were "posting reminders to encourage you to use positive stress management techniques" (M = 1.93; SD = .965), "reflecting on using positive stress management techniques before you start the day" (M = 1.99; SD = .882), "seeing movies, videos or television programs showing people using positive stress management techniques" (M = 2.11; SD = .983), and "reading how to use positive stress management techniques" (M = 2.15; SD = .905) (Table 4.7).

A Cues to Using Effective Acute Stress Management Techniques score was calculated by summing items 67 to 74 on the survey. The potential range of scores was 8 to 32. The actual range was 8 to 32 (M = 14.36; SD = 6.418). This score was dichotomized into two levels: High Level of Cues to Using Effective Acute Stress Management Techniques (range = 17–32) and

Perceived Cue	M	SD
Having friends/family members use positive stress management techniques	2.50	1.010
Having friends/family members help remind you to use positive stress management techniques	2.35	1.020
Taking time throughout the day to remind yourself of positive stress management techniques	2.30	.934
Journaling/writing	2.16	1.108
Reading about how to use positive stress management techniques	2.15	.905
Seeing movies, videos or television programs showing people using positive stress management techniques	2.11	.983
Reflecting on using positive stress management techniques before you start the day	1.99	.882
Posting reminders to encourage you to use positive stress management techniques	1.93	.965
N = 485; Missing values excluded.		

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Means based on a 4-point scale (1 = Not Helpful; 2 = Slightly Helpful; 3 = Moderately Helpful; 4 = Extremely Helpful).

Low Level of Cues to Using Effective Acute Stress Management Techniques (range = 8-16). Results indicated that 39.5% of the students reported high level of cues to using effective acute stress management techniques and 60.5% reported low level of cues to using effective acute stress management techniques.

Perceived Helpfulness of Stress Management Techniques in Reducing Stress

Students were also asked to report how helpful they felt that certain acute stress management techniques would be in reducing their stress in the moment they felt stressed (Table 4.8). Regarding taking deep breaths, 59.2% felt it would help and 40.8% felt it would not help reduce stress in the moment they felt stressed. Regarding counting to 10, 91.5% felt it would not help and 8.5% felt it would help reduce stress in the moment they felt stressed. Regarding praying, 64.7% felt it would not help and 35.3% felt it would help reduce stress in the moment they felt stressed. Regarding meditating, 77.5% felt it would not help and 22.5% felt it would help reduce stress in the moment they felt stressed. In terms of listening to music, 78.1% felt it would help and 21.9% felt it would not help reduce stress in the moment they felt stressed. Regarding contracting and relaxing muscles, 78.5% felt it would not help and 21.5% felt it would help reduce stress in the moment they felt stressed. Regarding stretching, 62.7% felt it would not help and 37.3% felt it would help reduce stress in the moment they felt stressed. In terms of running or exercising, 66.8% felt it would help and 33.2% felt it would not help reduce stress in the moment they felt stressed. Regarding looking at the big picture, 56.3% felt it would help and 43.7% felt it would not help reduce stress in the moment they felt stressed. In terms of talking to or calling someone to vent, 61.9% felt it would help and 38.1% felt it would not help reduce stress in the moment they felt stressed. Regarding imagining something pleasant, 72.6% felt it would help and 27.4% felt it would not help reduce stress in the moment they felt stressed.

Strong Management Technique	Help	ful
Stress Management Technique	п	%
Taking Deep Breaths	287	59.2
Counting to 10	41	8.5
Praying	171	35.3
Meditating	109	22.5
Listening to music	379	78.1
Contracting and relaxing muscles	104	21.5
Stretching	181	37.3
Running or exercising	324	66.8
Trying to look at the big picture	273	56.3
Taking to/calling someone to vent	300	61.9
Imagining something pleasant	133	27.4

Table 4.8 Perceived Hel	pfulness of Stress	Management	Techniques i	n Reducing Stress

 $\frac{\text{Imagining something pleasant}}{\text{N}=485; \% = \text{Valid Percentage; Missing values excluded from analysis.}}$

Perceived Emotional Closeness to Important Others (social connections)

Students were asked to report how emotionally close they felt towards specific individuals via a four-point scale (1 = not close at all; 2 = minimally close; 3 = moderately close; 4 = extremely close). A fifth response option was also provided (not applicable) but was not used in the data analysis. Of the four questions in the survey used to assess perceived emotional closeness to important others, only two items (76 and 77) were used to determine how emotionally close students felt towards parents and friends. Items 78 and 79 were removed from the data analysis. Students felt most emotionally close to "parent(s)/legal guardian(s)" (M = 3.40; SD = .752), and to "friends" (M = 3.25; SD = .701) (Table 4.9).

A Perceived Emotional Closeness to Important Others score was calculated by summing items 76 to 77 on the survey. The potential range of scores was 1 to 8. The actual range of scores was 2 to 8 (M = 6.65; SD = 1.204). Perceived Emotional Closeness to Important Others was dichotomized into two levels: High Perceived Emotional Closeness to Important Others (range = 7–8), and Low Perceived Emotional Closeness to Important Others (range = 2–6). Results indicated that 62.1% of the students reported high perceived emotional closeness to important others and 37.9% reported low perceived emotional closeness to important others. *Level of Involvement in Spirituality*

Students were asked to report how frequently they engaged in spiritual activities by using a six-point scale (1 = never; 2 = less than once a year; 3 = at least once a year; 4 = at least once a month; 5 = at least once a week; 6 = at least once a day). Students reported the most frequent spiritual activities they engaged in were "attend a class/workshop on spirituality/religious issues" (M = 5.15; SD = 1.292), "read books on spirituality that are not sacred" (M = 4.88; SD = 1.322), "meditate" (M = 4.54; SD = 1.558), "read sacred or religious texts" (M = 4.45; SD = 1.522), and

Tuble 119 Tereer en Emotional eloseness to important e	/ the s		
Overall, how emotionally close do you feel towards	M	SD	
Your parents(s)/legal guardian(s)	3.40	.752	
Your friends	3.25	.701	

Table 4.9 Perceived Emotional Closeness to Important Others

N = 485; Missing values excluded. Means based on a 4-point scale (1 = Not close at all; 2 = Minimally Close; 3 = Moderately Close; 4 = Extremely Close).

"attend a place of worship like church, mosque, synagogue, temple, et cetera" (M = 3.79; SD = 1.404) (Table 4.10). The spiritual activities students engaged in least frequently were "reflect on life" (M = 2.20; SD = 1.065), "pray" (M = 3.22; SD = 1.799), "talk to others about spiritual issues (i.e. God, higher power, meaning of life)" (M = 3.38; SD = 1.354), "feel a sort of connection with God or a higher power" (M = 3.42; SD = 1.833), and "think about spiritual issues" (M = 3.43; SD = 1.565) (Table 4.10).

A Level of Involvement in Spirituality score was calculated by summing items 83 to 93 on the survey. The potential range of scores was 11 to 66. The actual range of scores was 11 to 66 with a mean of 34.34 (M = 34.34; SD = 12.057). Level of Involvement in Spirituality was dichotomized into two levels: High Level of Involvement in Spirituality (range = 34-66), and Low Level of Involvement in Spirituality (range = 11-33). Results indicated that 49.1% of the students reported high level of involvement in spirituality and 50.9% reported low level of involvement in spirituality.

Analyses were performed to determine whether selected dependent variables differed significantly based on demographic characteristics. Results indicated the variables differed based on sex so they were controlled. Sex was used as a covariate in hypothesis testing.

In the past year, how often did you	M	SD
Attend a class/workshop on spirituality/religious issues	5.15	1.292
Read books on spirituality that are not sacred	4.88	1.322
Meditate	4.54	1.558
Read sacred or religious texts	4.45	1.522
Attend a place of worship like church, mosque, synagogue, temple, etc.	3.79	1.404
Feel that God or a higher power is in control of your life	3.73	1.938
Think about spiritual issues	3.43	1.565
Feel a sort of connection with God or a higher power	3.42	1.833
Talk to others about spiritual issues (i.e. God, higher power, meaning of life)	3.38	1.354
Pray	3.22	1.799
Reflect on life	2.20	1.065

Table 4.10 Level of Involvement in Spirituality

N = 485; Missing values excluded. Means based on a 6-point scale (1 = Never; 2 = Less than once a year; 3 = At least once a year;

4 = At least once a month; 5 = At least once a week; 6 = At least once a day).

Hypotheses Testing

Null Hypothesis 1. There will be no significant difference in students' perceived overall happiness based on level of perceived overall stress. MANOVA results controlling for sex revealed there was a significance difference in students' perceived overall happiness based on level of perceived overall stress, F(16, 202) = 2.590, p = .001. Therefore, the null hypothesis was rejected.

Univariate F tests revealed that the following happiness items differed significantly based on level of perceived overall stress: item 1, 2, 3, 8, 9, 10, 14, and 16 (Table 4.11). Students' level of happiness "With your life in general (item 1)," "With where you are in life (item 2)," "With yourself (item 3)," "With your accomplishments in life thus far (item 4)," "With your financial situation (item 9)," "With your parent(s)/legal guardian(s) (item 10)," "At home (item 14)," and "At work (item 16)" differed based on their perceived overall stress (Table 4.11).

Null Hypothesis 2. There will be no significant difference in students' perceived overall happiness based on the frequency in using effective acute stress management techniques. MANOVA results controlling for sex revealed there was not a significant difference in students' perceived overall happiness based on the frequency in using effective acute stress management techniques, F(16, 202) = 1.202, p = .269. Therefore, the null hypothesis was not rejected.

Null Hypothesis 3. There will be no significant difference in students' perceived overall happiness based on perceived emotional closeness to important others. MANOVA results controlling for sex revealed there was a significant difference in students' perceived overall happiness based on perceived emotional closeness to important others, F(16,200) = 5.337, p = .000. Therefore, the null hypothesis was rejected.

Averall, how hanny or unhanny do you fool	High Stress	Low Stress		
Overan, now happy of unnappy do you leel	M (SD)	M (SD)	\boldsymbol{F}	P
With your life in general	4.04 (.613)	4.22 (.685)	3.918	.049
With where you are in life	3.71 (.827)	4.05 (.691)	9.488	.002
With yourself	3.81 (.738)	4.05 (.746)	5.224	.023
With your accomplishments in life thus far	3.73 (.879)	4.07 (.754)	7.878	.005
With your financial situation	2.77 (1.151)	3.55 (.870)	27.510	.000
With your parent(s)/legal guardian(s)	4.02 (.920)	4.45 (.737)	12.025	.001
At home	3.97 (.788)	4.18 (.706)	3.990	.047
At work	3.45 (.892)	3.72 (.918)	4.498	.035

Table 4.11 Students' Perceived Overall Happiness based on Perceived Overall Stress

N = 485; Missing values excluded from analysis. Means based on a 5-point scale (1 = Extremely Unhappy; 5 = Extremely Happy)

Univariate F tests revealed that the following happiness items differed significantly based on perceived emotional closeness to important others: item 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 14, (Table 4.12). Students' perceived overall happiness differed based on perceived emotional closeness to important others for the following items: "With your life in general (item 1)," "With where you are in life (item 2)," "With yourself (item 3)," "With your physical appearance (item 4)," "With your personality (item 5)," "With your ability to communicate with others (item 6)," "With your health (item 7)," "With your accomplishments in life thus far (item 8)," "With your financial situation (item 9)," "With your parent(s)/legal guardian(s) (item 10)," "With your friends (item 11)," "With your significant other (item 12)," and "At home (item 14)" (Table 4.12).

Null Hypothesis 4. There will be no significant difference in students' perceived overall happiness based on level of involvement in spirituality. MANOVA results controlling for sex revealed there was not a significant difference in students' perceived overall happiness based on level of involvement in spirituality, F(16,202) = 1.089, p = .368. Therefore, the null hypothesis was not rejected.

Null Hypothesis 5. There will be no significant difference in students' perceived overall stress based on the frequency in using effective acute stress management techniques. MANOVA results controlling for sex revealed there was not a significant difference in students' perceived overall stress based on the frequency in using effective acute stress management techniques, F(12,210) = .831, p = .619. Therefore, the null hypothesis was not rejected.

Closeness to Important Others				
	High	Low		
	Emotional	Emotional		
Overall, how happy or unhappy do you feel	Closeness	Closeness		
	M (SD)	M (SD)	F	Р
With your life in general	4.24 (.556)	3.90 (.716)	14.212	.000
With where you are in life	4.02 (.690)	3.56 (.859)	17.133	.000
With yourself	4.06 (.677)	3.66 (.790)	17.133	.000
With your physical appearance	3.81 (.878)	3.43 (.871)	11.975	.001
With your personality	4.31 (.583)	3.95 (.806)	13.844	.000
With your ability to communicate with others	4.02 (.794)	3.63 (.929)	12.504	.000
With your health	3.81 (.895)	3.49 (.975)	9.529	.002
With your accomplishments in life thus far	4.00 (.784)	3.61 (.907)	9.255	.003
With your financial situation	3.17 (1.124)	2.86(1.112)	5.278	.023
With your parent(s)/legal guardian(s)	4.45 (.736)	3.76 (.927)	34.665	.000
With your friends	4.45 (.571)	3.74 (.814)	58.546	.000
With your significant other	4.25 (.897)	3.83(1.133)	7.577	.006
At home	4.28 (.671)	3.69 (.767)	30.978	.000
N = 485: Missing values evaluated from analysis. Means have	d on a 5 naint scale	(1 - Extramely I)	Inhonny: 5	_

Table 4.12 Students' Perceived Overall Happiness based on Perceived Emotional Closeness to Important Others

N = 485; Missing values excluded from analysis. Means based on a 5-point scale (1 = Extremely Unhappy; 5 = Extremely Happy)

Null Hypothesis 6. There will be no significant difference in students' perceived overall stress based on perceived emotional closeness to important others. MANOVA results controlling for sex revealed there was a significant difference in students' perceived overall stress based on perceived emotional closeness to important others, F(12,208) = 2.085, p = .019. Therefore, the null hypothesis was rejected.

Univariate F tests revealed that the following stress items differed significantly based on perceived emotional closeness to important others: item 22, 27, and 28 (Table 4.13). Students' level of stress "With your friends (item 22)," "With your future (item 27)," and "With your career (item 28)," differed based on perceived emotional closeness to important others (Table 4.13).

Null Hypothesis 7. There will be no significant difference in students' perceived overall stress based on level of involvement in spirituality. MANOVA results controlling for sex revealed there was not a significant difference in students' perceived overall stress based on level of involvement in spirituality, F(12,210) = 1.109, p = .354. Therefore, the null hypothesis was not rejected.

Null Hypothesis 8. There will be no significant difference in students' frequency in using effective acute stress management techniques based on the level of perceived benefits in using effective acute stress management techniques. MANOVA results controlling for sex revealed there was a significant difference in students' frequency in using effective acute stress management techniques based on the level of perceived benefits in using effective acute stress management techniques based on the level of perceived benefits in using effective acute stress management techniques, F(11,423) = 20.390, p = .000. Therefore, the null hypothesis was rejected.

Item	High Emotional	Low Emotional		
	Closeness	Closeness		
Overall, how stressed do you feel	M (SD)	M (SD)	F	Р
With your friends	1.45 (.781)	1.67 (.798)	4.011	.046
With your future	2.72 (1.140)	3.02 (1.164)	5.196	.024
With your career	2.65 (1.057)	3.01 (1.140)	8.465	.004

Table 4.13 Students' Perceived Overall Stress based on Perceived Emotional Closeness to Important Others

N = 485; Missing values excluded from analysis. Means based on a 5-point scale (1 = Not stressed at all; 5 = Extremely stressed)

Univariate F tests revealed that the frequency in using effective acute stress management techniques differed significantly based on the level of perceived benefits in using effective acute stress management techniques for the following items: 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, and 39 (Table 4.14). Therefore, students' frequency in using effective acute stress management techniques differed significantly based on the level of perceived benefits in using effective acute stress management techniques for "Take deep breaths (item 29)," "Count to ten (item 30)," "Pray (item 31)," "Meditate (item 32)," "Listen to music (item 33)," "Contract and relax muscles (item 34)," "Stretch (item 35)," "Run or exercise (item 36)," "Try to look at the big picture (item 37)," "Talk to or call someone to vent (item 38)," and "Imagine/visualize something pleasant (item 39)" (Table 4.14).

Null Hypothesis 9. There will be no significant difference in students' frequency in using effective acute stress management techniques based on the level of perceived barriers in using effective acute stress management techniques. MANOVA results controlling for sex revealed there was a significant difference in students' frequency in using effective acute stress management techniques based on the level of perceived barriers in using effective acute stress management techniques based on the level of perceived barriers in using effective acute stress management techniques, F(11,426) = 3.508, p = .000. Therefore, the null hypothesis was rejected.

Univariate F tests revealed that the frequency in using effective acute stress management techniques differed significantly based on the level of perceived barriers in using effective acute stress management techniques for the following items: item 29 and item 39 (Table 4.15). Therefore students' frequency in using effective acute stress management techniques differed significantly based on the level of perceived barriers in using effective acute stress management techniques differed techniques for the following items: item 29 and item 39 (Table 4.15).

Management Techniques In the moment you feel stressed Low Perceived **High Perceived** F how often do you use the following Р **Benefits** Benefits *M* (SD) to reduce your stress? *M* (*SD*) Take deep breaths 3.03 (.971) 2.26 (1.085) 54.324 .000. 1.12 (.405) Count to ten 1.50 (.758) 38.370 .000 1.84 (1.167) Pray 2.44 (1.257) 21.998 .000 Meditate 1.97 (1.016) 1.32 (.691) 59.554 .000 Listen to music 3.59 (.969) 3.14 (1.029) 20.866 .000 Contract and relax muscles 2.50 (1.123) 1.65 (.962) 74.231 .000 1.93 (1.040) Stretch 2.65 (1.043) 48.935 .000 Run or exercise 2.99 (1.122) 2.41 (1.163) 26.889 .000 Try to look at the big picture 3.47 (.943) 2.79 (1.139) .000 47.104 Talk to or call someone to vent 2.65 (1.248) 3.31 (1.136) 24.807 .000 Imagine/visualize something pleasant 2.60 (.977) 1.80 (.978) 65.281 .000

 Table 4.14
 Students' Frequency in Using Effective Acute Stress Management Techniques

 based on Level of Perceived Benefits in Using Effective Acute Stress

 Management Techniques

N = 485; Missing values excluded from analyses. Means based on a 5-point scale (1 = Never (0%); 5 = Always (100%)).

 Table 4.15
 Students' Frequency in Using Effective Acute Stress Management Techniques

 based on Level of Perceived Barriers in Using Effective Acute Stress

 Management Techniques

In the moment you feel stressed how	High Level of	Low Level of	F	P
often do you use the following to	Perceived	Perceived		
reduce your stress?	Barriers	Barriers M (SD)		
	M (SD)			
Talza daan lanastlar	222(1042)	2.75(1.101)	15 140	000
Take deep breaths	2.33 (1.043)	2.75 (1.101)	13.140	.000

N = 485; Missing values excluded from analyses. Means based on a 5-point scale (1 = Never (0%); 5 = Always (100%)).

pleasant (item 39)" (Table 4.15).

Null Hypothesis 10. There will be no significant difference in students' frequency in using effective acute stress management techniques based on the level of cues to using effective acute stress management techniques. MANOVA results controlling for sex revealed there was a significant difference in students' frequency in using effective acute stress management techniques, F(11,399) = 4.327, p = .000. Therefore, the null hypothesis was rejected.

Univariate F tests revealed that the frequency in using effective acute stress management techniques differed significantly based on the level of cues to using effective acute stress management techniques for the following items: item 29, 30, 31, 32, 34, 35, 36, 37, 38, and item 39 (Table 4.16). Therefore, students' frequency in using effective acute stress management techniques based on level of cues to using effective acute stress management techniques differed significantly for "Take deep breaths (item 29)," "Count to ten (item 30)," "Pray (item 31)," "Meditate (item 32)," "Contract and relax muscles (item 34)," "Stretch (item 35)," "Run or exercise (item 36)," "Try to look at the big picture (item 37)," "Talk to or call someone to vent (item 38)," and "Imagine/visualize something pleasant (item 39)" (Table 4.16).

Techniques				
In the moment you feel stressed	High Level of	Low Level of	F	р
how often do you use the following	Cues	Cues		
to reduce your stress?	M (SD)	M (SD)		
Take deep breaths	2.85 (1.049)	2.51 (1.089)	7.138	.008
Count to ten	1.42 (.742)	1.26 (.566)	4.890	.028
Pray	2.37 (1.340)	2.02 (1.189)	4.680	.031
Meditate	1.88 (1.050)	1.52 (.826)	15.670	.000
Contract and relax muscles	2.25 (1.151)	1.99 (1.106)	6.155	.014
Stretch	2.53 (1.118)	2.15 (1.077)	9.582	.002
Run or exercise	2.96 (1.173)	2.57 (1.163)	10.677	.001
Try to look at the big picture	3.33 (1.013)	2.99 (1.148)	8.989	.003
Talk to or call someone to vent	3.33 (1.216)	2.79 (1.202)	9.290	.002
Imagine/visualize something pleasant	2.57 (1.083)	1.98 (.977)	27.475	.000

 Table 4.16
 Students' Frequency in Using Effective Acute Stress Management Techniques based on Level of Cues to Using Effective Acute Stress Management Techniques

N = 485; Missing values excluded from analyses. Means based on a 5-point scale (1 = Never (0%); 5 = Always (100%)).

Discussion

A total of 485 college students at a Midwestern University were surveyed summer quarter 2008–09 regarding whether their perceived overall happiness and stress differed significantly based on frequency in using effective acute stress management techniques, perceived emotional closeness to important others (social connections), and level of involvement in spirituality. Furthermore, the students were surveyed regarding whether their use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques. A majority of the students were male (60.9%), junior grade level (30.8%), Caucasian/White (84.5%) individuals, who lived in an apartment (45.0%), with friends or roommates (46.6%), enrolled full-time (90.8%), and not involved in any student organizations (66.0%).

Most students felt happiest with their parents or legal guardians (M = 4.22; SD = .857), with their friends (M = 4.16; SD = .752), and with their individual personality (M = 4.14; SD = .722). The students were most unhappy with their financial situation (M = 2.98; SD = 1.156), at work (M = 3.56; SD = .885), and at school (M = 3.57; SD = .882).

A majority (61.0%) of the students reported having high stress and 39.0% reported having low stress. Students felt the most stress regarding school (M = 3.40; SD = 1.051), with lack of time (M = 3.12; SD = 1.227), and with their career (M = 3.06; SD = 1.317). Students felt the least stress with friends (M = 1.54; SD = .765), parent(s)/legal guardian(s) (M = 1.71; SD =.948), and co-workers (M = 1.72; SD = .889).

Most (72.0%) of the students reported low frequency in using effective acute stress management techniques and 28.0% reported high frequency in using effective acute stress management techniques. In the moment of most acute stress, students mostly listened to music (M = 3.36; SD = 1.027), tried to look at the big picture (M = 3.12; SD = 1.118), and talked to

someone to vent (M = 2.93; SD = 1.259). The least frequently used effective acute stress management techniques were counting to ten (M = 1.30; SD = .626), meditating (M = 1.64; SD = .919), and contracting and relaxing muscles (M = 2.05; SD = 1.113).

A slight majority (50.1%) of the students reported high perceived benefits in using effective acute stress management techniques and 49.9% reported low perceived benefits in using effective acute stress management techniques. The most beneficial effective acute stress management techniques for reducing stress were running or exercising (M= 3.18; SD = 1.134), listening to music (M= 3.03; SD = .930), and talking to someone to vent (M= 3.02; SD = 1.147). Students indicated the least beneficial acute stress management techniques were taking deep breaths (M = 2.57; SD = 1.099), counting to ten (M= 2.66; SD = 1.361).

A vast proportion (71.2%) of the students reported low perceived barriers in using effective acute stress management techniques while 28.8% of the students reported high perceived barriers in using effective acute stress management techniques. The largest barriers to using effective acute stress management techniques were because students got caught up in the moment (M = 2.31; SD = .993), they did not have enough time to use the techniques (M = 2.19; SD = .979), and because they thought the techniques will not work (M = 2.12; SD = .909). The smallest barriers to using the effective acute stress management techniques were because they were embarrassed to use the techniques in private (M = 1.21; SD = .560), they did not know how to use the techniques (M = 1.56; SD = .772), and because they were not aware of the techniques (M = 1.61; SD = .844).

A minority (39.5%) of the students reported high level of cues to using effective acute stress management techniques and 60.5% reported low level of cues to using effective acute

stress management techniques. The most helpful cues which led students to use effective acute stress management techniques were having friends/family members who used these techniques (M = 2.50; SD = 1.010), having friends/family members who reminded students to use these techniques (M = 2.35; SD = 1.020), and self reminders to use these techniques (M = 2.30; SD =.934). The least helpful cues in getting students to use effective acute stress management techniques were posting reminders to encourage using these techniques (M = 1.93; SD = .965), reflecting on using positive stress management techniques before starting the day (M = 1.99; SD =.882), and seeing movies, videos, or television programs showing people using these techniques" (M = 2.11; SD = .983).

Interestingly, a majority of students felt six of the eleven effective acute stress management techniques would not reduce stress in the moment they felt most stressed. Of all the effective acute stress management techniques, students felt taking deep breaths (59.2%), listening to music (78.1%), running or exercising (66.8%), trying to look at the big picture (56.3%), and talking to someone to vent (61.9%) would reduce their stress in the moment they felt stressed. Students felt the following effective acute stress management techniques would not help reduce stress in the moment they felt stressed: counting to ten (91.5%), praying (64.7%), meditating (77.5%), contracting and relaxing muscles (78.5%), stretching (62.7%), and imagining something pleasant (72.6%).

Results indicated that 62.1% of the students reported high perceived emotional closeness to important others and 37.9% reported low perceived emotional closeness to important others. Students felt most emotionally close to parent(s)/legal guardian(s) (M = 3.40; SD = .752), and to friends (M = 3.25; SD = .701).

A slight minority (49.1%) of the students reported high level of involvement in spirituality and 50.9% reported low level of involvement in spirituality. Students reported the most frequent spiritual activities they engaged in were attending a class/workshop on spirituality/religious issues (M= 5.15; SD = 1.292), reading books on spirituality that are not sacred (M= 4.88; SD = 1.322), and meditating (M= 4.54; SD = 1.558). The spiritual activities students engaged in least frequently were reflecting on life (M= 2.20; SD = 1.065), praying (M= 3.22; SD = 1.799), and talking to others about spiritual issues (i.e. God, higher power, meaning of life) (M= 3.38; SD = 1.354).

Various statistical analyses were performed to test the hypotheses. Sex was used as a covariate in hypothesis testing since analyses revealed sex as the only significant demographic for which selected dependent variables differed. MANOVA results revealed perceived overall happiness differed significantly based on perceived overall stress F(16, 202) = 2.590, p = .001, perceived overall happiness differed significantly based on perceived emotional closeness to important others F(16, 200) = 5.337, p < .001, perceived overall stress differed significantly based on perceived emotional closeness to important others F(12,208) = 2.085, p = .019, frequency in using effective acute stress management techniques differed significantly based on level of perceived benefits in using effective acute stress management techniques F(11,423) =20.390, p < .001, frequency in using effective acute stress management techniques differed significantly based on level of perceived barriers in using effective acute stress management techniques F(11,426) = 3.508, p < .001, and frequency in using effective acute stress management techniques differed significantly based on level of cues to using effective acute stress management techniques F(11,399) = 4.327, p < .001. No other significant interactions between the variables were noted i.e. perceived overall happiness did not differ significantly

based on frequency in using effective acute stress management techniques, perceived overall happiness did not differ significantly based on level of involvement in spirituality, perceived overall stress did not differ significantly based on frequency in using effective acute stress management techniques, and finally perceived overall stress did not differ significantly based on level of involvement in spirituality.

Chapter Five

Conclusions and Recommendations

Happiness and overall life satisfaction are considered major life goals in common philosophy (Annas, 1993; Ehrhardt, Saris, & Veenhoven, 2000; Helliwell & Putnam, 2004). Research suggests increasing happiness has multiple benefits (Schiffrin, & Nelson, 2010). However, there are various barriers to achieving life happiness. One such barrier to happiness is stress (Schiffrin & Nelson, 2010).

Several factors contribute to increased prevalence of stress such as daily stressors and major life stressors (Almeida, 2005). Natvig, Albrektsen, and Qvarnstrom (2003) found increasing stress reduced happiness in a study of 887 adolescents. College student health has shown a disturbing trend of increasing stress nationwide (Misra & McKean, 2000; Sax, 1997). Thus, effective strategies are needed to prevent new stressors and to appropriately manage current stressors.

Research has identified several relaxation techniques used to alleviate stress (Smith, 2007). Some of the documented techniques for relieving stress in an acute setting include stretching exercises and progressive muscle relaxation (Smith, 2007). Besides stretching exercises and progressive muscle relaxation, there are several other relaxation techniques described in the literature such as breathing exercises, autogenic training, imagery and visualization, meditation, and mindfulness (Smith, 2007).

Besides the stress management strategies mentioned above, many use social connections to cope with stress. Social connections tend to increase happiness (Bruhn, 2005). Social connections also protect individuals from the harmful effects of stress (Bruhn, 2005; Coyne &

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DeLongis, 1986). The importance of social connections to help college students tackle stress has also been well documented (Misra & McKean, 2000).

Another strategy for coping with stress is spirituality (Ridnour & Hammermeister, 2008). Larimore, Parker, and Crowther (2002) asserted spirituality can increase happiness or satisfaction with life. Larimore et al. (2002) also asserted that positive spiritual beliefs provide a cognitive framework that can reduce stress. Research has indicated the buffering effects of spirituality on stress (Hawks et al., 1995; Ridnour & Hammermeister, 2008).

The Health Belief Model (HBM) is one of the first theories predicting health behavior created by social psychologists, Hochbaum, Rosenstock, and Kegels (Glanz & Rimer, 2005). Researchers commonly use this model to describe the likelihood of an individual performing a preventive health behavior or action. For the present study, three constructs of the HBM were used: perceived benefits, perceived barriers, and potential cues to action.

The purpose of this study was to examine whether college students' perceived overall happiness and stress differed significantly based on frequency of using effective acute stress management techniques, emotional closeness to important others (social connections), and level of involvement in spirituality. In addition, this study examined whether college students' use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques.

A comprehensive review of the literature found no published study which addressed the impact of acute stress management techniques, social connections, and level of spirituality on stress and happiness among college students. Therefore, this study was conducted. A goal of this study is to further the knowledge on happiness and identify key ways the negative effects of

stress can be mollified to increase happiness. This information can be used to assist health educators design programs that increase happiness and/or decrease stress.

Chapter one discussed the purpose, the research questions, hypotheses, delimitations, limitations, assumptions and operational definitions for this study. Chapter two provided a comprehensive review of the literature. Chapter three described the methods used in this study. Chapter four presented the results of this study. This chapter presents the conclusions, discussion, recommendations for practice, recommendations for improving this research, and recommendations for future research.

Conclusions

A total of 485 college students at a Midwestern University were surveyed during the summer quarter of 2008–09 regarding whether their perceived overall happiness and stress differed significantly based on frequency in using effective acute stress management techniques, perceived emotional closeness to important others (social connections), and level of involvement in spirituality. Furthermore, the students were surveyed regarding whether their use of effective acute stress management techniques differed significantly based on perceived benefits, barriers, and cues to using effective acute stress management techniques. Results indicated that most students felt happiest with their parents or legal guardians, with their friends, and with their individual personality. Students were most unhappy with their financial situation, at work, and at school.

A majority (61.0%) of the students had high stress. Students felt the most stress regarding school, lack of time, and with their career. Students felt the least stress with friends, parents or legal guardians, and co-workers. Most (72.0%) of the students had a low frequency in using effective acute stress management techniques. In the moment of most acute stress, students reported most frequently listening to music, trying to look at the big picture, and talking to someone to vent. The least frequently used effective acute stress management techniques were counting to ten, meditating, and contracting and relaxing muscles.

Half (50.1%) of the students reported high perceived benefits in using effective acute stress management techniques. The most beneficial effective acute stress management techniques for reducing stress were running or exercising, listening to music, and talking to someone to vent. Students indicated the least beneficial effective acute stress management techniques were taking deep breaths, counting to ten, and imagining/visualizing something pleasant.

Most (71.2%) of the students reported low perceived barriers in using effective acute stress management techniques. The largest barriers to using effective acute stress management techniques were getting caught up in the moment, not having enough time to use the techniques, and thinking the techniques will not work. The lowest perceived barriers were feeling embarrassed to use the techniques in private, not knowing how to use the techniques, and not being aware of the techniques.

Just more than one-third (39.5%) of the students had a high level of cues to using effective acute stress management techniques. The cues perceived as most helpful were having friends or family members who used these techniques, having friends or family members who reminded students to use these techniques, and self reminders to use these techniques. The cues perceived as least helpful were posting reminders, reflecting on using positive stress management techniques before starting the day, and seeing movies, videos, or television programs showing people using these techniques.

Interestingly, a majority of students felt six of the eleven effective acute stress management techniques would not reduce stress in the moment they felt most stressed. Of all the effective acute stress management techniques, students felt taking deep breaths (59.2%), listening to music (78.1%), running or exercising (66.8%), trying to look at the big picture (56.3%), and talking to someone to vent (61.9%) would reduce their stress in the moment they felt stressed. Most students felt the following effective acute stress management techniques would not help reduce stress in the moment they felt stressed: counting to ten (91.5%), praying (64.7%), meditating (77.5%), contracting and relaxing muscles (78.5%), stretching (62.7%), and imagining something pleasant (72.6%).

Regarding level of perceived emotional closeness to important others, two-thirds (62.1%) had high perceived emotional closeness to important others. Students felt most emotionally close to parents or legal guardians and to friends. Half (49.1%) had a high level of involvement in spirituality. Students reported the most frequent spiritual activities they engaged in were attending a class or workshop on spirituality or religious issues, reading books on spirituality that were not sacred, and meditating. The spiritual activities students engaged in least frequently were reflecting on life, praying, and talking to others about spiritual issues (i.e. God, higher power, meaning of life).

Various statistical analyses were performed to test the hypotheses. Sex was used as a covariate in hypothesis testing since analyses revealed sex as the only significant demographic for which selected dependent variables differed. A multivariate analysis of variance (MANOVA) revealed that perceived overall happiness differed significantly based on perceived overall stress and perceived emotional closeness to important others. Frequency in

using effective acute stress management techniques differed significantly based on level of perceived benefits, barriers, and cues to using effective acute stress management techniques. No other significant differences were found.

Discussion

The present study found most college students were happiest with their parents or legal guardians, friends, and their individual personality. This study also found students were most unhappy with their finances, work, and school. Previous studies have found college students believe happiness consists of personal relationship factors, social factors, occupational factors, family factors, an emphasis on high self-confidence, and an emphasis on low stress (Crossley & Langdridge, 2005). Diener and Seligman (2002) found social relationships, extraversion, low neuroticism, and low levels of psychopathology were necessary for high happiness among college students. Furthermore, how individuals appraise life situations depends on whether they are happy or unhappy since happy students recalled both positive and negative events in a more positive manner than unhappy students (Lyubomirsky & Tucker, 1998). Lastly, Argyle (2001) asserted social relationships, work, and leisure are the main reasons for happiness. This study supports previous research by showing the influence of social relationships, family, individual personality, and conditions at work as features which affect happiness. This study differs from previous research since finances and school affected happiness among these students. Findings suggest that college students feel happiness is impacted by quality social relationships with family and friends, being proud of one's personality, having adequate financial resources to meet expenses, having a pleasant work environment, and having a pleasant environment at school.

The majority (61.0%) of college students in this study reported having high stress. Students experienced the most stress regarding school, due to lack of time, and regarding their career. They experienced the least stress with friends, parents or legal guardians, and coworkers. Previous studies have identified stress as a major issue for many college students (Oman, Shapiro, Thoresen, Plante, & Flinders, 2008). College students typically face stressors that are academic, financial, or time-related (Goodman, 1993; LeRoy, 1988; Misra & McKean, 2000; Oman et al., 2008). Academic stressors are primarily due to students feeling overwhelmed with the amount of information they have to learn in the time allocated (Carveth, Gesse, & Moss, 1996; Misra & McKean, 2000). Researchers have found social support can buffer the negative effects of stress (Cheuk, Wong, & Rosen, 1994; Cohen & Wills, 1985; Solomon, Waysman, & Mikulincer, 1990; Wong & Cheuk, 2005). Wong and Cheuk (2005) found emotional support from one's supervisor is effective in buffering the impacts of job-related stress. Felsten (1998) stated that social support was beneficial for dealing with stress among college students. This study supports existing research because most college students are stressed, they are stressed due to academics or lack of time, and their stress is alleviated by social support. This study differs from previous research since financial matters were not a primary stressor for the students.

In the present study, most (72%) college students reported low frequency in using effective acute stress management techniques. In the moment of most acute stress, students mostly listened to music, tried to look at the big picture, and talked to someone to vent. The least frequently used effective acute stress management techniques in the moment of acute stress were counting to ten, meditating, and contracting and relaxing muscles. Previous studies have found college students use the following methods to decrease stress: effective time management, social support, positive reappraisal, and engagement in leisure activities (Blake & Vandiver, 1988; Mattlin, Wethington, & Kessler, 1990; Misra & McKean, 2000). Despite knowing stress management techniques, many college students do not use these behaviors and find themselves

in excessive distress before exams (Brown, 1991; Misra & McKean, 2000). This study supports previous research since college students rarely use effective acute stress management techniques, and because they alleviate stress using leisure activities or positive reappraisal.

The most beneficial effective acute stress management techniques for reducing stress were running or exercising, listening to music, and talking to someone to vent. Students indicated the least beneficial effective acute stress management techniques were taking deep breaths, counting to ten, and imagining or visualizing something pleasant. The perceived benefits of performing an action tends to influence whether a particular action is performed by a person because they identify the positive effects a person can expect from performing a behavior (Glanz & Rimer, 2005). The results of this study are unique since no other study has examined use of effective acute stress management techniques in terms of the perceived benefits among college students.

This study also identified the largest perceived barriers preventing students from using effective acute stress management techniques as: getting caught up in the moment, not having enough time to use the techniques, and thinking the techniques would not work. The lowest perceived barriers were feeling embarrassed to use the techniques in private, not knowing how to use the techniques, and not being aware of the techniques. Previous studies have found examples of perceived barriers to performing a health behavior among college students such as: time-consuming, fear, and not perceiving a need for participation in the program (Bost, 2005). Perceived barriers are crucial since individuals decide whether to perform a behavior based on how the effectiveness of engaging in the behavior weighs against the perception that performing the behavior is expensive, inconvenient, dangerous, or unpleasant (Rosenstock, 1974). The results of this study are similar to previous research since time is a barrier to using effective

acute stress management techniques. The results of this study differ from previous research since getting caught up in the moment, not believing in the efficacy of the effective acute stress management techniques, being embarrassed, lack of knowledge about how to use the techniques, and lack of knowledge about the existence of the techniques prevented students from using the effective acute stress management techniques.

The cues perceived as being most helpful in getting students to use effective acute stress management techniques in this study included: having friends or family members who used these techniques, having friends or family members who reminded students to use these techniques, and self reminders to use these techniques. The cues perceived as least helpful included: posting reminders to encourage using these techniques, reflecting on using the techniques before starting the day, and seeing movies, videos, or television programs showing people using these techniques. Cues to action is a construct that encourages a person to perform an action or behavior beneficial to the individual's health (Glanz & Rimer, 2005). No previous study has examined cues to using effective acute stress management techniques such as having friends or family members who use them, having friends or family members who remind them to use the techniques, and self reminders.

The results of the present study found most students perceived six of the 11 effective acute stress management techniques to not be helpful in reducing stress the moment they felt stressed. Students felt that taking deep breaths, listening to music, running or exercising, trying to look at the big picture, and talking to someone to vent would reduce their stress in the moment they felt stressed. Students perceived the following effective acute stress management techniques would not be helpful in reducing stress in the moment they felt stressed: counting to ten, praying, meditating, contracting and relaxing muscles, stretching, and imagining something
pleasant. Previous studies have found the following actions to be effective in reducing stress: stretching (Michalsen et al., 2005), progressive muscle relaxation (Chen et al., 2009), deep diaphragmatic breathing (Bughi, Sumcad, & Bughi, 2006), imagery (Lewis, 1987; Tsai & Crockett, 1993; Wynd, 1992), meditation (Oman et al., 2008), social support, positive reappraisal, engagement in leisure activities (Blake & Vandiver, 1988; Mattlin, Wethington, & Kessler, 1990; Misra & McKean, 2000), spirituality (Graham, Furr, Flowers, & Burke, 2001), and mindfulness (Miller, Fletcher, & Kabat-Zinn, 1995; Shapiro, Schwartz, & Bonner, 1998). The results of this study are similar to previous research since deep breathing, leisure activities such as music or exercising, positive reappraisal, and social support such as talking to someone to vent, all were perceived as helpful in reducing stress. However, this study revealed that students felt mindfulness such as counting to ten, praying, meditating, progressive muscle relaxation, stretching or Hatha Yoga, and imagery were not helpful in reducing stress.

The present study found that students felt most emotionally close to parents or legal guardians and friends. Research has found the most beneficial relationships involving social connections were marriage and cohabitation, family and kinship, friends, work relationships, neighbors, and memberships in organizations (Bruhn, 2005). Results of this study are similar to previous research.

Students in the present study mostly engaged in the following spiritual activities: attending a class or workshop on spirituality or religious issues, reading books on spirituality that were not sacred, and meditating. Research has found college students are interested in spirituality (Astin et al., 2005). Results of this study are similar to previous research.

Perceived overall happiness differed significantly based on perceived overall stress. Previous studies have found happiness depends on stress (Crossley & Langdridge, 2005; Natvig, Albrektsen, & Qvarnstrom, 2003; Schiffrin & Nelson, 2010). Therefore, the results of this study are consistent with existing research and imply that college students could be happier if they had lower overall stress. Many college campuses have wellness organizations that could increase stress management programming and thus possibly aid in improving overall happiness.

Results of the present study revealed perceived overall happiness differed significantly based on perceived emotional closeness to important others. Previous studies have found social relationships are the most important reason for happiness (Benin & Nierstedt, 1985; Campbell, Converse, & Rodgers, 1976; Inglehart, 1990; Larson, 1978; Myers, 2000). Programs which emphasize the importance of developing quality friendships and family relationships could possibly improve students' happiness. Perceived overall stress also differed significantly based on perceived emotional closeness to important others. Previous studies have found social support can buffer the negative effects of stress (Cheuk, Wong, & Rosen, 1994; Cohen & Wills, 1985; Solomon, Waysman, & Mikulincer, 1990; Wong & Cheuk, 2005). The results of this study are consistent with existing research and imply stress reduction programming on college campuses should incorporate the importance of having good social support. Stress management programming on college campuses could possibly also include ways students can expand their social connections by joining student organizations, sports, or living in student housing.

Not surprisingly, frequency in using effective acute stress management techniques differed significantly based on level of perceived benefits in using effective acute stress management techniques. The higher the perceived benefits, the more frequent the use of these techniques. Perceived benefits of specific behaviors tend to influence whether a particular action is performed by a person because they identify the positive effects a person can expect from performing a behavior (Glanz & Rimer, 2005). The results of this study support the health belief model as an accurate explanation of stress management behavior. Stress reduction programs on college campuses should emphasize the benefits of performing the effective acute stress management techniques to increase the likelihood that students utilize these skills to lower their stress.

Frequency in using effective acute stress management techniques also differed significantly based on level of perceived barriers in using effective acute stress management techniques. Perceived barriers are important in explaining health behaviors since individuals tend to weigh the positives of performing a behavior against the negatives or costs of performing a behavior (Rosenstock, 1974). These findings suggest that the barrier construct of the health belief model helps to explain stress management behavior. Stress reduction programs on college campuses should aim to reduce the perceived barriers to performing the effective acute stress management techniques. For example, because the present study revealed time is a barrier to performing the effective acute stress management techniques, the health educators should emphasize there are several effective acute stress management techniques that only require a few seconds such as imagery and visualization.

Frequency in using effective acute stress management techniques also differed significantly based on level of cues to using effective acute stress management techniques. The more cues possessed, the more likely the techniques were used. Previous research has found cues to be helpful in increasing health behaviors (Glanz & Rimer, 2005). Stress reduction programs on college campuses should include cues which students can utilize to increase the likelihood they use the effective acute stress management techniques to reduce stress.

Recommendations

Recommendations for practice. Health educators can assist in improving college students' health by increasing their happiness, decreasing their stress, and by emphasizing the positive characteristics of effective acute stress management techniques. Health educators can increase happiness among college students by teaching them how to decrease their stress and how to maintain or increase social connections. Social connections can also be used to decrease stress. Lastly, by discussing the benefits of using effective acute stress management techniques, teaching strategies to overcome the barriers to using effective acute stress management techniques, and by showing effective ways to utilize cues to using effective acute stress management techniques, health educators can increase the likelihood students will use these stress management techniques.

Regarding happiness, health educators designing wellness programs for college students should create programs which emphasize the importance of maintaining or creating strong relationships with parents or legal guardian(s), family members, friends, and with themselves. Educational programming for happiness should include self-esteem strategies along with skills for maintaining healthy relationships such as assertiveness training or anger management training. Furthermore, health educators should incorporate financial planning along with skills for being successful at work or school because these areas were where students were the most unhappy in the present study.

College campus wellness centers should increase stress management programming since a majority of students suffer from high stress. Programs should incorporate strategies for handling school more effectively, time management strategies, and career planning since these three areas created the most stress for the students of this study. Stress management programming on college campuses should seek to educate students about effective acute stress management techniques since a majority do not use these techniques frequently. A specific focus on the benefits, barriers, and cues to using these techniques should be employed.

Campus health educators could also help students by teaching them how to not get overwhelmed by the stressors of the moment, and how to use effective time management strategies. Campus workshops could be delivered to educate students about effective acute stress management techniques. Benefits, barriers, and cues to using these techniques should be addressed in these workshops.

Campus health educators should encourage students to share the effective acute stress management techniques with their family members and friends, to ask their family and friends to remind each other about using the effective acute stress management techniques, and to use self reminders about the techniques.

Campus health educators can also aim to increase the perceived helpfulness of the effective acute stress management techniques. Education on the following techniques is needed since students felt these were not helpful: mindfulness or counting to ten, spirituality or prayer, meditation, progressive muscle relaxation, stretching or Hatha Yoga, and imagery or visualization.

Recommendations for improving this research. Sampling the students during the fall, winter, or spring quarters could improve this research by providing a more accurate representation of the college students at the Midwestern University. The results of this study were also delimited to participants at one college campus. This study can be improved by surveying several other campuses to enhance the generalizability of the results. Regarding data analysis, item 78 and 79 of the survey were eliminated from perceived emotional closeness to

important others since many college students did not have a significant other or co-workers. This research could be improved by including more items on the survey that address different types of social connections such as siblings, cousins, extended family members, mentors, advisors, professors, activity partners, athletic partners, therapists, counselors, professional colleagues, fraternity brothers, sorority sisters, and so forth. This study was limited to five research questions and 10 hypotheses. In order to improve this research, more research questions and more hypotheses could be added to analyze the relationships between the selected variables.

Recommendations for future research. Evaluation studies for college campus wellness programs need to be conducted to determine whether these programs are effective at improving college students' health. More specifically, research needs to be conducted to identify effective programs that improve students' happiness and decrease their stress. Part of the evaluation studies should explore whether students are aware of the happiness programming and stress reduction programming conducted by the wellness centers, whether they use the techniques that are taught in these programs, and if these programs are effective at increasing the students' happiness and decreases are ineffective, then changes need to be made accordingly.

In addition to the recommendations for future research mentioned above, there are several other research studies which should be conducted in the future. In this study, the health belief model was used as a theoretical framework, but future studies could use other health behavior models such as social cognitive theory and the stages of change model. In this study ineffective acute stress management techniques were not analyzed. Future studies should examine students' involvement in the use of ineffective acute stress management techniques such as yelling, swearing, and fighting. In addition, future studies could examine how religion plays a role in perceived overall happiness and perceived overall stress. To further examine the relationship with spirituality and stress management, future studies could separate college students into two categories: those who do not engage in spirituality and those who do engage in spirituality and then examine how these two groups relate to stress management behaviors. Future studies should also examine how the defined variables differ between younger college students versus older college students.

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INFORMATION SHEET FOR ANONYMOUS SURVEY

University of Cincinnati Information Sheet for a Research Study College of Education, Criminal Justice, and Human Services Meha Singh, Graduate Student 513-556-3873 (singhma@email.uc.edu)

Title of Research Study: College Students' Perceived Happiness and Involvement in Stress, Social Connections, and Spirituality

I am inviting you to complete an anonymous survey of 380 college students. The survey is part of a research study that I am conducting for my Masters Degree program. The questions ask about factors that influence your overall happiness, stress, social connections, and spirituality.

Completing the survey will take less than 10 minutes. When you are finished, please place your survey in the envelope on the instructor's desk in the front of the room. Do not write your name on the survey form.

There are no expected risks or benefits to you from completing the survey. Because the survey is anonymous, your identity and your answers can not be connected. Your participation may, however, help health educators to develop stress reduction programs to better meet the needs of college students. There are no other activities planned if you do not want to complete the survey.

If you have any questions about this research study, you should contact Meha Singh at 513-556-3873. Or, you may contact the University of Cincinnati Institutional Review Board – Social and Behavioral Sciences at 513-558-5784.

The UC Institutional Review Board – Social and Behavioral Sciences (IRB-S) reviews all non-medical research projects that involve human participants to be sure the rights and welfare of participants are protected.

If you have questions about your rights as a participant or complaints about the study, you may contact the Chairperson of the UC IRB-S at (513) 558-5784. Or, you may call the UC Research Compliance Hotline at (800) 889-1547, or write to the IRB-S, 300 University Hall, ML 0567, 51 Goodman Drive, Cincinnati, OH 45221-0567, or email the IRB office at <u>irb@ucmail.uc.edu</u>.

This is a voluntary survey. You do NOT have to participate in this research study. You may choose not to participate or you may quit participating at any time. You may choose to not answer any questions without penalty or adverse consequences.

BY TURNING IN YOUR COMPLETED SURVEY YOU INDICATE YOUR CONSENT FOR YOUR ANSWERS TO BE USED IN THIS RESEARCH PROJECT. Nothing in this consent form waives any legal rights you may have. This consent form also does not release the investigator, the University of Cincinnati, or its agents from liability for negligence.

PLEASE KEEP THIS INFORMATION SHEET FOR YOUR REFERENCE.

Thank You!

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 STUDENT SURVEY

 Directions: Please answer the following questions honestly. Your responses will be kept anonymous and private. By completing this
 survey, you are granting your consent to participate in this study. Thanks for your help!

Overall, how happy or unhappy do you feel	Extremely Unhappy	Unhappy	Neither Happy nor Unhappy	Нарру	Extremely Happy	N/A
1. With your life in general						
2. With where you are in life						
3. With yourself						
4. With your physical appearance						
5. With your personality						
6. With your ability to communicate with others						
7. With your health						
8. With your accomplishments in life thus far						
9. With your financial situation						
10. With your parent(s)/legal guardian(s)						
11. With your friends						
12. With your significant other						
13. With your co-workers						
14. At home						
15. At school						
16. At work						

Overall, how stressed do you feel	Not stressed at all	Slightly Stressed	Moderately Stressed	Very Stressed	Extremely Stressed	N/A
17. With your life in general						
18. Regarding school						
19. Regarding home						
20. Regarding work						
21. With your parent(s)/legal guardian(s)						
22. With your friends						
23. With your significant other						
24. With your co-workers						
25. With your financial situation						
26. With lack of time (feeling rushed)						
27. With your future						
28. With your career						

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In the moment you feel stressed how often do you use the following to reduce your stress?	Never (0%)	Rarely (1-49%)	Sometimes (50%)	Most of the Time (51-99%)	Always (100%)
29. Take deep breaths					
30. Count to ten					
31. Pray					
32. Meditate					
33. Listen to music					
34. Contract and relax muscles					
35. Stretch					
36. Run or exercise					
37. Try to look at the big picture					
38. Talk to or call someone to vent					
39. Imagine / visualize something pleasant					
40. Cry					
41. Eat					
42. Yell					
43. Take a nap/sleep					
44. Smoke					
45. Drink alcohol					
46. Use other drugs					

When you feel stressed, how helpful are each of the following in reducing your stress?	Not Helpful	Slightly Helpful	Moderately Helpful	Extremely Helpful	I have never tried this
47. Take deep breaths					
48. Count to ten					
49. Pray					
50. Meditate					
51. Listen to music					
52. Contract and relax muscles					
53. Stretch					
54. Run or exercise					
55. Try to look at the big picture					
56. Talk to or call someone to vent					
57. Imagine / visualize something pleasant					

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<u>Note:</u> For questions 58-74, **POSITIVE TECHNIQUES** include things like: taking deep breaths, counting to 10, praying, meditating, listening to music, contracting and relaxing muscles, stretching, running or exercising, trying to look at the big picture, talking to someone, and imagining/visualizing something pleasant.

How large of a barrier is each of the following in preventing you from using positive techniques to reduce your stress in the moment you feel stressed?	Not a Barrier	Slight Barrier	Moderate Barrier	Extreme Barrier
58. Not aware of the techniques				
59. Do not know how to use the techniques				
60. Do not think the techniques will work				
61. Do not have enough time to use the techniques				
62. Embarrassed to use the techniques in public				
63. Embarrassed to use the techniques in private				
64. Am satisfied with how I handle my stress				
65. Am too lazy to use the techniques				
66. Get caught up in the moment				

How helpful is each of the following in getting you to use a positive technique to reduce stress in the moment you feel stressed?	Not Helpful	Slightly Helpful	Moderately Helpful	Extremely Helpful	I have never tried this
67. Posting reminders to encourage you to use positive stress management techniques					
68. Reflecting on using positive stress management techniques before you start the day					
69. Having friends/family members use positive stress management techniques					
70. Having friends/family members help remind you to use positive stress management techniques					
71. Reading about how to use positive stress management techniques					
72. Taking time throughout the day to remind yourself of positive stress management techniques					
73. Seeing movies, videos or television programs showing people using positive stress management techniques					
74. Journaling/writing					

75. Which of the following do you feel would help to reduce your stress in the moment you feel stressed? (check all that apply)					
Taking deep breaths	□ Listening to music	□ Trying to look at the big picture			
\Box Counting to 10	Contracting and relaxing muscles	□ Talking to/calling someone to vent			
□ Praying	□ Stretching	Imaging something pleasant			
Meditating	Running or exercising				

Overall, how emotionally close do you feel towards	Not close at all	Minimally Close	Moderately Close	Extremely Close	N/A
76. Your parent(s)/legal guardian(s)					
77. Your friends					
78. Your significant other					
79. Your co-workers					

In the past year, how often did you	At least once a day	At least once a week	At least once a month	At least once a year	Less than once a year	Never
83. Pray						
84. Reflect on life						
85. Talk to others about spiritual issues (i.e., God, higher power, meaning of life)						
86. Meditate						
87. Read sacred or religious texts						
88. Read books on spirituality that are not sacred						
89. Think about spiritual issues						
90. Attend a place of worship like church, mosque, synagogue, temple, et cetera						
91. Feel a sort of connection with God or a higher power						
92. Feel that God or a higher power is in control of your life						
93. Attend a class/workshop on spirituality/religious issues						

ABOUT YOU

94. What is your sex?	MaleFemale
95. What is your age?	years
96. What is your grade level in school?	Freshman Senior Sophomore Graduate student Junior Graduate student
97. What is your race?	African American Hispanic/Latino Asian Native American/American Indian Caucasian/White Multi-Racial Hawaiian/Pacific Islander Other (specify)
98. Where do you live?	HomeDormitoryApartmentOther (specify)
99. With whom do you live?	FamilyFriend(s)/Roommate(s)Significant otherSelf
100. What is your enrollment?	Full-timePart-time
101. Are you a member of a student group (i.e., sorority, fraternity, student group)?	YesNo

THANK YOU ③