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EXAMINING THE ASSOCIATION BETWEEN LEISURE COPING STRATEGIES AND
MENTAL HEALTH AMONG COLLEGE STUDENTS

THESIS

A Thesis
presented in partial fulfillment of requirements
for the degree of Master of Arts in Recreation Administration
in the Department of Health, Exercise Science, and Recreation Management
The University of Mississippi

By

KAROLYNE HELEN REHNER

May 2016

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ABSTRACT

The purpose of this study was to examine how leisure coping strategies (companionship, palliative and mood enhancement) and alcohol behaviors influence depression and stress among college students. The main findings revealed that using leisure to enhance mood lead to lower depression scores. Alcohol behaviors had no influence on depression or stress. Stress was higher among females and Caucasian college students. Further research needs to investigate the relationship between unhealthy leisure and mental wellness as well level of involvement in leisure activities. The results reinforce the benefits of using leisure as a means to enhance mood and counter act the harmful effects of negative emotions related to depression.

DEDICATION

This thesis is dedicated to my parents who have always supported, encouraged all of my educational pursuits. I could never repay them for all they have sacrificed on my behalf, and I'm so grateful to have them as parents.

ACKNOWLEDGEMENTS

I would like to thank several people who helped make it possible for me to complete my studies successfully. First and foremost, I would like to thank my parents who have always supported and encouraged my goals. I would also like to thank my sisters and brother in law who prayed and supported the completion of this thesis. Along with the support of my family I could not ask for a more wonderful fiancé. His patience through long hours in the library, listening tentatively and encouraging me to take breaks made the weight of this project a little lighter. I would also like to thank my chair advisor; Dr.KoFan as well as Dr. Kim Beason and Dr. Paul Loprinzi for your input and advice. I am blessed to have so many wonderful people in my life, and I'm thankful to have learned so much through this process. Thank you all.

Table of Contents

| | |
|--|-----|
| ABSTRACT..... | ii |
| DEDICATION..... | iii |
| ACKNOWLEDGEMENTS..... | v |
| CHAPTER I..... | 1 |
| INTRODUCTION | 1 |
| Mental Health Status of College Students | 1 |
| Transitioning into Adulthood..... | 2 |
| Stress and College Students | 2 |
| Defining Leisure Coping..... | 3 |
| CHAPTER II..... | 7 |
| LITERATURE REVIEW | 7 |
| Coping and Positive Emotions | 7 |
| Benefits of Leisure Coping..... | 10 |
| CHAPTER III | 19 |
| METHODS | 19 |
| Participants | 19 |

| | |
|----------------------------------|----|
| Instruments | 20 |
| CHAPTER IV | 26 |
| RESULTS | 26 |
| Sample Characteristics | 26 |
| Research Questions..... | 30 |
| CHAPTER V | 36 |
| DISCUSSION AND CONCLUSIONS | 36 |
| Discussion of Findings | 38 |
| Limitations..... | 42 |
| Reference Citation | 44 |
| APPENDIX A..... | 50 |
| VITA..... | 62 |

LIST OF TABLES

| | |
|---|-------------------------------------|
| Table 1: Breakdown of Sample..... | Error! Bookmark not defined. |
| Table 2: Mean and Standard Deviations with Demographics | Error! Bookmark not defined. |
| Table 3: Bivariate Correlation | Error! Bookmark not defined. |
| Table 4 Logistic Regression and Depression..... | Error! Bookmark not defined. |
| Table 5: Depression Severity and Leisure Coping | Error! Bookmark not defined. |
| Table 6: Logistic Regression with Stress..... | Error! Bookmark not defined. |
| Table_7: Leisure Activities..... | Error! Bookmark not defined. |

CHAPTER I
INTRODUCTION

Mental Health Status of College Students

The American College Health Association, conducted a national study in 2014 surveying college student's mental and physical health status within the last 12 months. This study collected data from 79,226 college students within 140 universities. It was estimated that 30% of college students, "felt so depressed it was difficult to function within the last 12 months" (American College Health Association, 2014, p. 14). Depression is a mental health condition which often leads to negative mood, reduced social interaction and difficulty experiencing enjoyment in chosen activities (Blanco & Lynn, 2014). Other symptoms related to depression include: poor sleeping and eating habits, fatigue, inability to concentrate and negative thoughts (Blanco et. al, 2014). In 2014, it was estimated that 6.7 percent of all U.S. adults experienced at least one episode of major depression. Out of that percentage, young adults reported the highest levels of depression (Holmes, 2015). The prevalence of poor mental health is evident through the rate of suicides that take place every year among young adults between the ages of 15-24 (American Suicide Prevention", 2014). Within the last thirteen months, six students at Pennsylvania State University committed suicide, as well as four students at Tulane University and three at Appalachian State University (Scelfo, 2015). With suicide being the third leading cause of death among this age group, this emphasizes the critical state of psychological well-being among young adults.

Transitioning into Adulthood

The higher rates of depressive symptoms among college students reflects a number of reasons. First being that mental health conditions generally occur between the ages of 18 and 24 (Nimrod, Kleiber & Berdychevsky 2012). The onset of mental health disorders can be a combination of genetic predisposition as well as environmental factors such as the occurrence of negative life events or high amounts of chronic stress (Nimrod et al., 2012). College years are often characterized by unprecedented transitions (Blanco, 2014). As students are emerging into adulthood they find themselves more responsible for financial stability as well as upholding roles in various life domains. Along with these obligations, students are also responsible for meeting academic standards while attempting to identify with new social groups. In a study conducted by Penn State many students reported feeling an unhealthy amount of pressure to be perfect in all areas of involvement on college campuses. This study reported that these feelings of pressure “can manifest as demoralization, alienation or conditions like anxiety or depression” (Scelfo, 2015, p. 2). For many college students, this is their first time to be responsible for their overall well-being without the provision of their parents. With the pressure to identify with social groups, maintain academic excellence, take care of interpersonal issues, and preparing for graduation this can be a time of high stress for many young adults.

Stress and College Students

Another contributing factor to poor mental health is prolonged stress. Some people cope with stress more effectively or recover from stress more quickly than others. Not all stress is considered bad, but extended periods of stress can take a toll on one’s mind and body (“Fact sheet on Stress”, 2014) According to the American Foundation for Suicide Prevention (2014), health and environmental factors are considered to be two major risk for suicide. Specifically,

depression and substance abuse disorders were considered health factors that contribute to suicide risk. Prolonged stress and stressful life events were considered influencing environmental factors. College students are particularly at risk for prolonged stress due to the pressure in balancing all responsibilities that come with transitioning into adulthood. This reinforces the importance in measuring stress along with level of depression. The Harvard public health department (2014) conducted a survey regarding the burden of stress in America which included over 2,000 participants. It was reported that individuals with health-related problems experienced the most stress. This study also evaluated the effectiveness of activities to reduce stress. It was reported that 94% of people considered spending time outdoors an effective activity for managing or reducing stress. This reinforces using leisure as a means of coping and taking care of our psychological health.

Defining Leisure Coping

With such large numbers of students reporting poor mental health it is important to examine how students are coping. Among the variety of coping resources, leisure researchers have proposed that using leisure as a means of coping can be beneficial. This is due to the many physiological benefits related to leisure participation. Leisure coping is defined as the intentional use of leisure as a means of dealing with negative emotions or difficulties (Iwasaki & Mannell, 2000). Leisure is an inclusive term that can be defined as free time, an activity, time and space or a state of mind. In this particular study, leisure is defined as a state of mind. Defining leisure as a state of mind considers the individual's perception of the activity rather than the activity itself. In this case, participation is not influenced by external factors, but rather the experience results in personal feelings of satisfaction (Iwasaki et. al, 2000). For example, leisure may provide the opportunity to take a break from work or a stressful problem. Whether it's a

vacation or getting lunch with a friend in the middle of the work day, this allows individuals to feel refreshed and better prepared to handle daily stressors. Participation in leisure can also be utilized to gain a new perspective on a difficult situation; this is referred to as the reappraisal effect. For example, being in contact with nature, practicing traditional or nontraditional spiritual activities or expressing one's self through art or music can provide individuals with time to analyze and reflect on a difficult or stressful situation (Nimrod et. al, 2012). The way that leisure can be utilized to relieve the impact of stress and negative emotions is subjective and heavily relies on the meaning associated with that activity (Bailey & Fernando, 2012).

Purpose of Study

The aim of this study was to examine the influence of leisure coping strategies among college students experiencing symptoms of depression and stress. Sub objectives of this study included the influence of unhealthy leisure which was classified as alcohol use, as well as what activities students are participating in to improve mood when experiencing feelings related to depression.

Significance

As previously stated, psychological well-being is at an all-time low among young adults. This study of the association between leisure coping strategies and alcohol behaviors with depressive symptoms and stress will provide mental health workers, recreation professionals and faculty with a better understanding of how to serve this population.

Currently, there is limited research regarding the association between leisure and depressive symptoms. Although research has been done to examine the relationship between leisure coping and stress (Iwasaki, 2006; Nimrod et al., 2012; Qian, Yarnel & Almeida, 2014; Kinser, Bourguignon, Taylor & Steeves, 2013), there has been little research investigating the role that leisure coping has in relationship with depression. There is also limited knowledge regarding leisure behavior and mental health among college students as a whole. Due to the inclusive nature of the definition of leisure it is important to examine defiant behaviors as well. Maladaptive behaviors such as the use of excessive amounts alcohol can have a negative effect on depression (Nimrod et al., 2012). Many of the social events college students attend involve the use of alcohol through a variety of events such as: Greek parties, football games or music venues. Due to the popularity and availability of alcohol, this reinforces the importance of examining behavior surrounding alcohol use.

Another profession that would benefit immensely from this research is the therapeutic recreation profession. Currently, many of profession's theoretical models are rooted in the ideology that having a healthy leisure lifestyle improves overall health. The profession claims leisure as the sixth domain of health because it is believed to be an essential part of wellness. However, the profession still needs more in depth research regarding how leisure affects those with poor mental health; especially since a large number of recreation therapist work in behavioral health. This research will also serve as evidence to advocate for the use of leisure and recreation services in clinical settings. There are still many clinical facilities that do not offer leisure services and do not value its importance as part of the rehabilitation process.

CHAPTER II

LITERATURE REVIEW

Health has taken on a holistic approach that encompasses the mind, body and spirit not just the absence of disease (Carter & Andel, 2011). This redefines health as a continuum that is constantly changing throughout developmental stages in correlation with our physical and mental well-being (Han & Patterson, 2007). These changes in health are influenced by a variety of reasons. Exposure to a traumatic or stressful event can have a negative effect on one's emotional health as well. Among the coping resources meant to support the health of one's mind, leisure has been shown to be a healthy outlet as a means to reduce feelings of stress and depression.

Coping and Positive Emotions

Due to positive emotions being a component of the leisure experience as well as a reoccurring theme throughout the literature review it is important to expand the role that positive emotions play in the coping process. With such large numbers of college students experiencing stress and depressive symptoms it is important to evaluate how they are coping. Coping is a dimensional behavior that is attained through behaviors, cognitions and perceptions (Skinner, Edge, Altman & Sherwood, 2003). How individuals cope with negative events and feelings often determines how well they survive and function in their daily lives. This survival factor of coping is not only biologically programmed in people, but a learned behavior influenced by socialization, major life events and culture (Iwasaki & Mannell, 2000). Healthy coping

mechanisms are also heavily influenced by one's values and beliefs, lifestyle habits and the ability to infuse positive meaning in ordinary events.

The ability to create positive meaning into ordinary events can provide beneficial psychological resources in regards to coping (Stein, Trabasso, Folkman & Richards, 2000). This concept can be explained in further detail through positive psychology. One popular theory that helps explain the role positive emotions play in on psychological health is the "Broaden and Build Model" (Fredrickson, 2002). The framework of this model proposes that positive emotions contribute to the expansion or broadening of one's attention and thought-action repertoires. The broadening of attention can produce creativity, and enhances the ability to make healthy decisions related to coping. (Conway, Tugade, Catalino & Fredrickson, 2013), which in return leads to the "build effect" which builds long term psychological resources such as improvements in overall well-being, health and resilience (Conway et al., 2013). To better understand this concept, it can be compared to the effects of negative emotions. For example, when an individual is feeling fearful and anxious they often have a more narrowed focus of attention, and are more likely to selectively attend to negative information (Conway, 2013). In return, prolonged periods of narrowed attention and negativity can have an impact on one's mental and physical bodies. Research has revealed that prolonged negative affect can even cause people to be more perceptible to common colds (Billings, Folkman, Moskowitz, 2000). When individuals experience the benefits related to the expansion of attention and improvement of well-being this can lead to the ability to cope more efficiently with negative life events (Billings et al., 2000).

This concept was examined in a study that observed coping mechanisms among homosexual caregivers who lost their partner to AIDS. When asked about a positive event that helped the caregiver/partner get through the day they responded with ordinary events such as: taking a walk, enjoying a movie, receiving a word of praise, watching a beautiful sunset. The normality of these events seemed to be infused with positive meaning in order to experience a “breather”. Another important factor to take from these findings is that they took place during the caregiver’s free time which allowed for a psychological break or reflection of the current situation. Although participating in routine leisure has been shown to yield psychological benefits; participating in leisure that is meaningful or has the ability to create deeper meaning in our lives can produce greater benefits (Bailey & Fernando, 2012). These positive feelings of satisfaction have the ability to reduce stress and improve affect which in return can help people cope.

Benefits of Leisure Coping

Understanding the benefits of positive emotions reinforces a greater need to create and savor moments that enhance mood. One of the many ways to create positive meaning and emotions is through participation in leisure. Research has shown that turning to leisure during negative life events or stressful times has the ability to enhance and restore one's psychological state (Kleiber, Hutchinson & Williams, 2002; Doreksen, Elavsky, Rebar & Conroy, 2014). The research that has been conducted regarding the effectiveness of leisure coping and stress reduction has implications for its effectiveness in coping with more long term conditions such as depression (Iwasaki, Shank, Messina, Salzer, Baron & Cabello, 2014).

Another study examined the effects of gentle yoga among women with major depressive disorder. After twelve qualitative interviews, the findings revealed that these women described their depression in three main components: stress, persistent negative thoughts (ruminations) and isolation. Participating in a 12 week yoga intervention allowed participants to feel connected with others, cope with stress and ruminations and practice mindfulness and self-acceptance (Kinser, Patricia, Bourguignon, Cheryl & Steeves, Richard, 2013). What's interesting about this study is that the participants framed their experience of the yoga intervention directly with their experiences of depression (stress, rumination and isolation). Meaning that participation in yoga helped boost those specific characteristics in these women's lives that needed to be empowered.

The benefits from leisure appear beyond the activity itself. The individual's context and perception of leisure reflects the benefits that one can gain from an activity. This was made relevant in a study that used individuals who had spinal cord injuries and long term illnesses (Hutchinson et. al, 2003). These individuals were interviewed regarding leisure as coping

mechanism during their time in rehabilitation. This study revealed that participation in leisure had the power to distract from distressing thoughts or situations, generate hope and preserve a sense of self (Hutchinson et. al, 2003). Another study examined the role of leisure in recovery from a mental illness. This study revealed that the use of leisure promoted meaningful experiences and reduced boredom, which was found to be beneficial to the recovery process. Furthermore, the use of leisure coping to reduce boredom was thought to reduce psychiatric symptoms (Iwasaki, Shank, Salzer, Baron & Cabello, 2014). These studies investigated improvement in symptoms related in mental illness as well leisure coping in a traumatic injury.

A study conducted by (Fullgar, 2008) used a different approach. Fullagar wanted to know if leisure could be used as a counter-depressant among 48 women with a diagnosis of depression. This study found that physical, creative and social leisure activities acted as a “counter-depressant” to facilitate recovery. Of the 35 women who discussed their leisure practices, 23 of them described the emotional importance of having active and diverse leisure practices. It was also reported that leisure provided the opportunity to generate intrinsic qualities such as hope, self-determination, and self-expression. These are intrinsic qualities that biomedical treatments often cannot produce (Fullgar, 2008). This also emphasizes the individualized nature of leisure and its ability to create deeper meaning within our lives.

Buffering Effect

One common theory used to support the use of leisure coping is the buffering effect. This theory states that the leisure participation can buffer the harmful impact of stress (Iwasaki et. al, 2006). In this sense, leisure is acting as a protective factor against the negative impacts of stress. Research regarding the buffering effect has continued to evolve since the late 1990s. One well known study that occurred in 1996 found that this counteracting effect occurred due to

leisure's ability to generate self-determination which in response makes stress more bearable (Iso-Ahola, 1996). This theory has been investigated in more recent studies including a one year prospective study regarding the counteracting effects of leisure coping (Iwasaki et al., 2006). His study revealed that health protective benefits of leisure appeared to be stronger when stress levels were higher rather than lower.

Another study that reinforced the buffering effect compared coping mechanism between college students with high stress tolerance and students with low stress tolerance with a special interest in physical activity behaviors. This study revealed that physical activity behaviors, social support and social interaction were the most significant protective factors in stress tolerance (Bland, Melton, Bigham & Welle, 2013). However, the majority of college students used coping mechanisms that were considered risk factors to cope with stress including: listening to music, sleeping, surfing the internet, social media, calling a friend and eating. This particular study argues that college students have poor coping strategies, and those coping strategies influence one's ability to deal with stress. This also reinforces the importance of establishing healthy leisure coping strategies to combat daily stressors and improve psychological health.

Leisure Coping Strategies

In response to emerging research regarding leisure coping, a theoretical model was created by Iwasaki and Mannel in 2000. This model established an innovative conceptualization of leisure coping which includes Leisure Coping Belief Scale (LCBS) and the Leisure Coping Strategies Scale (LCSS). The LCBS is broad scale used to measure perceptions and beliefs of using leisure as a means of coping. LCSS is an extension of the LCBS that is grounded in situation specific contexts. Due to the specific nature of the LCSS it was chosen to represent student's leisure coping practices. The LCSS contains three components: palliative coping,

mood enhancement and leisure companionship. These components of leisure coping strategies are meant to represent coping actions as a process that is influenced by the context (Iwaskai et al., 2000). In many cases the context influences the type of coping mechanisms chosen. For example, a college student who is studying for exams during finals week may be more likely to engage in an escape oriented action in order to take a mental “breather”. A verbal argument with a significant other that results in a negative mood may influence a coping action to improve mood. In these instances, leisure is being used in a process to mediate the effects of stress (Iwaskai et al., 2000). These specific contexts can be further elaborated through each component of the LCSS.

Palliative Coping

Palliative coping is described as engaging in leisure activities for the purpose of keeping one's mind diverted from distressing thoughts. This type of coping is also referred to as escape oriented or emotion focused coping (Iwasaki et al., 2000). Although people are fully involved in a leisure activity, their attention shifts away from the source of stress, which allows an opportunity to regroup psychologically. This was referred to in many studies as distraction. Distraction in this context is more than just time being spent participating in a leisure activity. It represents an escape from negative thoughts, self-urges, and allowed opportunity for "good thoughts" (Nimrod et al., 2012). A search for distraction can also act as a proactive step preventing further despondency (Nimrod et al., 2012). The benefits of distraction were also described in the recovery process for individuals with spinal cord injuries. This study described leisure's power to divert their attention from life's negative circumstances. One patient in rehabilitation with a spinal cord injury stated, "It keeps me busy, so I don't sit around in my room and think 'poor me'" (Hutchinson et al., 2003). The few studies that investigate palliative coping among college students found that it had both positive and negative effects. Several common downfalls of palliative coping among college students is that it can become a source of procrastination especially in relation to school work (Patry, Blanchard & Mask, 2007). However, this study did find that energy was gained from escape oriented coping allowed for more effective emotion focused coping. Although palliative coping is readily used, it is not always an effective way of coping with long term issues such as coping with the loss of a loved one, because it is not realistic or healthy to "mentally escape" all conflicts or difficulties (Billings et. al, 2000).

Mood Enhancement

Experiencing pleasant moods is one of the most common reactions to participation in leisure. As previously stated throughout the text, obtaining positive emotions through leisure has more benefits than just “feeling good” (Han et. al, 2007). Neuroscientist found through brain imaging that prolonged activity of the ventral striatum was linked to sustaining positive emotions (National Institute for Mental Health, 2014). The ventral striatum is the region of the brain responsible for reward perception, motivation and problem solving. Researchers found that people with more activity in this part of the brain reported higher levels of psychological well-being and lower levels of the stress hormone cortisol (National Institute for Mental Health, 2014). Psychological research has revealed that positive affect can reduce physical symptoms of illness triggered by stress, expand attention and enhance creativity which can all lead to better coping behaviors (Billings et. al, 2000). Mood enhancement was a reoccurring theme throughout the literature review, and was described in a variety of ways. For example, even the studies that did not specifically investigate mood enhancement still reported outcomes related to positive mood such as: generating optimism, empowerment, hope, accomplishment and sense of purpose. These diverse emotions help strengthen self-resilience and moderate the impact of stress and negative emotions (Han et al., 2007)

Leisure Companionship

The last component of the leisure coping strategies scale is leisure companionship. The need for companionship is a fundamental human need that motivates people to participate in shared activities. Social support has been shown to act as a buffer to stress, and has been highly encouraged due to its effectiveness in coping with depression (Nimrod et. al, 2012). Some of the earlier research regarding this topic examined leisure related social support and self-determination as a buffer to life stress and health problems (Iso-Ahola & Seppo, 1996). In a more recent study that was conducted among college students they found that students reported higher levels of satisfaction with life when they participated in more social activities than usual in one week (Doerksen, Elavsky, Rebar & Conroy, 2014). This research reported that leisure-generated friendships interact with the stressors of life in a manner that buffers the impact of stress. This reinforces the significance of social interaction for one's psychological well-being. Another positive attribute of leisure friendships is that the relationship is formed outside of the work context which helps separate work stress with leisure time. Motivation related to participation also increases when people have a partner to participate in activities with (Iwasaki et al., 2006).

Unhealthy Leisure among College Students

Unhealthy leisure is an often neglected component of leisure research. Many studies have explored the benefits of leisure, but little research regarding the use of negative leisure has been examined. Unhealthy leisure is described by a number of terms such as: purple leisure, taboo, marginalized or deviant (Shinew & Parry, 2005). All of these terms refer to activities that have negative consequences. Defiant leisure is often described as activities that fringe on social acceptability (Shinew et al., 2005). Alcohol is a very common component of social activities, but irresponsible behavior regarding alcohol consumption can have negative consequences.

Alcohol is often described as part of the American college experience. From football games, greek life, parties and concerts alcohol is generally involved in all of these activities. Universities and students have continued to have problems that resulted from binge drinking. These include problems with the law, academic performance, sexual assault and even death (O'Hara, Stephen & Fairleigh, 2015). Research reported that 44% of college students engage in binge drinking (Shinew et. al, 2005). Binge drinking is defined as more than five drinks at one time and for women it is considered four drinks at one time (Shinew et. al, 2005). The use of drugs or alcohol is often categorized into casual leisure due to its definition. Casual leisure consists of short lived pleasure which is are the effects of alcohol and drug use (Shinew et al., 2005). The number of college students experiencing negative outcomes related to excessive drinking contribute to high amounts of stress as they deal with consequences from their actions.

This reinforces the importance of further investigation between unhealthy leisure habits, stress and level of depression.

As mentioned throughout the text, mental health is poor among young adults in academia. This literature review emphasizes the benefits associated with leisure participation in regards to improving psychological-well-being. Intentionally using leisure as a means to socialize, enhance mood and take a break can provide college students with a healthy outlet to cope with negative impacts of stress as well as depressive symptoms.

CHAPTER III

METHODS

The primary purpose of this exploratory study was to investigate the role between leisure coping mechanisms and alcohol behaviors with depression and stress. A cross sectional study was applied to further examine the relationship between leisure coping strategies, depression, stress and alcohol consequences. The following sections will include detailed information regarding the participants, instruments and data analysis. Specific research questions that will be addressed include:

1. Is there a positive association between utilizing leisure coping strategies and lower depression scores?
2. Is there a positive association between utilizing leisure coping strategies and less stress?
3. What activities are students participating in to improve mood when experiencing feelings related to depression?
4. Does negative alcohol behaviors lead to an increase in stress and depression scores?

Participants

Participants consisted of full-time students between the ages of 18-29 that attend the University of Mississippi. Students were randomly selected through an approved sample panel of

2500 students granted under Institution Research Education Program department. A total of 380 responses were collected, but only 225 (59%) were adequate for analysis. The survey was distributed by email through Qualtrics. There was no specific criteria for any student other than age requirement.

Instruments

The instruments were comprised of questions generated by researchers and scales that had previously been validated and demonstrated reliability. They were chosen due to the relevance of the concepts being measured. The only exception to this is one question that was comprised by the principal investigator under the supervision of committee advisors to better understand leisure activity behavior. The first page of the questionnaire included a consent form explaining confidentiality and participant's rights. This study was made completely anonymous through Qualtrics settings, meaning that no identification information was recorded. This information was clearly explained to the participant in the consent form.

Leisure Coping Strategies (LCSS)

The first survey delivered examined leisure coping mechanisms. This survey has three components including: palliative coping, companionship and mood enhancement. This survey is based on a 1 (very strongly agree) to 7 (very strongly disagree) Likert scale. The guided statement prior to the first question states, “recall within the last month the most stressful event that happened to you”. This question allows the participants to reflect on a specific situation within the last month in order to answer the coping strategies questions effectively. The questionnaire will then proceed to ask questions related to coping strategies such as, “I engage in leisure to temporarily get away from a problem.” Scores are obtained by creating an average score for each subscale. This instrument has been shown to be reliable and valid based on previous studies. Iwasaki et al (2006) reported internal consistency based on the cronbach’s alpha ($\alpha=.85 .86 .87$). Criterion validity was supported by (Iwasaki & Mannell,2000) ($r= .95$ to $.98$)

Perceived Stress Scale (PSS)

The second instrument administered was the Perceived Stress Scale (PSS). This scale was developed by Sheldon Cohen (Cohen, Karnarck & Mermelstein, 1983). This scale consists of ten questions regarding the participant's thoughts and feelings within the last month such as, "In the last month, how often have you found that you could not cope with all the things that you had to do?" This tool is measured using a Likert scale ranging from 0 (Never) to 4 (Very often). The PSS is a widely used psychological instrument for measuring stress and has been used in a number of studies. Previous studies revealed that the PSS was a valid and reliable tool based upon the Cronbach alpha of .84 and construct validity measures of (.76 .65) measuring correlation coefficient (Hyun et al., 2012). Due to the statistical test applied for this study, stress was transformed into a dichotomous variable consisting of two groups: (1=high stress and 0=low stress). A cut point to divide this variable was chosen due to the mean, median and break in observed data. The importance of measuring stress allowed for further investigation of how leisure coping strategies were associated with high and low levels of stress.

Young Adult Alcohol Consequences

The questionnaire was used to evaluate defiant leisure is the Young Adult Alcohol Consequences Questionnaire. This questionnaire examined the consequences of excessive alcohol consumption. Information beyond frequency and amount of alcohol consumption need to be examined in order classify drinking alcohol as deviant leisure behavior. This emphasizes the purpose in selecting this questionnaire due to its intent in evaluating consequences of excessive drinking which is considered unhealthy leisure behavior. The guided statement prior to the completion of the questionnaire states, "Please mark the yes or no column to indicate whether that item describes something that has happened to you within the last month." The questions that follow this are related to binge drink such as, "I have driven a car when I knew I had too much to drink to drive safely" or "I have passed out from drinking." This instrument has been determined to be a valid and reliable source. Rank order correlation between items obtained by Kahler et al. 2005 were high $r = .96$. Internal consistency was acceptable due to the Cronbach alpha of .84. Reliable and valid measures were also assessed through reviewed research (Read, Merrill, Kahler, Strong, 2007; Kahler et. al, 2014). Responses were coded as (0=no 1=yes) to account for the total number of incidents that occurred over the last month. Due to the number of students that reported no consequences (n=86) related to excessive drinking the variables were later recoded as (0=no consequences and 1=consequences).

Patient Health Questionnaire (PHQ-9)

The last survey delivered was the Patient Health Questionnaire (PHQ-9) which measures level of depression. The PHQ-9 was first developed by Robert Spitzer and Kurt Kroenke (Kroenke, Spitzer & Williams, 2001). This survey contains nine questions with a total of 27 possible points. The guided statement before beginning the survey states, “Over the last two weeks, how often have you been bothered by any of the following problems.” Examples of questions include: “Little interest or pleasure in doing things” or “Feeling tired or having little energy.” Participants responded by checking the following options: not at all, several days, more than half the days or nearly every day. Previous studies have shown the PHQ-9 as a valid by observing construct validity ($r=.84$) and reliable tool with Cronbach alpha of 0.89 to measure depression levels (Kroenke et al., 2001). Due to the statistical test used for this study, depression was made dichotomous by splitting the variable into a high depression and low depression group. The low group ranged from 0-9 which encompasses no depression, minimal and mild which was recoded as 0 ($n=146$). The high group ranged from 10-27 which included moderate, moderately severe and highly severe which was recoded as 1 ($n =79$).

Leisure Activities

The first question after the consent form is regarding leisure activities. The question states, “What type of leisure activity do you participate in to improve your mood when experiencing negative feelings, sadness or depression?” This question was added to gain a better idea of what students are participating in to improve their mood. Answer choices consisted of: sedentary, physical, social, competitive outdoors, creative, hobbies, volunteering and spiritual activities. Students were able to report more than one activity. They were also given the option to write in a leisure activity if the appropriate option was not already listed.

Analysis

SPSS 22 was used to analyze the data. Descriptive analysis of the data was performed using frequencies, cross-tabulation and bivariate correlations. Data screening was conducted before the primary analysis to examine issues such as non-normality, outliers and multicollinearity. Two binary logistic regression models were used to assess the influence of leisure coping strategies and alcohol behavior on the level of depression and stress with gender, grade classification and ethnicity as covariates. Both of the dependent variables were made dichotomous in order to conduct this statistical test. Meaning that depression and stress were cut to form a high and low group for each measurement. The results of the analysis were used to answer the research questions and describe the data for discussion. An alpha level of .05 was utilized for all statistical measurements. Scale Reliability Analyses (Cronbach’s Alpha) was used to determine the reliability and validity of the responses.

CHAPTER IV

RESULTS

The purpose of this study was to further investigate how leisure experiences are used by college students to cope with depressive feelings and stress. A sub objective of this study was to see what role alcohol behaviors had on these variables and to understand the types of activities students are participating in to improve mood. To gain a better understanding of the results participant's characteristics will be defined with explanations of the research questions to follow.

Sample Characteristics

Participants in this study consisted of undergraduate and graduate students at the University of Mississippi. A detailed breakdown of the demographics can be observed in below in Table 1. A total of 380 response were collected, but only 225 (59%) were adequate for analysis. Out of the 225 participants that fully completed the survey, 58 were males and 128 were females. The majority of participants were Caucasians (83%) between the ages of 18-22. There was a high representation of minorities in this population with 15 African American students, 10 Hispanic and 10 Non- US citizens. The classification "other" refers to Asian, Native Hawaiian/Pacific and two or more races. These groups were merged together due to low representation among the three races. Due to the small sample size of minorities in comparison to Caucasians, ethnicities were recoded as 1=Caucasians and 0=other ethnicities. The tables listed below provide a more detailed description of the variables measured. Table 2 reports the mean scores and standard deviation for all of the variables in regards to demographic information

including gender, race and grade classification. Table 3 illustrates a bivariate correlation in order to observe the relationship between each variable.

Table 1:

Breakdown of Sample

| Demographics (N = 255) | | |
|-------------------------------|-----|------|
| Gender | N | % |
| Females | 156 | 69.3 |
| Males | 69 | 30.7 |
| Levels | | |
| Freshmen | 42 | 18.7 |
| Sophomore | 40 | 17.8 |
| Junior | 44 | 19.6 |
| Senior | 57 | 25.3 |
| Graduate | 42 | 18.7 |
| Ethnicity | | |
| White | 186 | 82.7 |
| African American | 15 | 16.7 |
| Hispanic | 10 | 4.4 |
| Others | 4 | 1.8 |
| Non-US Citizen | 10 | 4.4 |

Table 2:*Mean and Standard Deviations with Demographics*

N=225

| | Gender | | Ethnicity | | | | |
|----------------------|--------|--------|-----------|--------|----------|-----------------|--------|
| | Male | Female | White | Black | Hispanic | Non-US Citizens | Other |
| Companionship | 3.3 | 3.28 | 3.3 | 3.16 | 3.03 | 3.55 | 3.17 |
| SD | -0.97 | -1.12 | -1.12 | -1.17 | -1.54 | -0.75 | -1.1 |
| Palliative | 2.79 | 2.74 | 2.8 | 2.43 | 2.42 | 2.97 | 2.33 |
| SD | -0.82 | -0.78 | -0.78 | -0.85 | -0.8 | -0.83 | -0.61 |
| Mood | 2.65 | 2.73 | 2.74 | 2.47 | 2.53 | 2.42 | 2.92 |
| SD | -0.75 | -0.82 | -0.8 | -0.91 | -0.62 | -0.92 | -0.44 |
| Stress | 1.83 | 1.85 | 2 | 1.74 | 1.53 | 1.86 | 1.53 |
| SD | -0.54 | -0.57 | -0.56 | -0.579 | -0.568 | -0.687 | -0.263 |
| Alcohol | 1.83 | 1.85 | 1.83 | 1.92 | 1.87 | 1.89 | 1.91 |
| SD | -0.2 | -0.19 | -0.2 | -0.19 | -0.1 | -0.14 | -0.14 |
| Depression | 1.64 | 1.84 | 1.82 | 1.71 | 1.61 | 1.61 | 1.27 |
| SD | -0.5 | -0.64 | -0.615 | -0.633 | -0.627 | -0.484 | -0.189 |

*Note: SD is located under each variable**Table 2 Continued**Grade Classification*

| | Freshman | Sophomore | Junior | Senior | Graduate |
|----------------------|----------|-----------|--------|--------|----------|
| Companionship | 3.25 | 3.18 | 3.31 | 3.46 | 3.15 |
| SD | -1.3 | -0.81 | -1.17 | -1.19 | -1.08 |
| Palliative | 2.71 | 2.92 | 2.67 | 2.75 | 2.74 |
| SD | -0.77 | -0.77 | -0.97 | -0.74 | -0.72 |
| Mood | 2.65 | 2.96 | 2.58 | 2.72 | 2.62 |
| SD | -0.76 | -0.86 | -0.88 | -0.72 | -0.79 |
| Stress | 1.82 | 1.83 | 1.85 | 1.84 | 1.88 |
| SD | -0.52 | -0.55 | -0.53 | -0.63 | -0.6 |
| Alcohol | 1.88 | 2.06 | 1.97 | 1.87 | 2 |
| SD | -0.21 | -0.2 | -0.19 | -0.21 | -0.16 |
| Depression | 1.78 | 1.88 | 1.81 | 1.7 | 1.78 |
| SD | -0.58 | -0.72 | -0.61 | -0.56 | -0.6 |

Note: Smaller values represent a positive result

Table 3:*Bivariate Correlation*

N= 225

| | Mean | SD | Social | Palliative | Mood | Alcohol | Stress | Depression |
|-------------------|-------------|-----------|---------------|-------------------|---------------|----------------|---------------|-------------------|
| Social | 3.2867 | 1.12331 | $\alpha=.880$ | | | | | |
| Palliative | 2.7556 | .79370 | .309 .000 | $\alpha=.743$ | | | | |
| Mood | 2.7044 | .80035 | .258 .000 | .569 .000 | $\alpha=.845$ | | | |
| Alcohol | 1.8428 | .19447 | .056 .402 | -.057 .396 | -.133 .047 | $\alpha=.899$ | | |
| Stress | 1.9493 | .57314 | -.025 .707 | .126 .059 | .174 .009 | -.043 .519 | $\alpha=.792$ | |
| Depression | 1.7804 | .60965 | .084 .208 | .123 .065 | .298 .000 | -.095 .156 | .644 .000 | $\alpha=.883$ |

Note: Cronbach's α is reported in the diagonal cells of the correlation matrix

Research Questions

Is there a positive association between utilizing leisure coping strategies and lower depression scores?

Scores were obtained by establishing an average for each subscale (leisure companionship, palliative and mood enhancement). The scale ranged from “very strongly agree” as 1 to very strongly disagree as 7. The first model with depression as the dependent variable revealed that mood ($p < .001$) was a significant predictor of depression. Findings reported that for every 1 unit decrease in mood the odds of being in the “high” depression group multiply by (OR=2.18). Meaning that students who used leisure less to enhance their mood were 2.18 times more likely to be considered “highly” depressed.

Table 4:

Logistic Regression with Depression

| | B | SE | Wald | df | Sig | Exp(B) | Lower | Upper |
|------------------------------|----------|-----------|-------------|-----------|------------|---------------|--------------|--------------|
| Leisure Companionship | 0.039 | 0.138 | 0.078 | 1 | 0.781 | 1.039 | 0.792 | 1.363 |
| Palliative | -0.34 | 0.239 | 2.026 | 1 | 0.155 | 0.712 | 0.446 | 1.137 |
| Mood | 0.779 | 0.238 | 10.757 | 1 | 0.001 | 2.18 | 1.368 | 3.474 |
| Alcohol | -0.03 | 0.304 | 0.01 | 1 | 0.921 | 0.97 | 0.535 | 1.762 |
| Gender | 0.256 | 0.327 | 0.611 | 1 | 0.434 | 1.292 | 0.68 | 2.454 |
| Grade Level | 0.009 | 0.108 | 0.008 | 1 | 0.931 | 1.009 | 0.817 | 1.246 |
| Ethnicity | -0.486 | 0.41 | 1.407 | 1 | 0.236 | 0.615 | 0.275 | 1.373 |
| Constant | -2.061 | 0.835 | 6.091 | 1 | 0.014 | 0.127 | | |

Note: significance $p < .05$, reported variables above table include: beta, standard error, Wald (chi square measures), differential freedom, significance, exponential beta and confidence intervals (high and low)

To gain a better understanding of the role that leisure coping has with depression a one-way anova was conducted as supplemental analysis with a post-hoc Tukey test following. These findings indicate that there was a significant difference between severe levels of depression in regards to mood scores and all other levels of depression. Meaning that leisure coping was being utilized less often as depression worsened. To further describe these findings, Table 5 illustrates the results of leisure coping strategies in relationship with levels of depression ranging minimal to severe. Keep in mind when observing this table that the lower mean score indicates a positive result. The reported p values are a comparison between severe levels of depression and all other levels provided by a Tuckey post hoc test: ($p < .000$, $p < .000$, $p < .000$, $p < .000$, $p < .005$).

Table 5:

Depression Severity and Leisure Coping Strategies

| Depression Severity | | Social | Palliative | Mood |
|----------------------------|----------------|---------------|-------------------|-----------------|
| No Depression | Mean | 2.9333 | 2.4333 | 2.5222 |
| | Std. Deviation | .93605 | .74215 | .76081 |
| Minimal | Mean | 3.2778 | 2.7685 | 2.5394 |
| | Std. Deviation | 1.15504 | .88083 | .68832 |
| Mild | Mean | 3.2712 | 2.7429 | 2.6243 |
| | Std. Deviation | 1.13584 | .71674 | .79365 |
| Moderate | Mean | 3.3080 | 2.6703 | 2.7754 |
| | Std. Deviation | 1.06514 | .70052 | .76273 |
| Moderately Severe | Mean | 3.2857 | 2.8175 | 2.8333 |
| | Std. Deviation | 1.19390 | .90815 | .80966 |
| Severe | Mean | 3.7778 | 3.3611 | 3.8194 α |
| | Std. Deviation | 1.22337 | .56779 | .83017 |

Note: α =significant level of depression in comparison to all other levels of depression

Is there a positive association between utilizing leisure coping strategies and less stress?

Leisure coping strategies and alcohol behavior were then applied to stress as the dependent variable through logistic regression. The Perceived Stress Scale was used to evaluate stress on a 0 (Never) to 4 (Very Often) point Likert scale. There was no significance between leisure coping strategies and stress as the dependent variable (*social* $p > .439$, *palliative* $p > .166$, *mood* $p > .825$). After applying logistic regression, the only significant predictors of stress were gender (females) and race (white). The results state that males were 37% less likely to be stressed than females (OR=.371 $p < .002$). In regards to race, Caucasians are 2.58 times more likely to be stressed than other ethnicities (OR=2.58, $p < .013$) Table 6 describes further details of how these variables influence one another in relation to stress.

Table 6:

Logistic Regression with Stress

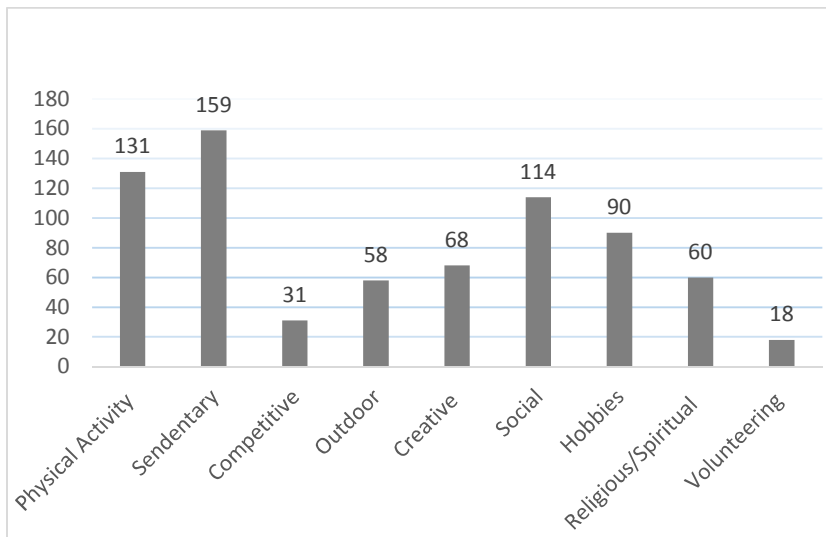
| | B | SE | Wald | df | Sig | Exp(B) | Lower | Upper |
|----------------------|----------|-----------|-------------|-----------|------------|---------------|--------------|--------------|
| Leisure | | | | | | | | |
| Companionship | -0.103 | 0.132 | 0.599 | 1 | 0.439 | 0.903 | 0.696 | 1.17 |
| Palliative | 0.31 | 0.224 | 1.915 | 1 | 0.166 | 1.363 | 0.879 | 2.114 |
| Mood | 0.049 | 0.22 | 0.049 | 1 | 0.825 | 1.05 | 0.683 | 1.614 |
| Alcohol | -0.102 | 0.296 | 0.119 | 1 | 0.73 | 0.903 | 0.505 | 1.614 |
| Gender | 0.902 | 0.311 | 8.407 | 1 | 0.004 | 2.464 | 1.339 | 4.532 |
| Grade Level | 0.053 | 0.103 | 0.261 | 1 | 0.609 | 1.054 | 0.861 | 1.291 |
| Ethnicity | -0.878 | 0.375 | 5.48 | 1 | 0.019 | 0.416 | 0.199 | 0.867 |
| Constant | -0.968 | 0.782 | 1.533 | 1 | 0.216 | 0.38 | | |

Note: significance held at $p < .05$

What activities are students participating in to improve mood when experiencing feelings related depression?

The first question on the survey stated, “What types of leisure activities do you participate in to improve your mood when experiencing negative feelings, sadness or depression?” As previously stated, this questions provides specific feedback on what students are participating in and how college students intentionally use leisure to improve their mood. The three most common types of leisure activities included were sedentary, physical and social. The least common types of activities included were volunteering and competitive activities. Providing broad categories for participants to select allowed students to express their own interpretation of their activity.

Figure 7:
Leisure Activities



The following statement was an extension of the previous question allowing students to write in a leisure activity that was not provided. This optional response was provided in case the type of leisure activity was not listed above or the student was unsure how to classify it. Out of the 225 responses, 11 people included specific leisure activities. Those activities are listed below as an exact translation from the participant's response:

- Listening to music
- Writing in a journal
- Alcohol
- Video games
- Masturbation
- Yoga
- Snacking, baking
- Weight lifting
- Football
- Glass of wine or five
- Sleep

In order to further investigate the role that specific activities play on mood, an independent t-test was conducted with each activity separately. This was done to determine if there was any relationship between type of activity and enhanced mood. It was reported that students who used leisure to enhance their mood participated in more outdoor activities ($p < .022$). Further investigation of leisure participation such as duration and frequency need to be examined in order to make a strong conclusion regarding these findings.

Does negative alcohol behaviors lead to an increase in stress and depression scores?

This question was established to acknowledge the use of unhealthy leisure among college students and the role that it plays on depression. The Young Adult Alcohol Consequences Scale was used to determine the number of poor behaviors that have occurred within the last month related to consumption of alcohol. The results revealed that there was no significant correlation between alcohol behaviors and stress ($p > .730$) and depression ($p > .921$). Due to the fact that there were such a large number of students that reported having no negative consequences ($n=86$) to alcohol within the last month this data was not normally distributed. To accommodate for that, this variable was recoded as (0=no incidents) and (1= some incidents).

CHAPTER V

DISCUSSION AND CONCLUSIONS

The purpose of this study was to examine the role that leisure coping strategies played on depression and stress among college students. The sub-objectives of this study were to gain a better understanding of how defiant leisure (e.g. alcohol use) effected depression as well as what types of activities students are participating to improve mood. Data was collected and analyzed by applying logistic regression to two models with depression and stress as the dependent variables. Pearson's correlation was done to observe the relationships between all variables. An independent t-test was applied to observe the relationship between leisure activities and the mood enhancement subscale. Cronbach's alpha was performed on the data which indicated internal consistency (overall social $\alpha=.880$, palliative $\alpha=.743$, mood $\alpha=.845$, stress $\alpha=.792$, alcohol $\alpha=.899$, depression $\alpha=.883$). The results of data analysis propose that students who participate in leisure to enhance their mood have lower levels of depression. The objective of this chapter is to elaborate on the results and discuss conclusions with respect to the sample population, research questions and sub-objectives of the study. Implications for future research will conclude this chapter.

Discussion of Findings

Research Question One: Is there a positive association between utilizing leisure coping strategies and lower depression scores?

Overall, the results reported that mood enhancement was also a significant predictor of depression. Students who used leisure to enhance their mood were more likely to report lower levels of depression. This is consistent with the fact that depression is a mood disorder; however, it also reinforces the benefits that positive emotions have on our psychological health. As previously stated positive emotions can play a powerful role in quality of life and helping people cope with difficult situations. Regular participation in leisure activities to enhance mood could protect against the harmful effects of negative emotions and assist in coping.

When observing the level of depression severity, there were significant differences in mood scores between severe levels of depression and all other levels. This also means that as depression severity increased the use of this leisure coping strategies decreased. There are several possible explanations that can explain this relationship. First being that a principle symptom of depression is anhedonia which is referred to as the loss of interest in previously enjoyed activities (Nimrod et al., 2012). It is possible that students were participating in less leisure coping strategies due to the severity of symptoms associated with depression. A previous study that observed the effects of depression on leisure involvement reported that it only took a mild level of depression to decrease leisure participation (Blanco et al., 2014). However, other studies have suggested that leisure can play a significant role in adjusting and adapting to illness or negative life events. Examples of successful use of leisure coping with these events include spinal cord injuries/traumatic brain injuries (Hutchinson et.al, 2003), managing psychiatric symptoms (Iwaskai et.al, 2003), stress among college students (Doerksen et. al, 2014), and women with depression (Fullagar, 2008).

Sharing similarities across acute and chronic conditions reinforce the benefits of utilizing leisure as a coping resource. The findings of this research also reinforces some of the theoretical concepts previously discussed. In regards to the buffering effect, regular leisure participation could be acting as a protective factor to stress toward negative emotions. According to the Broad and Build Theory, enhanced positive emotions through leisure could be contributing to student's ability utilize thought action repertoires by the expansion of their attention which enables better coping skills (Folkman, 2008)

Research Question Two: Is there a positive association between utilizing leisure coping strategies and less stress?

The results revealed no significance between stress and leisure coping strategies. Explanations for this could be that stress is a fairly subjective measurement. People encounter stress on a daily basis unlike symptoms related to depression. Another explanation for this finding is that previous research has revealed that the benefits of leisure are far greater for individuals experiencing high stress (Iwasaki et al., 2006). However, the stress scores for this study were fairly moderate which could be due to time of data collection.

Research Question Three: What activities are students participating to improve mood when experiencing feelings related to depression?

The question stated, “What type of leisure activities do you participate in when experiencing negative feelings, sadness or depression?” The results revealed that sedentary activities were the most reported type of activity with physical and social following. Although leisure is subjective and defined as a state of mind there are certain activities that have been proven to be more beneficial to health.

To further investigate types of activities an independent t-test was applied to all of the activities separately with mood enhancement. The results stated that individuals who used leisure to enhance their mood participated in more outdoor activities ($p < .022$). Consequently, there has been evidence to support that being in contact with nature is beneficial to our mental health. Two prevailing theories regarding human contact with nature are the Stress Recovery Theory (SRT) and the Attention Restoration Theory (ART). Both of these theories agree that outdoor and natural environments tend to be more restorative to our psychological health verses urban environments (Berto, 2014). Research that applied these studies found that participating in outdoor activities are more effective in reducing anxiety and restoring attention than participating in indoor activities (Weing & Chiang, 2014).

Another component of this question allowed students to write in their preferred leisure activity if it was not provided. Although only 11 students responded, leisure researchers would argue that a handful of those responses are not considered healthy forms of leisure especially in excess or as a form of coping (e.g. drinking alcohol, masturbation, eating, sleeping, and video games).

Research Question Four: Does negative alcohol behaviors lead to an increase in stress and depressive symptoms?

Alcohol behaviors were investigated using the Young Adult Alcohol Consequences Scale. Students reported (0=no negative incidents related to alcohol) and (1= negative incident). Measuring alcohol behavior was relevant to understanding the role that unhealthy leisure can have on depression. The questions consisted of negative consequences that occur from excessive drinking such as, “I have driven a car when I knew I had too much to drink to drive safely” or “I have passed out from drinking.” Responses were coded as (0=no 1=yes) to account for the total number of incidents that occurred over the last month. There was no significant relationship between alcohol and the other measured variables. This could be due to the time of surveying. Data was collected during the month of February which is after football season and before spring break and both of those events tend to be associated with heavy amounts of drinking among college students. There is also potential for recall biases and social desirability. This questionnaire asks students to recall their behavior within the last month which can limit accuracy. Students may also feel embarrassed in regards to their behavior after excessive drinking and may not respond honestly to this questionnaire.

Limitations

This study is not without limitations. First, the representation of the sample size showed significantly more students that were Caucasian and females. There is also risk of recall bias in regards to the instruments that asked students to recall their behavior or feelings within the past two weeks to a month. Lastly, there was not enough information gathered regarding types of leisure activities to make any strong assumptions between activity participation and the other measured variables. To get a better idea of one's leisure participation history other factors need to be considered such as frequency and duration of the activity. Due to the fact that, leisure activities was a sub-objective of this study those components were not studied.

Implications

Recreation therapists can use this information to not only advocate for the use of recreation and leisure in clinical settings, but also to provide quality leisure education to patients. Obtaining positive emotions through leisure to counter act the impact of depressive symptoms can improve quality of life for all people, especially those coping with chronic illness, newly acquired disabilities or loss. There needs to be more research done on this topic as well as the role of unhealthy leisure. More information is needed to classify alcohol use as unhealthy leisure among college students in order to make any strong conclusions. There is also a need for further research regarding specific activities that people use to intentionally enhance their mood. Examining frequency and duration of activity could help reveal trends between mood and activities.

Conclusion

The purpose of this study was to gain better knowledge of what role leisure coping plays on depression and stress among college students. Mood enhancement was shown to be an essential construct of leisure experience and relieving negative emotions. Implications of this study propose using leisure as a means of improving mood to cope with symptoms of depression. This validates the idea that using leisure to cope can be effective. This also reinforces the impact that positive emotions play on overall health, and how leisure experiences can facilitate that relationship.

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APPENDIX A: SURVEY

Examining the Association between Leisure Coping Strategies and Mental Health among College Students

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Description: The purpose of this study is to examine if and how students are using leisure as a way to deal with stress and depressive symptoms. The survey will contain instruments related to these topics: depression, leisure coping strategies, stress and alcohol use.

Risks and Benefits: There are no risks associated with participation in this study. Student's input is greatly valued in order to better understand coping and leisure behavior. The results of this study will provide faculty and staff the knowledge to better serve those students experiencing high amounts of stress or depression.

Confidentiality: This study will remain completely anonymous through Qualtrics settings. These settings prohibit recording your personal information. There will be no way to link your identity with your survey response

Right to Withdraw: You do not have to take part in this study, and you may stop participation at any time. If you start the study and decide that you do not want to finish you are allowed to do so.

IRB Approval: This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Statement of Consent: I have read and understand the above information. By completing the survey/interview I consent to participate in the study.

Q2 In order to complete this survey you must be between the ages of 18-28. Please certify this age requirement by checking the box below.

yes

Q3 The following questions will ask you about your leisure choices. Leisure is defined as an activity that you participate in during your free time.

Q4. What types of leisure activities do you participate in that improve your mood when experiencing negative feelings, sadness or depression? Choose no more than three of your favorite activities. If your leisure activity was NOT listed please write it in below.

- Sedentary activities- examples: watch tv, social media, relax
- Physical activity
- Competitive activities
- Outdoor activities- examples: hiking, kayaking, rock climbing
- Creative activities- examples: art, playing an instrument, crafts
- Social activities
- Hobbies: examples- reading, playing with pet, collecting things
- Religious/Spiritual activities
- Volunteering

In reference to the previous question, if your type of leisure activity was not listed please write it below

Q5 Leisure Coping Strategy Scale: Recall how you coped with the most stressful event that you experienced in the past month?

| | very strongly agree | strongly agree | Agree | Neither agree or disagree | disagree | strongly disagree | very strongly disagree |
|--|-----------------------|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|------------------------|
| My leisure allowed me to be in the company of supportive friends | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Socializing in leisure was a means of managing stress | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I dealt with stress through spending leisure time with my friends | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Engaging in social leisure was a stress-coping strategy for me | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of companionship in leisure prevented me from coping with stress | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| One of my stress-coping strategies was participation in social leisure | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q5. Recall how you coped with the most stressful event that you experienced in the past month?

| | very strongly agree | strongly agree | agree | neither agree or disagree | disagree | strongly disagree | very strongly disagree |
|---|-----------------------|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|------------------------|
| I engaged in a leisure activity to temporarily get away from the problem | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Escape through leisure was a way of coping with stress | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Leisure was an important means of keeping myself busy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Engagement in leisure allowed me to gain a fresh perspective on my problems | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| By escaping from the problems through leisure, I was able to tackle my problems with renewed energy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I took a brief break through leisure to deal with the stress | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q6. Recall how you coped with the most stressful event that you experienced in the past month?

| | very strongly agree | strongly agree | agree | neither agree or disagree | disagree | strongly disagree | very strongly disagree |
|--|-----------------------|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|------------------------|
| My leisure helped me feel better | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I gained a positive feeling from leisure | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I maintained a good mood in leisure | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My leisure involvement failed to improve my mood | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Leisure made me feel miserable | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Leisure helped me manage my negative feelings | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q6. Perceived Stress Scale: The questions in this scale ask you about your feelings and thoughts during the last month.

| | Never | Almost Never | Sometimes | Fairly often | Very often |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| In the last month, how often have you been upset because of something that happened to you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In the last month, how often have you felt that you were unable to control the important things in your life? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In the last month, how often have you felt nervous and "stressed"? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In the last month, how often have you felt confident about your ability to handle your personal problems? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In the last month, how often have you felt that things were going your way? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|---|---|---|---|---|---|
| <p>In the last month, how often have you found that you could not cope with all the things you had to do?</p> | ○ | ○ | ○ | ○ | ○ |
| <p>In the last month, how often have you been able to control irritations in your life?</p> | ○ | ○ | ○ | ○ | ○ |
| <p>In the last month, how often have you felt that you were on top of things?</p> | ○ | ○ | ○ | ○ | ○ |
| <p>In the last month, how often have you been angered because of things that were outside of your control?</p> | ○ | ○ | ○ | ○ | ○ |
| <p>In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?</p> | ○ | ○ | ○ | ○ | ○ |

Q7 Alcohol Consequence Scale: Below is a list of things that sometimes happen to people during, or after they have been drinking alcohol. Next to each item below, please mark YES or NO to indicate whether that item describes something that has happened to you IN THE PAST MONTH

| | Yes | No |
|--|-----------------------|-----------------------|
| While drinking, I have said or done embarrassing things | <input type="radio"/> | <input type="radio"/> |
| I have had a hangover the morning after I had been drinking | <input type="radio"/> | <input type="radio"/> |
| I have felt very sick to my stomach or thrown up after drinking | <input type="radio"/> | <input type="radio"/> |
| I often have ended up drinking on nights when I had planned not to drink | <input type="radio"/> | <input type="radio"/> |
| I have taken foolish risks when I have been drinking | <input type="radio"/> | <input type="radio"/> |
| I have passed out from drinking | <input type="radio"/> | <input type="radio"/> |
| I have found that I needed larger amounts of alcohol to feel any effect | <input type="radio"/> | <input type="radio"/> |
| When drinking, I have done impulsive things that I regretted later | <input type="radio"/> | <input type="radio"/> |
| I have not been able to remember large stretches of time while drinking heavily | <input type="radio"/> | <input type="radio"/> |
| I have driven a car when I knew I had too much to drink to drive safely | <input type="radio"/> | <input type="radio"/> |
| I have not gone to work or missed classes because of drinking, a hangover, or illness caused by drinking | <input type="radio"/> | <input type="radio"/> |
| My drinking has gotten me into sexual situations I later regretted | <input type="radio"/> | <input type="radio"/> |
| I have often found it difficult to limit how much I drink | <input type="radio"/> | <input type="radio"/> |
| I have become very rude, obnoxious or insulting after drinking | <input type="radio"/> | <input type="radio"/> |
| I have woken up in unexpected places after heavy drinking | <input type="radio"/> | <input type="radio"/> |

| | | |
|---|-----------------------|-----------------------|
| I have felt badly about myself because of drinking | <input type="radio"/> | <input type="radio"/> |
| I have had less energy or felt tired because of my drinking | <input type="radio"/> | <input type="radio"/> |
| The quality of my work or schoolwork has suffered because of my drinking | <input type="radio"/> | <input type="radio"/> |
| I have spent too much time drinking | <input type="radio"/> | <input type="radio"/> |
| I have neglected my obligations to family, work or school because of drinking | <input type="radio"/> | <input type="radio"/> |
| My drinking has created problems between myself, significant other and family members | <input type="radio"/> | <input type="radio"/> |
| I have been overweight because of drinking | <input type="radio"/> | <input type="radio"/> |
| My physical appearance has been harmed by my drinking | <input type="radio"/> | <input type="radio"/> |
| I have felt like I needed a drink after I'd gotten up after breakfast | <input type="radio"/> | <input type="radio"/> |

Q9. Depression Scale: Over the last two weeks, how often have you been bothered by any of the following problems?

| | Not at all | Several days | More than half the days | Nearly every day |
|---|-----------------------|-----------------------|-------------------------|-----------------------|
| Little interest or pleasure in doing things | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Feeling down, depressed, or hopeless | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Trouble falling or staying asleep, or sleeping too much | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Feeling tired or having little energy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Poor appetite or overeating | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Feeling bad about yourself-or that you are a failure or have let yourself or your family down | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Trouble concentrating on things, such as reading the newspaper or watching tv | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Moving or speaking so slowly that other people noticed. Or the opposite-being fidgety or restless | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Thoughts that you would be better off dead, or of hurting yourself | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

If you have check off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all
- Somewhat difficult
- Very difficult
- Extremely difficult

VITA

Karolyne Helen Rehner

Education

MA Masters of Arts in Recreation Administration (present)
University of Mississippi

Bachelors of Science in Therapeutic Recreation (2014)
University of Southern Mississippi

Work Experience:

Graduate Assistant- Student Disability Services
University of Mississippi (present)

Recreation Therapy Intern- Abbie J. Lane Acute Mental Health:
Nova Scotia, Canada (2014)

Adult Respite Coordinator, Afterschool Programmer and Camp Counselor- Association for the
Rights of Citizens with Developmental Disabilities (Arc)-(2010-2014)

Academic Awards:

University of Southern Mississippi Community Service Hall of Fame (2014)
Human Performance and Recreation Distinguished Leadership Award (2013)
Academic Honors (2012-2014)

Certifications:

Certified Therapeutic Recreation Specialist (2015)
Certified Personal Trainer (2015)
Registered Yoga Teacher (2016)

Teaching Experience:

Instructor: Introduction to Therapeutic Recreation- University of Mississippi (2015)

