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An Investigation of Existential and Positive Psychological Resources in College Students

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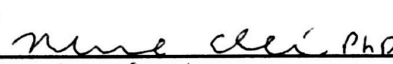
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Abstract

The number of college students reporting moderate to severe mental health symptoms has steadily increased since the 1990s to the point of a "mental health crisis" occurring on the majority of American college campuses (Joyce, 2016, p. 17). Students face a number of stressors including academic pressure, developmental challenges, and the existential issues of meaning in life and identity formation. Unfortunately, many college students struggle to respond to psychological stress in healthy and adaptive ways. This study measured the relationships between positive psychological resources, existential thought, coping strategies, and mental health symptoms among a national sample of 251 undergraduate students. Results indicated that the positive psychological resources of mindfulness, hope, and meaning of life predicted relatively lower rates of maladaptive coping strategies and mental health symptoms. Positive emotions and existential reflection predicted higher levels of adaptive coping. A multivariate canonical correlation analysis demonstrated a significant and positive relationship between maladaptive coping strategies and symptoms of depression, anxiety, and stress. Existential reflection was found to be beneficial to the cultivation of adaptive coping and presence of meaning in life, but also positively correlated to maladaptive coping and increased mental health symptoms. The light and the dark aspects of existential thought are discussed. This research significantly contributes to the literature of existential and positive psychology, as well as college counseling. Positive psychological resources are internal strengths that can be cultivated throughout a student's time at college. It is recommended that university administrators, college counselors, and faculty explore these constructs with students in order to further develop their individual strengths.

Keywords: existential psychology, positive psychology, college counseling, undergraduate students, mindfulness, hope, positive affect, meaning in life, coping

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Epigraph

Interviewer: *If life is so purposeless, do you feel that it's worth living?*

Kubrick: Yes, for those of us who manage somehow to cope with our mortality. The very meaninglessness of life forces man to create his own meaning. Children, of course, begin life with an untarnished sense of wonder, a capacity to experience total joy at something as simple as the greenness of a leaf; but as they grow older, the awareness of death and decay begins to impinge on their consciousness and subtly erode their *joie de vivre*, their idealism — and their assumption of immortality. As a child matures, he sees death and pain everywhere about him, and begins to lose faith in the ultimate goodness of man. But, if he's reasonably strong — and lucky — he can emerge from this twilight of the soul into a rebirth of life's *elan*. Both because of and in spite of his awareness of the meaninglessness of life, he can forge a fresh sense of purpose and affirmation. He may not recapture the same pure sense of wonder he was born with, but he can shape something far more enduring and sustaining. The most terrifying fact about the universe is not that it is hostile, but that it is indifferent; but if we can come to terms with this indifference and accept the challenges of life within the boundaries of death — however mutable man may be able to make them — our existence as a species can have genuine meaning and fulfillment.

However vast the darkness, we must supply our own light.

- Stanley Kubrick, *Stanley Kubrick: interviews*, 2001

Chapter One

Throughout all recorded history, human beings have been concerned with existential questions: Why are we here? Who am I? What is my purpose? What is the meaning of life? These can be passing thoughts or questions that launch an in-depth existential exploration. Frankl (1984) suggested that the search for meaning is the most powerful motivator in our lives and is essential for the development of optimal physical and psychological health. Existential philosophy has been associated with a multitude of ideas, many of them conflicting. Some associate existential thought with themes of meaninglessness, nihilism, angst, atheism and death (Cooper, 2003). Others argue that an exploration of existential concerns is essential to the development of meaning, authenticity, and personal freedom (Wulfing, 2008). Iverach and colleagues (2014) noted that, "themes of death and the wound of mortality have been featured heavily in both ancient and modern art, literature, theater, philosophy, and psychology" (p. 581). Despite this, death is still considered a taboo subject for many and is often met with anger, avoidance, or denial. Existential psychotherapists assert that the exploration of death has a positive impact on our mental health because the realization that there is a limitation to life makes us appreciate our lives more and place greater value on enjoying each day (Yalom, 1980). Proponents of existential psychotherapy have argued that the issues being explored therein are universal and basic to human experience and thus can be integrated into any approach (Van Deurzen, 2014).

Statement of the Problem

Although existential psychology has many benefits, some scholars have argued that existential thoughts lead to the development of death anxiety, which refers to negative thought processes that can produce terror and fears of powerlessness, loss of control, and

meaninglessness (Rasmunssen & Brems, 1996). American society often conceals the sick and elderly from view, thus we often have difficulty coping with the issues of aging, illness, and death (Schumaker, Barraclough, & Vagg, 1988). Even within the mental health profession, few students receive coursework or training in coping with mortality and often feel unprepared to deal with the emotional aspects of working with dying or grieving clients (Cacciatore, Thieleman, Killian, & Tavasolli, 2015). Furthermore, when training is provided, it is often focused on existential concerns related to aging, and rarely on traumatic or unexpected deaths (Bagatell et al., 2002).

Arndt et al. (2005) proposed that death anxiety is the "worm at the core" of psychopathology and demonstrated that death anxiety is positively correlated to a number of mental health conditions including anxiety, depression, eating disorders, and post-traumatic stress disorder (p. 582). Greenberg, Pyszczynski, and Solomon (1986) theorized that all of human culture was designed to protect individuals from the fear of death as this fear drives people to maintain faith in their belief system with the understanding that their cultural practices and worldview will outlast their own physical death. While there are many systems in place to avoid thoughts of death, confronting death anxiety may be an essential aspect in the development of existential meaning. Yalom (1980) argued that truly facing one's death through conscious consideration of existential concerns is necessary to overcome death anxiety.

Berman, Weems, and Stickle (2006) found that existential thought was positively correlated to mental health symptoms in adolescences, indicating that young adults may not be able to effectively cope with the reality of death. This may be partially explained by Steger, Oishi, & Kashdan's (2009) study on meaning in life across the lifespan. Results indicated that there is a significant difference amongst age groups, where older adults reported a greater

presence of meaning in their lives and young adults were more likely to be searching for a sense of meaning. Van Ranst and Marcoen (2000) found that a sense of meaning and purpose in life negatively correlated with fear of death and death anxiety. Therefore, adolescents without a well-defined meaning in their lives may be unprepared to explore these existential concerns.

By contrast, it can also be argued that exploring existential concerns is an essential component of the human experience and functions as a positive psychological resource. Although confronting thoughts about death can create the potential for overwhelming terror (Greenberg, Pyszczynski, & Solomon, 1986) in the short term, avoiding thoughts of death can increase death anxiety throughout the lifespan (Yalom, 2008). Yalom (1980) posits that each individual must confront a set of ''ultimate concerns'' (i.e., freedom, death, isolation, and meaninglessness), which are fundamental to human existence (p. 8 – 9). Unfortunately, themes of existential thinking are often bleak and involve fears of death, loneliness, and life's absurdity. However, avoidance of these concerns can lead to an existential crisis in which one feels overwhelmed due to inner conflicts and anxieties that accompany important human issues of purpose, responsibility, independence, freedom, and commitment. Yalom (1980) acknowledges this by stating, "the confrontation with the givens of existence is painful but, ultimately healing" (p. 8). Keyes and Haidt (2003) described that the goal of the positive psychology movement is to "help people live and flourish rather than merely to exist" (p. 3). This is accomplished through the identification of personal strengths and self-healing resources. Positive psychology and existential psychology both emphasize the importance of cultivating meaning in life. Despite this common theme, few studies have combined these two perspectives.

Existential Concerns among College Students

Kehr (2010) reported that an existential crisis typically emerges first during the transition from adolescence to adulthood. For traditional college-aged students, attending university often marks the start of this transition. Arnett (2004) describes this developmental period as *emerging adulthood*. Between the ages of 18 – 25 emerging adults are exploring possibilities in love, work, and careers. Emerging adults are faced with critical developmental tasks, for which there is not a clear pathway into successful adulthood. Emerging adulthood is an unstable, "in-between," self-focused, developmental period where one starts to explore identities and career possibilities (Arnett, 2004, p. 14). There is a pervasive myth that college makes up the best four years of one's life. Although college is generally viewed as positive experience, substantial research has demonstrated that emerging adults experience higher rates of vocational, financial, and interpersonal stress than at any other developmental period (Kessler et al., 2005). On top of that, the majority of mental health symptoms first emerge between the ages of 18 and 24, which represents the average age of students enrolled in undergraduate programs (Kessler et al., 2005). During this transitional period, young men and women are more likely to engage in maladaptive coping behaviors that increase stress and negatively impact their mental and physical health (Blanchard-Fields, 2007).

Bryant and Astin (2008) conducted a study with a national sample of 3,680 undergraduate students and found that 21% of students were *frequently* struggling to understand evil, suffering, and death in the world. Additionally, 18% had *frequently* questioned their religious and spiritual beliefs. Astin, Astin, and Lindholm (2011) investigated spiritual concerns in a large sample of undergraduate students that included 136 colleges. They found that by the end of junior year, "eight in ten undergraduates are at least *moderately* engaged in a spiritual

quest" (p. 31). An unresolved search for meaning can predict increased levels of substance abuse among undergraduate students (Faigin, 2013) and potentially lead to an existential vacuum (Frankl, 1984). These studies provide evidence that college marks a developmental period of high existential reflection among undergraduate students.

For many students, freshman year comes with newfound feelings of freedom and responsibility, but for others, there is a period of loss, homesickness, and increased levels of psychological stress. The American College Health Association reported that the prevalence of anxiety among American young adult college students increased from 6.7% in 2000 to 12.9% in 2013 (ACHA, 2013). According to a 2014 national survey, 94% of the directors of university counseling centers reported a significant increase in severe distress (e.g. emergency suicidal ideation, self-injury, panic attacks) among their students (Gallagher, 2014). The Association for University and College Counseling Center Directors (AUCCCD) collected data on the presenting concerns of clients at 621 university counseling centers. The AUCCCD found that close to half of college students (48.2%) reported anxiety as their presenting concern, followed by stress (39.1%), depression (34.5%), and suicidal ideation (25.2%) (LeViness, Bershard, & Gorman, 2017). Mental health symptoms negatively impact several facets of college student life. Previous research has demonstrated that students with mental health disorders are less likely to graduate, have lower grade point averages, socially isolate from campus clubs and activities, and have fewer effective relationships with peers and professors when compared to the general college population (Keyes et al., 2012; Storrie, Ahern, & Tuckett, 2010).

It is unclear why prevalence rates are increasing, but students undoubtedly face a variety of stressors. Freshmen and seniors experience more psychological distress than sophomores or juniors due to transition-related challenges (Nelson, Karr, & Coleman, 1996). First year students

often need to establish new relationships on campus, negotiate new boundaries with their families, and learn new study habits for their academic environment. Romantic relationships often emerge in college, but many can be short-lived, confusing, and stressful. Green, Lowry, and Kopta (2003) reported that problems in romantic relationships is one of the most common presenting problems for why students seek counseling at university counseling centers. Interpersonal stress in college has been linked to higher levels of depression, anxiety, substance use, and increased suicidal ideation (Drum et al., 2009). Twenge (2007) found that many young adults are delaying the formation of intimate relationships in order to focus on their educational goals. Hefner and Eisenberg (2009) demonstrated that loneliness and social isolation are associated with higher levels of anxiety among young adult college students. Therefore, the combination of increased anxiety, interpersonal stress, and reduced social support could potentially make the existential concern of isolation more prevalent among college students.

Love and work, according to Freud (1930), are the basic cornerstones of humanity and are indicative of making a successful transition into adulthood. Both connect us to trusted communities and create meaning in our lives. College students are faced with the developmental task of creating their vocational identity (Roisman et al., 2004). Career goals often change drastically from freshman to senior year, either through discovery of new possibilities, or failure to thrive in their initial choice of study. In fact, 80% of undergraduate students in the United States change their academic major at least once, and the average college student changes majors three times during their college career (Markham & Gordon, 2007). Cohen (2003) asserted that since a career choice is a major life decision, it has the potential to produce existential anxiety. Often for the first time in their lives, students are confronted with the freedom of choice. Gianakos (1999) found that 50% of college students have difficulty selecting a major and

committing to a career decision. Previous research has found that students who identify as religious or spiritual tend to have a clearer vocational identity (Duffy & Blustein, 2005). Students who viewed their major as a calling were also more likely to believe that their lives were meaningful (Dik & Duffy, 2009). Therefore, the presence of meaning in life may help reduce some of the anxiety of developing an academic and vocational identity.

Graber (2004) suggested that discovering a sense of purpose, "promotes human health, both physically and mentally, and prolongs, as well as preserves, life." (p. 65). Van Ranst and Marcoen (2000) demonstrated that individuals that endorsed a presence of meaning in life, defined as a sense of significance, purpose, or mission in life, displayed a greater variety of coping mechanisms than those who were searching for meaning in life. Shearer and Allan (2012) found a positive correlation between their Scale for Existential Thinking (SET) and Steger et al.'s (2006) Meaning in Life Questionnaire (MLQ). The researchers hypothesized that existential thinking might contribute to the discovery and maintenance of meaning in life. Wong (1998) argued that two types of personal meaning exist: "the ultimate meaning of human existence can be discovered through religious beliefs, philosophical reflections, and psychological integration, whereas specific meanings in everyday living can be created through engagement, commitment, and the pursuit of life goals" (p. 405). Pursuing a college education may be a catalyst for the development of meaning in life. Additionally, existential reflection may be a necessary component in the development of personal meaning and could be an adaptive coping skill for college students.

Existential thought may be especially beneficial for reducing problematic substance use, a prevalent problem among college students. White et al. (2006) described the transition from high school to college as a developmental period marked by a significant increase in substance

use. According to White and Hingson's (2014) study, approximately 65% of students self-reported alcohol consumption in the past month and 40% of students report periods of binge drinking throughout their time at college. Sahker, Acion, and Arndt (2015) reported that students' heavy substance use is associated with low grade point averages, dropping out of college, and unemployment after college. Previous research has demonstrated the utility of incorporating an existential philosophy into substance abuse treatment programs. Olive (1990) conceptualized substance use as a coping strategy that can create an artificial meaning in life and theorized that drugs and alcohol serve as a function to cover up a lack of authentic meaning. A consideration of existential issues could illuminate this lack of purpose and promote the exploration of what makes life meaningful.

An exploration of the existential concern of purpose and meaning in life may be beneficial for not only helping college students cope with substance use but also helping them potentially develop more adaptive ways of coping. Previous research has examined adaptive coping interventions such as mindfulness meditation and noted that it was effective in reducing college students' anxiety (Kang, Choi, & Ryu, 2009; Shapiro, Schwartz, & Bonner, 1998). LeSueur and Cruz (manuscript in preparation) found a strong negative correlation between a student's dispositional mindfulness and their level of stress and a positive relationship between existential thinking and positive emotions. Based on this literature, it is reasonable to argue that existential thought is not an inherently pessimistic construct; rather, it could be viewed as a positive strengths-based psychological construct. Existential thought addresses the question of what makes life worth living. Wong (2010) argued that without the existential dimension of life, the positive psychology movement becomes essentially superficial. Applying a positive

psychological perspective to existential concerns could provide a hopeful view and positive response to the pressing questions central to our existence.

Purpose of the Study

The purpose of this study is to explore existential thought and associated internal psychological resources, specifically mindfulness, hope, positive emotion, meaning in life, and coping strategies college students utilize to manage their mental health. Given the gap in the literature on applying a positive psychological perspective on the potential benefits of existential thought, this study could have positive implications for the field of psychology in general and for college student mental health in particular.

Research Questions

Question 1

Is there a significant relationship between internal psychological resources i.e. positive emotion, mindfulness, hope, meaning in life, and existential thought, and coping behaviors?

Question 2

Does the process of engaging in existential thought help clarify meaning in life for college students?

Question 3

How does a student's coping style influence their overall mental health?

Question 4

What psychological resources and coping strategies are most effective in helping college students manage mental health symptoms?

Hypotheses

Hypothesis 1: It is hypothesized that there will be positive correlations between positive emotion, mindfulness, hope, meaning in life, and existential thought and adaptive coping strategies, and a negative correlation between positive emotion, mindfulness, hope, meaning in life, and existential thought and maladaptive coping strategies.

Hypothesis 2: It is hypothesized that students who engage in higher levels of existential thought will have more clarity in their meaning in life. Specifically, it is predicted that higher scores on the Scale for Existential Thought will correlate with higher levels of the Presence and Search for Meaning in Life subscales of the Meaning in Life Questionnaire.

Hypothesis 3: It is hypothesized that there will be significant relationships between coping and mental health symptoms such that adaptive coping strategies will negatively correlate with mental health symptoms and maladaptive coping strategies will positively correlate with mental health symptoms.

Hypothesis 4: It is hypothesized that adaptive coping strategies and psychological resources will negatively correlate with mental health concerns and maladaptive coping strategies will positively correlate with mental health symptoms.

Definitions of Constructs

Existential thought. Existential thought refers to the propensity of an individual to contemplate the most fundamental questions of life, such as those concerning meaning, purpose, death, absurdity, and estrangement (Shearer, 2006).

Mindfulness. Kabat-Zinn (2003) defined mindfulness as, "the awareness that emerges through paying attention, on purpose, in the present moment, and nonjudgmental to the unfolding of experience moment by moment" (p. 145).

Hope. Hope is conceptualized as a goal-directed cognitive process that is based on three specific factors: goals, agency and pathways (Snyder, 2002). Snyder et al. (1991) defined hope as, "a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy), and (b) pathways (planning to meet goals)" (p. 287).

Psychological stress. Psychological stress occurs when a situation, event, or environmental stressor exceeds an individual's perceived ability to cope (Cohen, Janicki-Deverts, Miller, 2007).

Meaning in life. Frankl (1984) described meaning as a synonym to purpose, which refers to an individuals' long-term goals, generating motivation, commitment and passion. Meaning is developed through personal accomplishments, encounters with others, or encounters with art and nature.

Coping. Lazarus and Folkman (1984) defined coping as involving cognitive and behavioral efforts to manage the external and/or internal demands of a stressful situation. Their transactional model of coping proposed that *adaptive* coping strategies such as problem-solving buffer or neutralize the effect of stress and promote psychological well-being. Conversely, using passive coping strategies such as avoidance, self-blaming, and substance use is *maladaptive*.

Positive affect. Positive affect refers to the extent to which an individual subjectively experiences positive moods such as joy, interest, and alertness (Fredrickson, 2001).

Significance of the Study

During the last two decades, university and college counseling centers have reported a shift in the needs of students seeking counseling services, from more interpersonally oriented concerns (e.g., break-ups, peer-conflict) and informational needs (e.g. study skills, time management) to more severe psychological problems (Gallagher, 2014). In 2015, The Center for Collegiate Mental Health reported that the number of attended counseling appointments by students grew at more than seven times the pace of institutional enrollment (CCMH, 2015). While student demand is increasing, budgets and staffing at counseling centers have plateaued (Reetz et al., 2015). University counseling centers often have insufficient staff and long waiting lists. Reetz et al. (2015) conducted a study with the Association for University and College Counseling Center Directors (AUCCCD) and found that on average there is approximately 1 counselor to every 1,500 students. Because of these trends, more counseling centers have moved to short-term models of treatment that allow students to see a therapist for one semester before they are referred to off-campus mental health professionals for long-term treatment (CCMH, 2015). The Association for University and College Counseling Centers Directors reported that 51% of college counseling centers have some form of session limits, with the median being 12 sessions (Reetz et al., 2015). Counseling centers are addressing these issues by providing alternative resources to students, including psychoeducational programming, group work, self-help technology, and outreach programs.

This study will explore what internal psychological resources and copings skills college students endorse to help manage their mental health concerns. This study seeks to specifically focus on the value of exploring existential concerns and whether existential thought contributes to meaning making in college students. This study will shed light on college students' subjective

experience of existential thought and other psychological resources. The study includes four positive psychological resources (positive emotion, mindfulness, hope, and meaning in life) that have been shown to be psychometrically sound and lend themselves well to both curriculum and therapy. Findings from this study can help contribute to interventions for college students, such as incorporating themes of positive psychology and existential concerns into freshman seminars as a relatively low-cost way to improve university students' adjustment to college.

Chapter Two

Introduction

This study is largely viewed within the theoretical frameworks of existential psychology and positive psychology. In this chapter, literature on existential psychology, and the positive psychological resources of positive emotion, mindfulness, hope, and meaning in life will be reviewed, as well as the broader literature on psychological stress and coping.

The Psychological Stress of College

University students inevitably experience psychological stress during their academic career. Cohen, Janicki-Deverts, and Miller (2007) define psychological stress as the perception that a situation, event, or environmental stressor exceeds an individual's ability to adaptively cope. Psychological stress can emerge in college due to the academic demands of coursework, projects, and exams, as well as the complex interpersonal and financial pressures faced by today's students. These factors are often interacting and operating simultaneously. Traditional-aged college students have to navigate multiple developmental challenges including identity formation, separation from family, and career decision. For many students, college life is dramatically different from their home environment and their high school experience. Students are given the freedom to make their own decisions and experiment with how they live their lives. Without the rigid structure of high school, the majority of students are faced with an abundance of free time and have little guidance on how to spend it. Although exhilarating for some, others may feel bored, isolated, and alone with their thoughts. Suddenly students have the time to reflect on questions such as:

Who am I?

What am I doing here?

What should I study?

What is my purpose?

According to Young (2008), busyness blurs our existential angst. When we disengage the autopilot that drives our everyday life, we have the opportunity to observe our habitual thoughts, patterns, and behaviors. This is often uncomfortable and many people respond by filling their time with distractions. In college, there is an abundance of distractions as students have the freedom to create their own lifestyle and choose how they want to spend the next four years. Many of the choices made by undergraduate students including their sleep patterns, diet, exercise, substance use, and risky sexual behavior can significantly impact their mental health (Pritchard, Wilson, & Yamnitz, 2007).

Mental health disorders typically emerge between the ages of 18 and 24, which represents the average age of students enrolled in undergraduate programs (Kessler et al., 2005). The number of college students with severe mental health symptoms has steadily increased since the 1990s to the point of a "mental health crisis" occurring on the majority of American college campuses (Joyce, 2016, p. 17). Research has demonstrated that the ever-increasing financial burden of college enrollment has a substantial negative impact on student's levels of depression, anxiety, and stress (Watkins et al., 2011). Pritchard, Wilson, and Yamnitz (2007) found that high levels of student stress were associated with increased rates of anxiety and depression, as well as physical illnesses. Stoliker and Lafreniere (2015) described the negative impact of chronic collegiate stress on academic performance and linked excessive stress to poor health behaviors including inadequate levels of sleep, excessive screen time, and poor diet. Meanwhile, university administrators have reported substantial increases in student conduct problems including issues with illicit drug use and alcohol abuse over the past decade (Castillo, &

Shawartz, 2013). The National Institute of Alcohol Abuse and Alcoholism (2012) estimated that 1,825 college students between the ages of 18 and 24 die each year from alcohol related injuries, including drunk driving. Students continue to struggle to develop adaptive coping skills and many are choosing maladaptive coping behaviors, which have physical, psychological, and sometimes fatal consequences.

Sartre (1975) stated that our everyday choices, habits, and practices determine who we become. If students do not take the time for self-reflection, their awareness of their everyday choices will be blurred by the busyness of collegiate life. Students who lack awareness of their thoughts, behaviors, and emotional states will likely struggle to learn how to regulate themselves and will be less likely to develop adaptive coping strategies. McClellan and Stringer (2015) argued that higher education needs a reemergence of contemplative practices and encouraged educators to create spaces to expand critical thinking skills through deep discussion and existential reflection. Early engagement with the meaning making process could act as a way to strengthen internal coping resources during this taxing developmental period.

Coping with Psychological Stress in College

Lazarus and Folkman (1984) defined coping as cognitive and behavioral efforts to manage the external and/or internal demands of a stressful situation. Avoidance, venting, religion, denial, substance use, and seeking social support are all examples of different kinds of coping strategies. Lazarus and Folkman differentiate adaptive and maladaptive coping. According to Lazarus and Folkman (1984), adaptive coping strategies such as problem-solving buffer or neutralize the effect of stress and promote psychological well-being. Behaviors related to social support, such as seeking emotional support, are considered adaptive (Carver, Scheier, & Weintraub, 1989).

Conversely, using coping strategies such as avoidance, self-blaming, and substance use is considered maladaptive. Previous research has demonstrated that maladaptive coping behavior is correlated with low levels of life satisfaction (Frisch, 2006) and high levels of negative thinking (Beck, Emery, & Greenberg, 2005). Doronh and colleagues (2009) found a gender difference in coping among college students where women generally seek out social support and are more likely to express their emotional concerns to family or peers. Other studies have found that men express emotional distress in the form of anger, isolation, risk-taking, and excessive use of drugs or alcohol (Ramirez & Badger, 2014). For example, Naimi et al. (2003) found that college-age men tended to drink more heavily and reported an average of 12.5 binging episodes per year, whereas women reported 2.7 episodes. Burda, Tushup, and Hackman (1992) described increased alcohol use as a "socially acceptable way for men to satisfy their dependency needs while they maintain a social image of independence" (p. 187). These maladaptive coping strategies can contribute to prolonged psychological distress by masking mental health symptoms and reducing an individual's likelihood to receive treatment from a mental health professional.

Compared to older adults, young adults are more likely to use maladaptive coping strategies including avoidance and substance use (Blanchard-Fields, 2007). Results from this study also showed that middle-aged adults were more effective at resolving interpersonal conflict than younger adults. They hypothesized that young adults are preoccupied with developmental tasks and older adults have a greater concern for maintaining social connections. Therefore, college students may place less of their resources into the foundation of adaptive coping skills when faced with the developmental issues of autonomy and identity formation. With less coping skills available, college students are particularly vulnerable to psychological and physical health

problems. Mahmoud, Staten, Hall, and Lennie (2012) assessed coping skills and mental health symptoms in a sample of 508 undergraduate students. They found that more frequent use of maladaptive coping strategies predicted higher levels of depression, stress, and anxiety. Interestingly, adaptive coping was not found to be a significant predictor of mental health symptoms. Pritchard, Wilson, and Yamnitz (2007) surveyed 242 undergraduate freshmen at the beginning and end of their first year. The researchers asked students about their physical health, substance use, stress levels, self-esteem, coping skills, and overall adjustment to college. They found that freshmen students who more frequently used maladaptive coping strategies had significantly increased rates of alcohol use and physical illness at the end of the year than students who used more adaptive coping strategies. However, students who more frequently used the adaptive coping skills of religious belief, optimism, and self-esteem had both better physical and psychological outcomes. Therefore, it appears that an exploration of meaning could help students develop stronger and more adaptive internal coping skills.

Wong's resource congruence model (1993) theorized that effective coping and stress resistance are dependent on the presence of internal psychological resources. Wong (1993) cited optimism and meaning in life as two of the strongest resources for stress resistance. Yalom (1980) and Frankl (1984) often spoke of meaning as a protective factor that can reduce the harmful effects of psychological stress. Taylor et al. (2000) theorized that positive psychological beliefs and positive feelings can act as a resource to both protect mental health and improve physical health. Other researchers have found evidence that these resources can help reframe traumatic and stressful life events and in turn, promote a newfound sense of purpose and personal growth from the experience (Calhoun, Cann, & Tedeschi, 2010). There is strong evidence to suggest that many young adults will respond to college stressors through

maladaptive coping strategies (Blanchard-Fields, 2007; Castillo, & Shawartz, 2013). Research indicates that the reduction of maladaptive coping is as important, if not more, than the development of adaptive coping behaviors (Mahmoud et al., 2012). Both of these issues can be addressed through self-reflection, therapy, and educational workshops.

Positive Psychological Resources

Positive psychology emerged approximately four decades after the existential psychology movement with the goal of reducing the emphasis on psychopathology and suffering found in the majority of the psychological sciences. In other words, the aim of positive psychology is to "help people live and flourish rather than merely to exist" (Keyes & Haidt, 2003, p. 3). As president of the American Psychological Association, Martin Seligman (1998) encouraged psychologists to shift their focus from "weakness and damage" to "strength and virtue." Seligman (1998) described building human strength as psychology's "forgotten mission" and identified the internal psychological resources of courage, optimism, interpersonal skill, work ethic, hope, honesty, and perseverance.

Seligman (2002) believes that every person has their own unique set of strengths that work as protective factors to reduce the experience of negative emotion and increase the amount of happiness in our lives. These strengths can be cultivated, nurtured, and utilized throughout our entire lifetime. As the movement has grown, other positive psychological resources have been identified. In 2001, Fredrickson theorized that positive affect played a crucial role in positive psychology. She noted that positive emotions serve as markers of flourishing and facilitate adaptive coping strategies (Folkman & Moskowitz, 2004). Carr (2004) explored the similarities between optimism and Snyder's (1991) theory of hope. Both constructs are positively correlated and have been shown to predict positive affect, subjective well-being,

physical well-being, and adaptive coping (Carr, 2004). Research has indicated that mindfulness enhances both hedonic well-being (e.g. happiness, positivity emotions) and eudaimonic well-being (e.g. meaning in life, self-acceptance, optimal functioning) (Brown & Cordon, 2009; Brown, Ryan, & Creswell, 2007), which both relate to the central aims of positive psychology. The constructs of positive emotion, hope, meaning in life, and mindfulness can all be viewed as branches of the positive psychology family tree. In fact, each construct has its own dedicated chapter in the *Oxford Handbook of Positive Psychology* (Cohn & Fredrickson, 2009; Steger, 2009; Rand & Cheavens, 2009; Langer, 2009).

Seligman (2002) described religious beliefs and spirituality as positive individual traits that provide an individual with a coherent belief system that can guide the search for meaning in life and provide hope for the future. However, minimal research exists on the potential benefits of existential reflection. The following constructs can be viewed as positive psychological resources and an argument will be made for the inclusion of existential reflection.

Positive Emotion

Emotions are brief affective responses to an appraisal of a situation; when that appraisal is good, positive emotions such as joy, interest, gratitude, hope, or amusement are produced (Watson, Clark, & Stasik, 2011). The Broaden-and-Build theory of positive emotion (Fredrickson, 1998) states that when people, even momentarily, experience positive emotions, they broaden their attentional focus and behavioral repertoire. Previous research has shown that positive emotion buffers against the negative effects of stress, facilities adaptive coping (Gloria & Steinhardt, 2016), influences the process of detecting and constructing meaning in life (King, Hicks, Krull, & Del Gaiso, 2006), and leads people toward higher levels of well-being (Folkman, 2008).

The Broaden-and-Build theory proposes that the experience of positive emotions can trigger an *upward spiral*, toward emotional well-being. The process of an upward spiral facilitates the boost in all social, psychological, and physical resources (Fredrickson, 2004). Fredrickson (2003) argued that this upward spiral contributes to the development of resiliency, allowing individuals to flourish even when presented with highly stressful situations. Negative emotions provoke a *downward spiral*, which lead to narrow, rigid, and pessimistic thinking. While upward spirals lead to adaptive coping skills, openness to others, and spontaneous exploratory behaviors, downward spirals lead to defensive behavior and avoidance (Garland et al., 2010).

Although positive emotions are ephemeral, the resources that are built through upward spirals are persistent. Positive emotions widen an individual's focus and allows new information to enter into their awareness. This leads to new ideas, possibilities, and approaches that improve psychological resources and promote resilience (Fredrickson, 2003). Previous research has demonstrated that positive affect is predictive of adaptive coping skills (Aspinwall & Taylor, 1997). Folkman (2008) hypothesized that positive emotions are an important aspect of the stress process and can facilitate the development of psychological and social resources.

Shallcross, Ford, Floerke, and Mauss (2012) found that negative affect is inversely related to age. However, it is unclear why this occurs. One explanation is that older individuals experience life events that are often outside of their control and thus, have a greater sense of acceptance. Previous research has found similar developmental gaps with younger people having less adaptive coping skills (Blanchard-Fields, 2007) and lower levels of meaning in life (Steger, Oishi, & Kashdan, 2009). King et al. (2006) found that positive affect can predispose an individual to feel like their life is meaningful and may be an important factor in finding meaning

after negative life experiences. Similarly, Steger and Kashdan (2007) found that greater daily negative affect independently predicted lower levels of meaning in life and life satisfaction. With this in mind, a promotion of positive affect in college students could promote stronger coping skills and an increase in meaning in life.

Mindfulness

Frankl (1984) reasoned that if there is meaning in life then there is meaning in suffering, as suffering and death are both inescapable aspects of life. Frankl (1984) stated that, "once an individual's search for meaning is successful, it not only renders him happy but also gives him the capability to cope with suffering" (p. 163). Suffering can be experienced as depression, anxiety, stress, interpersonal conflict, confusion, and despair. Suffering comes with the existential issues of meaninglessness, sickness, old age, and dying. The concept of mindfulness has its roots in Buddhist spiritual practices where it occupies a central role in a system that was developed as a path leading to the cessation of personal suffering (Thera, 1962). Although mindfulness has a religious origin, mindfulness-based therapies are typically secular in nature. In the realm of psychology, mindfulness is commonly defined as the state of being attentive to and aware of what is taking place in the present moment. Kabat-Zinn (1994) describes mindfulness as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (p. 4). Bishop et al. (2004) explain that:

> In a state of mindfulness, thoughts and feelings are observed as events in the mind, without over-identifying with them and without reacting to them in an automatic, habitual pattern of reactivity. This dispassionate state of self-observation is thought to introduce a ''space'' between one's perception and response. Thus, mindfulness is thought to enable one to respond to situations more reflectively (as opposed to reflexively) (pp. 232).

Vago and Silbersweig (2012) theorized that mindfulness promotes mental health and well-being through increased self-awareness, self-regulation (e.g. coping skills, impulsive control), and self-transcendence (e.g. empathy and compassion). A growing body of research has demonstrated the benefits of mindfulness-based interventions on the reduction of chronic pain, depression, anxiety, eating disorders, and psychological distress (Grossman et al. 2007; Hofmann et al., 2010; Tapper et al., 2009; Bohlmeijer et al., 2010). Empirically supported studies have also shown that higher levels of mindfulness are associated with reduced rumination (Chambers, Lo, & Allen, 2008) and reduced alcohol problems among college students (Bodenlos, Noonan, & Wells, 2013).

Mindfulness-based practice and existential psychotherapy share many similarities, as both emphasize non-directive reflection and facilitate the exploration of existential questions (Ramsey-Wade, 2015). Spinelli (2007) noted that existential anxiety is not avoidable as it is present in "*all* reflective experiences of relatedness" (p. 27). Existential psychology also shares similarities with the positive psychology movement in the sense that existential anxiety is not pathologized, but seen as a given of human existence. Nanda (2010) described both practices as concerned with "exploring human existence" and that both, "acknowledge change, impermanence, uncertainty, as givens of existence. Both see self and reality as relational, without rigid or permanent substance" (p. 147).

Mindfulness-based interventions have become increasingly popular over the past decade. In fact, Time Magazine recently declared that America was in the midst of a "Mindful Revolution" (Pickert, 2014). A national survey on complementary health practices found that almost 25 million Americans engaged in meditation or another form of contemplative practice in 2012 (Clark et al., 2015). Mindfulness meditation programs are an emerging practice in higher

education. Shapiro, Brown, and Astin (2011) found that mindfulness-based programs have many academic benefits including increased concentration, creativity, and compassion towards other students. Additionally, several studies have demonstrated that mindfulness meditation significantly reduces stress among college students (Ramler et al., 2016; Oman et al., 2008; Nidich et al., 2009). Gryffin, Chen, and Erenguc (2014) reported that a lack of awareness of the practice and health benefits is a substantial barrier to meditation practice among college students. This indicates that there is a need for increased outreach, education, and experiential workshops on college campuses in order to promote mindfulness-based interventions.

Roberts and Danoff-Burg (2010) examined the relationship between mindfulness, stress, and health behaviors in college students. The study included 553 undergraduate students with 168 males, 385 females, and a mean age of 18.8. Results demonstrated that mindfulness is positively correlated with lower levels of student stress. Additionally, mindfulness predicted health-related behaviors including more physical exercise, better sleep quality, and reduced binge eating. Therefore, mindfulness-based interventions can help promote better physical and psychological health in college students.

Munoz et al. (2018) conducted a study to explore the impact of mindfulness meditation on an individual's level of stress and hope. The study used a quasi-experimental design with 46 participants in a meditation group and 23 participants in a comparison group. Munoz et al. (2018) found that the meditation group participants displayed significantly higher levels of hope and lower levels of stress than those in the comparison group. The authors concluded that mindfulness meditation can increase an individual's level of hope through stress reduction. Although there is a limited research directly studying the relationship between hope and mindfulness, the literature suggests these constructs have similarities. Sears and Kraus (2009)

conducted a study on the effectiveness of mindfulness-based group therapy on college students. Fifty-seven students participated with 59% of the sample identifying as female and 41% identifying as male. All participants attended a weekly meditation group over the course of the semester. The study demonstrated that over the course of the semester, students in the meditation group had increased levels of hope and reduced anxiety and negative affect. LeSueur and Cruz (manuscript in preparation) found that found that mindfulness was positively correlated with hope ($r = .34$, $p < .001$). Baer and colleagues (2006) described hope and mindfulness as constructs that share both state and trait components can be intentionally learned and increased.

Hope

Snyder defined hope as a "positive motivational state" that includes (1) the conceptualization of goals, (2) the developed routes to obtain goals (pathways), (3), and the motivation to obtain goals (agency) (Snyder et al., 1991, p. 287). Hope has been extensively researched as a positive psychological construct (Duckworth, Steen & Seligman, 2005) and is predictive of lower levels of depression among undergraduate students (Arnau et al., 2007). Lazarus (1999) stated that when hope is absent, despair arises, and suggested that a sense of hope can alleviate many of the symptoms of depression. Snyder (2000) believed that "hope is the glue that holds together the rest of the human condition as well as the energy that moves us ahead," (p. xxi). Research has established that hope is associated with the use of adaptive coping methods (Irving, Snyder, & Crowson, 1998) and is positively related to academic achievement, physical health, and psychological well-being (Snyder, 2002). Hirschi, Abessolo, and Froidevaux (2015) described empirical evidence that found hope positively correlated to vocational identity and career planning behaviors in adolescents and college students.

Additionally, hope is positively correlated with academic achievements among college students including higher grade point averages, retention, and graduation rates (Lopez, 2010).

Feldman and Snyder (2005) argued that hope is an essential component in the development of meaning in life. They tested this hypothesis by surveying students with scales that measured hope, meaning in life, depression, and anxiety. Their sample consisted of 139 college students with 74 males and 65 females. Participants ranged in age from 18 to 24, with a mean of 19.20 ($SD = .92$). Feldman and Snyder (2005) used three different assessments for meaning in life (Purpose in Life Test, Life Regard Index, Sense of Coherence Scale) and found that the scales strongly correlated with one another ($r = .81$ to .82, $p < .01$). Additionally, all three measures of meaning in life were strongly correlated with the Hope Scale ($r = .70$ to .77, $p <.01$). Factor analysis revealed a single factor underlying the three meaning in life scales and the hope measure, offering evidence that hope is part of a broad meaning in life factor. Additionally, hope was negatively correlated to both anxiety ($r = -.67$, $p = .01$) and depression ($r = -.59$, $p = .01$). This is consistent with findings by LeSueur and Cruz (manuscript in preparation) that found hope negatively correlated with negative emotions ($r = -.47$, $p < .001$) and stress ($r = -.49$, $p <.001$) and positively with positive emotions ($r = .46$, $p < .001$). Snyder (2002) reported that individuals with high levels of hope were able to manage ongoing stressors more effectively than low hope individuals. Additionally, individuals with lower levels of hope are more likely to engage in maladaptive coping behaviors (Gustafsson et al., 2013). Similar findings have been documented with college students (e.g., Gallagher, Marques & Lopez, 2017; Demirli, Türkmen & Arik, 2014). Chang and DeSimone (2001) found that hope was positively correlated to adaptive coping and negatively correlated to symptoms of depression and maladaptive coping behaviors among a sample of undergraduate students. Thus, it appears that high hope individuals

handle psychological stress differently than their low hope counterparts and tend to experience greater well-being.

Mascaro and Rosen (2005) examined the relationship between existential meaning, hope, and depressive symptoms within the college population. Results of the study suggested that individuals with high levels of existential meaning are more likely to be more hopeful and have less symptoms of psychological distress than students that lack a presence of existential meaning. This provides evidence that existential meaning has a relationship with mental health symptoms. Hope is a trait that can be learned and shared with others (Lopez, 2013). Based on previous research, hope promoting activities and discussions may help cultivate existential meaning, develop adaptive coping behaviors, and work as a powerful motivational tool to help students choose and obtain a set of personally meaningful goals (e.g. vocation, academic achievement, interpersonal relationships).

Meaning in Life

Existential meaning is characterized by a sense of inner fulfilment (Frankl, 1984). Wong and Fry (1998) highlighted the importance of meaning by stating, "there is now a critical mass of empirical evidence and a convergence of expert opinions that personal meaning is important not only for survival, but also for health and well-being" (p. 17). Halama and Strizenec (2004) argued that the development of meaning is necessary to eliminate existential anxiety, and therefore, "an existential problem is always one of meaning" (p. 248). Frankl (1984) suggested that an "existential vacuum" can emerge when an individual is lacking meaning (p. 128). An existential vacuum is an inner emptiness commonly felt by people living in modern society and is marked by a subjective state of boredom, apathy, and emptiness. Many people develop maladaptive coping behaviors in an effort to fill their existential vacuums through binge eating,

drinking, overworking, overspending, or avoiding the issue entirely. However, for others, the experience of an existential vacuum may be the motivation to trigger a quest for meaning. The solution to the existential vacuum, according to Frankl (1984), is the development of a sound philosophy or meaning in life.

Shearer and Allan (2012) found a link between existential thought and the search for meaning in life. They hypothesized that existential thought is a necessary part of the meaning making process. However, a search for meaning does not necessarily translate into the presence of meaning. In fact, an unsuccessful search could result in the development of an existential vacuum (McKnight & Kashdan, 2009). Bryant and Astin (2008) studied the impact of college students experiencing a "spiritual struggle," which is defined as a period where one questions their faith or spiritual values due to an awareness of "suffering, evil, and death in the world" (p. 1). They found that this struggle does not always lead to growth and some students develop maladaptive coping skills in response to existential questions. Faigin (2013) supported this claim and demonstrated that undergraduate students experiencing a spiritual struggle had higher levels of substance abuse. Steger et al. (2006) found that although presence of meaning in life has numerous benefits including positive correlations with well-being, life satisfaction, and self-esteem, the search for meaning in life can produce distress, anxiety, and depression.

Mascaro and Rosen (2006) developed a study to examine existential meaning as a protective factor against the harmful effects of psychological stress. The study included a diverse sample of 143 undergraduate college students. Spiritual meaning was measured by the Spiritual Meaning Scale (SMS; Mascaro & Rosen, 2006), which was designed to assess the extent to which individuals believe that life and human existence has inherent meaning. Personal meaning was defined by the framework subscale from the Life Regard Index-Revised (LRI-R;

Debats, 1998), which measures the extent to which an individual sees their life within some meaningful context and has derived a set of life goals from that framework. Results indicated that both spiritual meaning and personal meaning were both negatively correlated with depressive symptoms and positively correlated with hope.

Harlow, Newcomb, and Bentler (1986) studied how meaning in life affects the relationship between stress and alcohol or drug addiction in adolescents. The study included 722 participants with 211 men, 511 women, and a mean age of 21.93. Participants that reported low meaning in life were more likely to react to psychological stress by using drugs or alcohol than those that reported a clear sense of purpose. The study also indicated a gender difference in coping styles, such that men were more likely to cope by using drugs and alcohol and women were more likely to display suicidal ideation. Interestingly, the converse is true for participants who report a lack of meaning in life. Among participants who reported little to no meaning in their lives, women were more likely to respond to stressors through substance use and men reported higher levels of suicidal ideation. These findings suggest that college-age young adults with poorly defined meaning in life are at risk to both substance use and suicidal ideation.

Meaning in life is thought to be important to well-being throughout the stages of human development. Previous research has suggested that healthy attitudes about death and having a sense of purpose in life may help people maintain their function and independence as they age. Van Ranst and Marcoen (2000) interviewed a group of adults ranging from 48 to 88 years old and surveyed them about their experience of aging throughout their life. The researchers explored the relationship between the cognitive, motivational, and emotional aspects of meaning and coping strategies. Van Ranst and Marcoen (2000) found that individuals with a strong awareness of meaning in life displayed a more robust variety of coping strategies than those with

less awareness of meaning in life. Additionally, adults who reported finding existential meaning in the experience of aging and death displayed higher levels of spirituality, meaning in life, and psychological well-being. Van Ranst and Marcoen (2000) explain that:

> From an existential point of view, attitudes toward death cannot be separated from the search for meaning. The manner in which individuals look at life affects their attitudes toward death. But the converse is also true: the manner in which people look at death affects how they see life (pp. 67-68).

For many people, death is a taboo subject and considered morbid. The thought of death makes most of us uneasy, but avoiding the idea of death entirely may delay our development and result in the sense that our lives are unfulfilled. Yalom (2002) summarized this idea when he claimed, "though the physicality of death destroys us, the idea of death may save us (p. 126)."

Steger, Oishi, and Kashdan (2009) investigated differences in meaning in life across four age groups: emerging adulthood, young adulthood, middle-age adulthood, and older adulthood. Results suggest that there are significant differences in meaning across these developmental milestones. Middle-age and older adults displayed significantly higher levels of meaning in their lives, whereas participants in the younger age groups were more likely to be actively searching for meaning in their lives. This makes sense developmentally as young adults are going through a process of identity formation. According to Erikson's (1968) theory of identity development, adolescents and young adults go through the psychosocial crisis of identity versus role confusion, which involves a self-exploration of one's interests, beliefs, strengths, and weaknesses. The transition from adolescents to adulthood is often a turbulent time that can include feelings of self-doubt about one's place in the world. During this developmental period, the question "Who am I?" becomes central. Therefore, many traditional-aged college

students may feel overwhelmed by the combination of existential awareness, identity formation, and an emerging quest for meaning.

Existential Reflection as a Positive Psychological Resource

According to Yalom (1980), every human being must confront a set of ultimate concerns (i.e., freedom, death, isolation, and meaninglessness), which are fundamental to human existence. Yalom (1980) believed that an instinctive fear of death exists at every level of human awareness, from the most conscious and intellectualized, to the deepest depths of the unconscious, which manifests as "death anxiety" (p. 42). How do we consider death, how do we balance freedom and responsibility, how do we navigate isolation and connection, and how do we determine meaning and meaninglessness? For traditional college students, freshman year may mark the first time that they have explored these issues.

The emergence of existential reflection can be traced back to ancient philosophers such as Socrates, who famously remarked "the unexamined life is not worth living" (Brickhouse & Smith, 1994, p. 201). Jean-Paul Sartre's (1943) statement, "existence precedes essence" is a central claim of existentialism (p. 567). Rollo May (1962) elaborated on Sartre's statement: ''That is to say, there would be no *essences*—no truth, no structure in reality, no logical forms, no *logos,* no God nor any morality—except as man in affirming his freedom makes these truths'' (p. 5 - 6). In other words, human beings exist first and then define themselves afterwards. Sartre (1943) believed that there are no absolute truths (essences) to the universe and that it is up to the individual to define his or her own truth, values, and reality. We have the choice to either drift through our lives or live an authentic life by developing a personal sense of meaning.

Existential reflection provides a useful framework for clarifying and understanding the experience of personal meaning. Existential psychology is very often linked to phenomenology

as an approach to investigation (Spinelli, 2005). Quantitative research on existential reflection and mental health is virtually absent. One exception is the research by Shearer and Allan (2012) who developed the Scale for Existential Thinking. The authors argued that it is important to consider one's existence and other existential issues for humans to function at their optimal level. Existential thought is theorized to operate as a positive "tendency to explore the fundamental concerns of human existence and the capacity to engage in a meaning-making process" (Shearer & Allen, 2012, p. 21). Existential thinking is viewed as a form of intelligence (Halama & Strizenec, 2004) that involves transcendental reflection, divergent perspective taking, and a creative process that involves the examination of purpose, motivation and intention. Halama and Strizenec (2004) defined existential intelligence as an "ability to develop a system of beliefs and values which makes an individual capable to recognize workable existential meaning in his or her life" (p. 248). Shearer and Allan (2012) found existential thought to be positively correlated existential well-being, spiritual intelligence, curiosity, and presence of meaning in life.

Astin, Astin, and Lindholm (2011) conducted longitudinal study on spirituality and religious beliefs in undergraduate students. The study included a large national sample of over 14,000 students from 136 colleges. The researchers developed a multifaceted scale of spirituality that included a spiritual quest component. The spiritual quest scale measured a student's level of existential reflection. The results found that students' involvement with religious practices decreased between the first and junior year of college, but students' endorsement of being on a spiritual quest significantly increased. Astin, Astin, and Lindholm (2011) reported that by the end of junior year, "eight in ten undergraduates are at least moderately engaged in a spiritual quest" (p. 31). This provides evidence that college marks a developmental period of high existential reflection among undergraduate students. As a strength,

existential reflection is believed to enhance cognitive and emotional wellness (Nanda, 2010).

Working through existential questions may be a critical component in the development of a

personal sense of meaning in life and therefore can be viewed as a positive psychological

resource.

Summary

The rise of the positive psychology movement and the enduring nature of existential

psychology has culminated in decades of research on the source and significance of meaning in

our lives. Both perspectives have faced criticism for offering an unbalanced and incomplete

view of human existence. Existentialism has often been conflated with Nihilism and seen as the

belief that there is an inherent lack of meaning to the universe. Some argue that existential

psychology is too dark, pessimistic, and tragic. Conversely, positive psychology has been

criticized for being too bright, optimistic, and for ignoring the fundamental aspects of human

suffering. Despite their differences, both positive and existential psychology emphasize the

importance of finding a personal meaning to life. Developing a sense of meaning is an essential

aspect of human coping and as well as for understanding our place in the world.

Chapter Three

Methodology

This chapter describes the methodology employed in the present study in more detail. This includes an overview of the design, participants and procedures, psychometric instruments, and planned statistical analyses.

Design

The present study used a cross-sectional research design to examine the relationships between existential thought, internal psychological resources (mindfulness, hope, positive emotion, meaning in life) and coping strategies college students utilize to manage their mental health. The study implemented a randomized block design to reduce order effects.

Participants

This study's aim was to determine the associations between psychological resources and coping strategies among college students. Therefore, the study was limited to participants currently enrolled in an undergraduate program at an American college or university. Participants were recruited through Amazon's Mechanical Turk (MTurk). All participants were over the age of 18 and currently enrolled in an undergraduate program at an American college or university. No exclusion was made based on gender, sexual orientation, race, or ethnicity.

Procedure

This research study received Seton Hall University Institutional Review Board (IRB) approval on September 27th, 2017 (Appendix A). Data collection began on October 4th, 2017 and all participants were recruited through Amazon.com's Mechanical Turk (MTurk). MTurk is a web resource that allows researchers to pay nominal advertising fees to recruit participants for survey research studies. All participants were required to register for an MTurk account and

were given a unique Worker ID, which is randomly generated alphanumeric string. Through MTurk, they participated in the study as a "Human Intelligence Task" (HIT). HITs refer to the fact that participants complete individual tasks for reimbursement. MTurk workers are an online community of individuals who self-select to engage in small tasks for nominal fees, generally related to business, marketing, and social science research (Bohannon, 2016). Amazon charges the researcher one bulk recruitment fee and then manages the distribution of small monetary payments themselves (in the form of credit for purchases on the amazon.com website). The participants are then able to receive small payments while retaining their anonymity to the researchers. MTurk has been shown to produce reliable results, and effect sizes do not appear to show significant differences from other samples (Goodman, Cryder, & Cheema, 2012). Research has shown that MTurk workers are typically diverse in terms of age, education levels, and socioeconomic status (Casler, Bickel, & Hackett, 2013).

Workers find these HITs by searching the MTurk website. MTurk was programmed for the current study to automatically pre-screen potential participants (i.e., workers) to exclude anyone living outside of the United States, under the age of 18, and with a HIT approval rate of less than 95%. To screen out workers living outside of the U.S., study-eligible participants needed to have a U.S. bank account associated with their MTurk account to prove that they live in the United States. Additionally, the latitude and longitude of the Geo-IP address of the computer used to complete the HIT was examined to determine and confirm their location in the U.S. A 95% HIT approval rating means that 95% or more of the previous HITs the worker has completed on MTurk met the standards of the requester who provided the HIT (i.e., the worker adequately completed 95% of the MTurk jobs they took on in the past).

Given that this study was designed for college students, MTurk's keyword function were

utilized. MTurk participants can enter keywords to identify tasks that are most relevant and interesting to them. Keywords associated with this study were "college," "university," "students," "undergraduate," "existential," "meaning in life," "mindfulness," "mental health," "depression," "anxiety," "stress," "coping," and "psychology." Participants who clicked on this study's information were presented with the letter of solicitation which included an explanation of the financial incentives via Mechanical Turk. Each participant earned $1.00 for participation in this study.

Participants selected through Amazon Mechanical Turk (MTurk) were provided with a link to the Qualtrics study survey. Once their location and enrollment status were confirmed, then they continued to the survey. Participants were first directed to a Letter of Solicitation (Appendix B) at the start of the survey. This letter included essential information regarding the study such as the approximate length of time to complete the survey, purpose of the study (to explore factors psychological resources and coping strategies among college students), and a summary of the measures being used. In order to protect participants' confidentiality, all of the data pertaining to this study was collected through Qualtrics Survey Software. Participants' Worker IDs were all that the researcher knew about the participants. All collected data was associated with only this Worker ID. Participants reviewed the letter of solicitation which stated that by completing the survey, participants consented to participate in the study. Participants then completed a series of surveys including (1) a Demographic Questionnaire; (2) Scale for Existential Thinking (SET; Shearer & Allan, 2012), which measures an individual's process of reflecting on human existence; (3) Meaning in Life Questionnaire (MLQ; Steger et al., 2006), which measures presence of and search for meaning in life; (4) Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), which is self-reported mindfulness measure of the

mindful state; (5) Adult Hope Scale (AHS; Snyder et al., 1991), which measures an individual's dispositional level of hope; (6) Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), which is used to assess general affect or mood; (7) Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995), which measures symptoms of depression, anxiety, and stress; (8) Brief COPE Inventory (BCI; Carver, 1997), which measures coping strategies in response to life stressors. All participants first completed the demographics questionnaire and the remaining seven scales were presented in a random order using the Qualtrics Randomizer. At the conclusion of the study, participants were thanked and given a Mechanical Turk validation code so that they were able to receive payment for their participation. The survey took an average of 13 minutes to complete. The entire survey is attached in the appendices section (Appendices A – I).

Measures

The psychometric instruments used in the current study consisted of 7 measures that tapped the following distinct constructs: (1) Scale for Existential Thinking (SET; Shearer & Allan, 2012), (2) Meaning in Life Questionnaire (MLQ; Steger et al., 2006), (3) Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), (4) Adult Hope Scale (AHS; Snyder et al., 1991), (5) Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), (6) Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995), (7) Brief COPE Inventory (BCI; Carver, 1997), as well as a demographic questionnaire. These constructs were identified through a thorough literature review and theoretical and empirical analysis.

Scale for Existential Thinking.

The Scale for Existential Thinking (SET; Shearer & Allen, 2012) is a recently developed psychometric instrument that measures the process of reflecting on human existence. It is an 11-

item questionnaire that asks participants to respond to questions on a 6-point Likert scale. Sample questions on this measure include, "Do you think about ideas such as eternity, truth, justice and goodness?" and "Do you spend time in meditation, prayer, or reflecting on the mysteries of life?" The measure was normed with diverse heterogeneous populations. Confirmatory Factor Analysis (CFA) confirmed the measures unidimensional factor structure. Shearer and Allan's (2012) results revealed a statistically significant model ($\chi^2(40) = 83.98$, $p <$ .001, χ^2/df ratio = 2.10, CFI = .98, and RMSEA = .06), with very strong reliability ($\alpha = .93$). As evidence of convergent validity, existential thinking correlated with spiritual intelligence ($r =$ .67), meaning in life (presence $r = .37$; search $r = .28$) and existential well-being ($r =. 27$). For this study, internal consistency was assessed using Cronbach's alpha, which indicated good to excellent reliability ($\alpha = .89$).

Meaning in Life Questionnaire.

The Meaning in Life Questionnaire (MLQ; Steger et al., 2006) is a 10-item instrument that measures two dimensions: the presence of and search for meaning in life. Participants rate 5 items on the two subscales presence of meaning in life (PML) (e.g. "I have a good sense of what makes my life meaningful"), and search for meaning in life (SML) (e.g. "I am seeking a purpose or missions for my life"). Participants rate items on a scale ranging from 1(*absolutely untrue*) to 7 (*absolutely true*). Items are summed by subscale. Higher scores on both subscales indicate higher presence of meaning in life, or the extent to which participants feel their lives are meaningful, and search for meaning in life, the extent to which people are actively seeking a sense of meaning. During initial development and validation Cronbach's alphas were relatively high for both PML and SML, .86 to .88. Test-retest stability coefficients were good (.70 and .73) and showed good internal consistency (.88 and .93) for MLQ-P and MLQ-S, respectively. For

this study, internal consistency was assessed using Cronbach's alpha, which indicated excellent reliability for both the presence ($\alpha = .92$) and search ($\alpha = .91$) subscales.

Mindful Attention Awareness Scale.

The Mindful Attention Awareness Scale (MAAS) was developed by Brown and Ryan (2003) as a measure of the general tendency to be attentive to and aware of present-moment experience in daily life. The MAAS is focused on the presence or absence of attention to and awareness of what is occurring in the present moment and operationalizes mindfulness as a single construct. The MAAS is a 15-item self-report measure and has a single-factor structure that yields a single total score. Higher scores reflect higher levels of dispositional mindfulness. Using a 6-point Likert scale (almost always to almost never), respondents rate how often they have experiences of feeling preoccupied or running on "autopilot." Items include, "I find it difficult to stay focused on what's happening in the present," and "It seems I am "running on automatic," without much awareness of what I'm doing."

The single factor structure of the MAAS has been validated (Brown & Ryan, 2003; Carlson & Brown, 2005). The MAAS has demonstrated good internal consistency in both the undergraduate population (.82) and in non-clinical adult samples (.87). Internal consistency estimates in the current study were equally strong; Cronbach's alpha coefficient was .89.

As evidence of convergent validity, scores on the MAAS positively correlated with positive affect, hope, optimism, life satisfaction, and negative relationships with rumination, depression, anxiety, and stress (Carlson & Brown, 2005). Brown and Ryan (2003) tested the factor structure of the MAAS, using Confirmatory Factor Analysis (CFA) testing, and confirmed the validity of the MAAS with a sample of 327 college students. They reported adequate fit for a

single-factor model based on various indices including goodness-of-fit (.92), and index of fit

(.91).

Adult Hope Scale.

The adult hope scale (AHS; Snyder et al., 1991) measures Snyder's cognitive model of

hope which defines hope as "a positive motivational state that is based on an interactively

derived sense of successful (a) agency (goal-directed energy), and (b) pathways (planning to

meet goals)" (Snyder et al., 1991, p. 287). The adult hope scale contains 12 items with four

items that measure pathways thinking, four items that measure agency thinking, and four filler

items. A total score is obtained by summing the items' scores minus the four filler items (3, 5, 7,

and 11). The total hope score ranges from 8–32, with larger scores indicating higher levels of

hope. Participants respond to each item using an 8-point Likert scale ranging from definitely

false to definitely true. Snyder et al. (1991) demonstrated good test–retest reliability as well as

discriminant and convergent validity. The Adult Hope Scale is positively correlated with

perceived problem-solving and self-esteem, and it is negatively correlated with hopelessness and

depression (Synder et al., 1991). The measure has demonstrated strong reliability with

Cronbach's alphas from .74 to .84 in college student samples and test-retest correlations .80 or

above over periods exceeding 10 weeks (Snyder et al., 1991). The factor analysis results from

the normative study by Snyder produced a two-factor model that accounted for 52% of the

variance, discriminant validity with unrelated constructs (e.g., self-consciousness; r= .06 and -

.03), convergent validity correlations of r = .50 or higher for related constructs (e.g., positive

outcome expectations) and negative correlations with hopelessness (r = -.51). For this study,

internal consistency was assessed using Cronbach's alpha, which indicated good reliability for

both the agency (α = .80) and pathways (α = .80) subscales and the total hope score (α = .88).

Positive and Negative Affect Schedule.

The Positive Affect and Negative Affect Schedule (PANAS) questionnaire was developed to assess general affect or mood (Watson et al., 1988). Participants rate 20 items on the two subscales positive affect (e.g. "interested") and negative affect (e.g. "upset"). This questionnaire consists of 10 items that measure positive affect (PA) traits (interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, and active) and 10 items that measure negative affect (NA) traits (distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid). Participants rate items on a scale ranging from 1 (very slightly or not at all) to 5 (extremely) on the following instructions "Indicate to what extend you feel this way right now, that is, at the present moment OR indicate the extent you have felt this way over the past week." Higher scores on the positive affect subscale represent higher levels of positive affect and lower scores on the negative affect subscale represent lower levels of negative affect.

The Positive and Negative Affect Schedule (PANAS) is one of the most widely used scales to measure mood or emotion (Crawford & Henry, 2004). The validation study included six groups of undergraduate students ranging from 586 – 1,002 participants. Watson et al. (1988) found strong internal consistency across these six samples for both of the subscales with Cronbach's alphas above 0.83 for the PA scale and 0.84 for the NA scale for each group. Watson and Walker (1996) also found evidence of high internal consistency, with Cronbach's alpha ranging from 0.84 to 0.87 for the NA scale and 0.84 to 0.90 for the PA scale. Test-retest for both Negative Affect (.71) and Positive Affect was good (.68). For this study, internal consistency was assessed using Cronbach's alpha, which indicated excellent reliability for both the positive emotion ($\alpha = .90$) and negative emotion ($\alpha = .90$) subscales.

The Depression Anxiety Stress Scale.

The Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995) is a 21-item measure and has three subscales: Depression (7-items), anxiety (7-items), and stress (7-items). The Depression scale measures low positive affect, pessimism about the future, loss of self-esteem, loss of ability to experience enjoyment or satisfaction, and a sense of hopelessness. The Anxiety scale measures somatic symptoms, autonomic arousal, situational anxiety, and subjective anxious affect. The Stress scale measures problems with relaxing, nervous arousal, how easily one is upset, irritability, and impatience. Sample questions on this measure include, "I felt that life was meaningless" for depression, "I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)" for anxiety, and "I found myself getting agitated" for stress. The measure is based on a 4-point Likert scale ranging from 0 (Did not apply to me at all) to 3 (Applied to me very much or most of the time). According to Lovibond and Lovibond (1995), normal scores on the three subscales are scores that are less than 9 for Depression, 7 for Anxiety, and 14 for Stress. Lovibond and Lovibond (1995) created a severity rating for each scale and scores can range from "normal" to "extremely severe." The Cronbach's alphas for the DASS–21 subscales have been examined in clinical and nonclinical samples and found to be 0.94 for Depression, 0.87 for Anxiety, and 0.91 for Stress (Antony, et al., 1998). Osman et al. (2012) recently examined the psychometric properties of the DAAS-21 in a sample of 887 undergraduate students. The study found high internal consistency for Depression (.85), Anxiety (.81), and Stress (.88). Lovibond (n.d.) reported that the DASS-21 scales can be composited into a meaningful total score that measures "negative emotional symptoms." For the purposes of this study, the DASS-21 total score will be used to assess overall mental health symptoms. Internal consistency was assessed using Cronbach's alpha,

which indicated good to excellent reliability for the depression (α = .90), anxiety (α = .86), stress (α = .88), and total DASS-21 (α = .95) scale.

Brief COPE Inventory.

The Brief COPE Inventory (BCI; Carver, 1997) is the abbreviated version of the original 60-item COPE Inventory created by Carver, Scheier, and Weintraub (1989). The Brief COPE inventory was created in response to criticism that the original scale included redundant items and the 60-item measure could be overwhelming for some participants (Carver, 1997). The Brief COPE is a 28-item self-report measure designed to assess behavioral coping strategies. The scale is theoretically based on the Lazarus and Folkman model of coping (1984), and Carver and Scheier (1990) model of behavioral self-regulation. The instrument includes 14 sub-scales that consist of two items each. Each sub-scale represents a theoretical coping response. Sample items include statements such as, "I've been getting emotional support from others" and "I've been using alcohol or other drugs to make myself feel better." Participants are asked to rate each item using a 4-point Likert scale ranging from 1 (I haven't been doing this at all) to 4 (I've been doing this a lot) in relation to how they have been coping with the stress in their life during the past week. In the original sample, Carver (1997) assessed reliability using Cronbach's alphas and found that the internal consistency of the coping response scales ranged from poor to excellent: venting (.50), denial (.54), acceptance (.57), positive reframing (.64), instrumental support (.64), behavioral disengagement (.65), active coping (.68), self-blame (.69), emotional support (.71), self-distraction (.71), planning (.73), humor (.73), religion (.82), and substance use (.90).

The Brief COPE does not include an "overall" coping index score (Carver, n.d.). However, Carver (n.d.) has encouraged researchers to create their own second-order factors. For

the purposes of this dissertation, the Brief COPE subscales were combined to assess adaptive and maladaptive coping. Previous research has supported this factor structure (Donnally, 2002; Jacobson, 2005). The adaptive coping dimension includes the subscales of active coping, use of emotional support, positive reframing, use of instrumental support, planning, humor, acceptance, and religion. The maladaptive coping dimension includes the subscales of self-distraction, denial, venting, substance use, self-blame, and behavioral disengagement (giving up attempts to cope). Adaptive coping is the sum of 16 items ranging from 16 – 64, and maladaptive coping is the sum of 12 items ranging from 12 – 48. Higher score on either scale indicate more frequent use of that coping approach. For this study, preliminary analyses were conducted using the adaptive and maladaptive scales. Internal consistency was assessed using Cronbach's alpha, which indicated good reliability for adaptive coping ($\alpha = .82$) and acceptable reliability for maladaptive coping ($\alpha = .77$).

Power Analysis

Statistical power is the level of confidence we have that the study will detect a potential effect in the sample data so that if an effect exists, it will be detected. It refers to the probability of a type II statistical error or a false negative finding where the null hypothesis is incorrectly accepted. Using the program G*Power 3.1.9.2 (Faul et al., 2009) *a priori* power analyses were conducted to determine the minimum number of participants needed to have meaningful results and in turn, reduce the chances of type II statistical errors. Below, power analyses will be discussed separately for each study hypothesis and planned statistical analysis.

Research Questions

Question 1

Is there a significant relationship between internal psychological resources i.e. positive emotion, mindfulness, hope, meaning in life, and existential thought, and coping behaviors?

Question 2

Does the process of engaging in existential thought help clarify meaning in life for college students?

Question 3

How does a student's coping style influence their overall mental health?

Question 4

What psychological resources and coping strategies are most effective in helping college students manage mental health symptoms?

Hypotheses

Hypothesis 1: It is hypothesized that there will be positive correlations between positive emotion, mindfulness, hope, meaning in life, and existential thought and adaptive coping strategies, and a negative correlation between positive emotion, mindfulness, hope, meaning in life, and existential thought and maladaptive coping strategies.

Planned Statistical Analysis for Hypothesis 1: The hypothesis that there will be positive correlations between positive emotion, mindfulness, hope, meaning in life, and existential thought and adaptive coping strategies, and a negative correlation between positive emotion, mindfulness, hope, meaning in life, and existential thought and maladaptive coping strategies will be tested through two multiple regression analyses. In the regressions, positive emotion,

mindfulness, hope, meaning in life, and existential thought will serve as the predictor

(independent) variables, and adaptive and maladaptive coping strategies will serve as the

criterion (dependent) variables.

Power Analysis for Hypothesis 1: On the basis of an apriori power analysis with moderate

power, with an alpha of .05, and a moderate effect size for multiple regression, the estimated

number of participants needed is 138.

Hypothesis 2: It is hypothesized that students who engage in higher levels of existential

thought will have more clarity in their meaning in life. Specifically, it is predicted that higher

scores on the Scale for Existential Thought will correlate with higher levels of the Presence and

Search for Meaning in Life subscales of the Meaning in Life Questionnaire.

Planned Statistical Analysis for Hypothesis 2: This hypothesis will be tested by two

linear regression analyses. In the analysis, existential thought will serve as the predictor

(independent variable) of presence (model 1) and search (model 2) for meaning (dependent

variables; criterion outcomes).

Power Analysis for Hypothesis 2: On the basis of an apriori power analysis with

moderate power, with an alpha of .05, and a moderate effect size for simple linear regression, the

estimated number of participants needed is 43.

Hypothesis 3: It is hypothesized that there will be significant relationships between coping

and mental health symptoms such that adaptive coping strategies will negatively correlate with

mental health symptoms and maladaptive coping strategies will positively correlate with mental

health symptoms.

Planned Statistical Analysis for Hypothesis 3: The hypothesis that predicts significant

relationships between coping and mental health symptoms will be tested through a canonical

correlation analysis. In the canonical correlation analysis, coping strategies will serve as the predictors (independent variables) of mental health symptoms (depression, anxiety and stress).

Power Analysis for Hypothesis 3: On the basis of an apriori power analysis with moderate power, with an alpha of .05, and a moderate effect size for regression and canonical correlation, the estimated number of participants needed is 160.

Hypothesis 4: It is hypothesized that adaptive coping strategies and psychological resources will negatively correlate with mental health concerns and maladaptive coping strategies will positively correlate with mental health symptoms.

Planned Statistical Analysis for Hypothesis 4: The fourth hypothesis, which states that there will be significant correlations between coping, psychological resources and mental health, will be tested through multiple regression analyses. The predictors (independent variables) will be the composite (total) scores for adaptive and maladaptive coping, positive emotion, mindfulness, hope, meaning in life, and existential thought, and the outcome variables (dependent/criterion) will be depression, stress and anxiety.

Power Analysis for Hypothesis 4: On the basis of an apriori power analysis with moderate power, with an alpha of .05, and a moderate effect size for multiple regression, the estimated number of participants needed is 153.

Chapter Four

Results

The purpose of this study was to test for associations between existential thought and other related internal psychological resources (positive emotion, mindfulness, hope, and meaning in life) and coping strategies college students utilize to manage their mental health. This chapter will outline the statistical procedures and results, beginning with data exploration and evaluation, followed by preliminary analyses, a description of the sample, primary analyses related to each research question and, lastly, a supplemental analysis.

Exploratory Analysis

A total of 265 participants started the survey through Amazon's Mechanical Turk (MTurk), but 12 were immediately excluded as they were not currently enrolled in an undergraduate program. Of the 253 participants that completed the survey, two participants were removed for incomplete surveys and missing data. Two-hundred-fifty-one participants were included in the final analyses. All analyses used SPSS v. 21, and significance was determined with a *p* of less than .05 criterion.

Preliminary Analysis

Prior to conducting the main analyses, all variables were carefully evaluated to ensure that they met statistical assumptions (e.g., normality). Normality for continuous variable items was examined through the mean to standard deviation ratio, and further examination of standardized skewness and kurtosis values. On the basis of these data screening procedures, there was no evidence of violations of normality.

Sample Description

A summary of participant demographic characteristics is outlined in Table 1. Participants in the final sample were between 18 and 32 years old ($M = 22.23$, $SD = 1.89$). Sixty-one percent identified as female ($n = 153$), thirty-eight percent identified as male ($n = 97$) and one percent identified as gender nonconforming ($n = 1$). The majority of respondents identified as White/Caucasian (67%), followed by Black/African American (14%), Asian or Pacific Islander (9%), Hispanic/Latino (6%), Biracial/Multiracial (3%), and Native American (1%). Sixty-five percent reported that they attend a public university ($n = 162$), 18% attend private university ($n = 46$), and 17% attend community college (n = 17). Thirty-seven percent ($n = 93$) were seniors, 27% ($n = 68$) sophomores, 25% ($n = 63$) juniors, and 11% (n = 27) freshman. Thirty-five percent ($n = 88$) identified as commuter students, 31% ($n = 77$) first generation college students, and 23% ($n = 57$) transfer students.

Table 1

Demographic Characteristics of the Sample (N = 251)

	N	%
Gender		
Male	97	38
Female	153	61
Gender Nonconforming	1	1
Ethnicity		
African-American	35	14
Asian-American	23	9
Caucasian/White	167	67
Hispanic/Latino(a)	16	6
Native American	3	1
Biracial/Multiracial	7	3

	N	%	(cont'd)
College Type			
Public University	162	65	
Private University	46	18	
Community College	43	17	
Class Year			
Freshman	27	11	
Sophomore	68	27	
Junior	63	25	
Senior	93	37	
Student Type			
Commuter	88	35	
Transfer	57	23	
First Generation	77	31	
Other	29	11	

To assess the bivariate relationships between all variables in the study, a series of two-tailed Pearson product moment correlations were calculated and tested for significance (see Table 2). Overall, examination of the correlation matrix suggests that the set of predictors are sufficiently related to one another without being so strongly related to a degree that would suggest multicollinearity or redundancy.

Table 2

Correlations Between all the Variables in the Study Sample

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Existential Thought	-											
2. Mindfulness	-.19**	-										
3. Presence of Meaning in Life	.13*	.40**	-									
4. Search for Meaning in Life	.23**	-.03	-.05	-								
5. Hope	.11	.33**	.59**	.15*	-							
6. Positive Emotion	.24**	.34**	.59**	.13*	.55**	-						
7. Negative Emotion	.18**	-.34**	-.41**	-.07	-.50**	-.26**	-					
8. Depression	.16*	-.45**	-.56**	.04	-.53**	-.50**	.64**	-				
9. Anxiety	.28**	-.40**	-.35**	.04	-.36**	-.24**	.67**	.67**	-			
10. Stress	.22**	-.44**	-.38**	.12	-.36**	-.27**	.64**	.75**	.78**	-		
11. DASS21-Total	.24**	-.48**	-.48**	.07	-.46**	-.38**	.71**	.90**	.90**	.93**	-	
12. Adaptive Coping	.31**	.21**	.37**	.26**	.36**	.51**	-.08	-.21**	.01	-.01	-.08	-
13. Maladaptive Coping	.28**	-.38**	-.40**	.06	-.38**	-.25**	.61**	.64**	.58**	.56**	.65**	.11

Note. DASS21-Total = Combined score on the Depression, Stress, and Anxiety subscales of the DASS-21.

p <.05. ** *p* < .01.

Prior to conducting inferential statistics, descriptive statistics for the primary variables of the study were also obtained. The statistics of the following variables are presented in Table 3: level of existential thought (as measured by the SET), mindfulness (as measured by the MAAS), presence of meaning in life (as measured by the MLQ), active search for meaning in life (as measured by the MLQ), hope (as measured by the AHS), positive emotion (as measured by the PANAS), negative emotion (as measured by the PANAS), depression (as measured by the DASS-21), anxiety (as measured by the DASS-21), stress (as measured by the DASS-21), total mental health symptoms (as measured by the DASS-21 total score), adaptive coping (as measured by the Brief COPE inventory), and maladaptive coping (as measured by the Brief COPE inventory).

Participants' level of existential thought was measured by the Scale for Existential Thinking (SET; Allen & Shearer, 2012). Higher scores indicate a greater tendency to reflect on questions related to human existence. Internal consistency was assessed using Cronbach's alpha, which indicated good to excellent reliability (α = .89) for the SET. Participants' level of dispositional mindfulness was measured by the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003). Higher scores reflect higher levels of dispositional mindfulness. The MAAS displayed good to excellent reliability with a Cronbach's alpha of .89. The Meaning in Life Questionnaire (MLQ; Steger et al., 2006) was used to measure participants' degree of presence and search for meaning in life. Higher scores on the presence subscale indicates the extent to which participants feel their lives are meaningful. High scores on the search subscale indicates the extent to which people are actively seeking meaning in their lives. Cronbach's alpha indicated excellent reliability for both the presence (α = .92) and search (α = .91) subscales. Participants' level of hope was measured by the Adult Hope Scale (AHS; Snyder et

al., 1991). Higher scores for the total scale indicated a higher level of hope. Reliability on this scale was good to excellent with a Cronbach's alpha of .88. Participants' general affect was measured using the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Higher scores on the positive affect subscale represent higher levels of positive affect and lower scores on the negative affect subscale represent lower levels of negative affect. The PANAS demonstrated excellent internal consistency with Cronbach's alphas of .90 for positive emotion and .90 for negative emotion. Participants' mental health symptoms were assessed using the Depression Anxiety Stress Scale (DASS-21; Lovibond and Lovibond, 1995). All three scales were combined as a composite measure of negative emotional symptoms. For this study, internal consistency was assessed using Cronbach's alpha, which indicated good to excellent reliability for the depression ($\alpha = .90$), anxiety ($\alpha = .86$), stress ($\alpha = .88$), and total mental health symptoms ($\alpha = .95$). Participants' coping strategies were measured by the Brief COPE Inventory (Carver, 1997). For the purposes of this study, the Brief COPE scores were composited into two dimensions (adaptive and maladaptive) using the method suggested by previous researchers (Donnally, 2002; Jacobson, 2005). Higher scores on the Adaptive Coping subscale indicated a stronger ability to use more positive coping styles. Higher scores on the Maladaptive Coping subscale indicated a stronger tendency to use negative coping mechanisms. The Adaptive Coping subscale displayed good reliability ($\alpha = .82$), and the Maladaptive Coping subscale demonstrated acceptable reliability ($\alpha = .77$).

Table 3

Descriptive Statistics for Primary Variables

Variable	M	SD
Existential Thought	30.75	9.77
Mindfulness	3.67	.90
Presence of Meaning in Life	4.17	1.51
Search for Meaning in Life	5.00	1.31
Hope	43.48	9.86
Positive Emotion	29.34	8.40
Negative Emotion	21.43	8.44
DASS-21 - Depression	14.73	10.53
DASS-21 - Anxiety	12.07	9.44
DASS-21 - Stress	15.86	9.63
DASS-21 Total	42.66	26.80
Adaptive Coping	39.21	7.83
Maladaptive Coping	24.98	6.04

The DASS-21 subscales were further analyzed to determine the clinical significance and distribution of mental health symptoms within the study sample. Severity scores were determined using suggested cutoff values from Lovibond and Lovibond (1995). A summary of DASS-21 score distribution of the sample is outlined in Table 4. Surprisingly, the majority of participants demonstrated "extremely severe" levels with 53% indicating extremely severe depression, 55% reporting extremely severe anxiety, and 47% endorsing extremely severe levels

of stress. This high level of mental health symptoms reflects the increased need for student

counseling resources as discussed in Chapter 1.

Table 4

Distribution of DASS-21 Scores

	N	%
Depression		
Normal	59	23
Mild	18	7
Moderate	22	9
Severe	20	8
Extremely Severe	132	53
Anxiety		
Normal	54	22
Mild	21	8
Moderate	23	9
Severe	15	6
Extremely Severe	138	55
Stress		
Normal	53	21
Mild	13	5
Moderate	36	14
Severe	31	13
Extremely Severe	118	47

Primary Analyses

Research Question 1: Is there a significant relationship between internal psychological resources (positive emotion, mindfulness, hope, meaning in life, and existential thought) and coping behaviors?

Hypothesis 1: It was hypothesized that there would be positive correlations between positive emotion, mindfulness, hope, meaning in life, existential thought and adaptive coping strategies, and a negative correlation between positive emotion, mindfulness, hope, meaning in life, existential thought and maladaptive coping strategies. The hypothesis was tested with two multiple regression analyses. In the regressions, positive emotion, mindfulness, hope, meaning in life, and existential thought served as the predictor (independent) variables, and adaptive and maladaptive coping strategies served as the criterion (dependent) variables.

Analysis 1: A linear regression analysis was used to examine the relationship between adaptive coping skills and various positive psychological resources. Table 5 summarizes the descriptive statistics and analysis results. As predicted, each of the positive psychological resources positively and significantly correlated with coping, indicating that those with higher scores on these variables tend to have higher degree of adaptive coping. As shown in Table 5, the overall model predicting adaptive coping skills from positive psychological resources was significant, $F(5, 245) = 22.47$, $p < .001$, and accounted for 30% of the variance in adaptive coping skills. Existential thought and positive emotion had significant positive regression beta weights, indicating students with higher scores on these scales were expected to have higher levels of adaptive coping, after controlling for the other variables in the model. Mindfulness, hope, and meaning in life did not contribute to the linear prediction regression model.

Table 5

Summary Statistics, Correlations, and Results from the Linear Regression Analysis for Positive Psychological Resources and Adaptive Coping Skills (N=251)

Variable	*M*	*SD*	Correlation with Adaptive Coping	*B*	*SE B*	*β*
Existential Thought	30.75	9.77	.31**	.18	.05	.23*
Positive Emotion	29.34	8.40	.51**	.32	.07	.35*
Mindfulness	3.67	.89	.21**	.70	.54	.08
Hope	43.48	9.86	.36**	.06	.06	.08
Presence of Meaning	4.18	1.51	.37**	.32	.38	.06

Note. R^2 = .31; adjusted R^2 = .30.

* *p* < .01

A linear regression analysis was conducted to examine the relationship between maladaptive coping skills and various positive psychological resources. Table 6 summarizes the descriptive statistics and analysis results. Mindfulness, positive emotion, meaning in life, and hope were negatively and significantly correlated with the criterion, indicating that those with higher scores on these variables tend to have lower degree of maladaptive coping. Surprisingly, Existential thought was positively correlated to maladaptive coping.

As shown in Table 6, the overall model predicting maladaptive coping skills from positive psychological resources was significant, $F(5, 245) = 23.53$, $p < .001$, and accounted for 31% of the variance in maladaptive coping skills. As can be seen in Table 6, mindfulness, hope, and meaning in life had significant negative regression beta weights and existential thought had significant positive regression beta weights, indicating students with higher scores on mindfulness, hope, and meaning in life and lower scores on existential thought were expected to

have lower levels of maladaptive coping, after controlling for the other variables in the model.

Positive emotion did not contribute to the linear regression model.

Table 6

Summary Statistics, Correlations, and Results from the Linear Regression Analysis for Positive Psychological Resources and Maladaptive Coping Skills (N=251)

Variable	*M*	*SD*	Correlations with Maladaptive Coping	*B*	*SE B*	*β*
Existential Thought	30.75	9.77	.28**	.19	.04	.31**
Positive Emotion	29.34	8.40	-.25**	-.01	.05	-.01
Mindfulness	3.67	.89	-.38**	-.99	.41	-.15*
Hope	43.48	9.86	-.38**	-.13	.04	-.22**
Presence of Meaning	4.18	1.51	-.40**	-.99	.29	-.25**

Note. $R^2 = .32$; adjusted $R^2 = .31$.

* $p < .05$ ** $p < .001$

Research Question 2: Does the process of engaging in existential thought help clarify meaning in life for college students?

       Hypothesis 2: It was predicted that students who display a higher degree of existential reflection would have more clarity in their meaning in life. This hypothesis was tested by two linear regression analyses. In the analysis, existential thought served as the predictor (independent variable) of presence (model 1) and search (model 2) for meaning (dependent variables; criterion variables).

       Analysis 2: A linear regression analysis was conducted to examine the relationship between existential thought and presence of meaning in life. Table 7 summarizes the descriptive statistics and analysis results. As shown in Table 7, the overall model predicting presence of meaning in life from existential thought was significant, $F(1, 249) = 4.29$, $p = .04$. Existential thought had a significant positive regression beta, indicating students with a greater degree of existential reflection were expected to have higher levels of presence of meaning in life.

Table 7

Summary Statistics, Correlations, and Results from the Linear Regression Analysis for Existential Thought and Presence of Meaning in Life (N=251)

Variable	M	SD	Correlations with Presence	B	$SE\ B$	β
Existential Thought	30.75	9.77	.13*	.02	.01	.13*

Note. $R^2 = .02$. adjusted $R^2 = .01$.

* $p < .05$

As shown in Table 8, the overall model predicting active search for meaning in life from existential thought was significant, $F(1, 249) = 14.28$, $p < .001$. Existential thought had a significant positive regression weight, indicating students with a greater degree of existential reflection were expected to have higher levels of search for meaning in life.

Table 8

Summary Statistics, Correlations, and Results from the Linear Regression Analysis for Existential Thought and Search for Meaning in Life (N=251)

Variable	*M*	*SD*	Correlations with Search	*B*	*SE B*	*β*
Existential Thought	30.75	9.77	.23**	.02	.01	.13**

Note. $R^2 = .05$. adjusted $R^2 = .05$.

* $p < .001$

Research Question 3: How does a student's coping style influence their overall mental health?

Hypothesis 3: It was hypothesized that there would be significant relationships between coping and mental health symptoms such that adaptive coping strategies will negatively correlate with mental health symptoms and maladaptive coping strategies will positively correlate with mental health symptoms. The third hypothesis was tested through a canonical correlation analysis. In the canonical correlation analysis, coping strategies served as the predictors (independent variables) of mental health symptoms (depression, anxiety and stress).

Analysis 3: A multivariate canonical correlation analysis was used to determine if there is a relationship between coping strategies and mental health symptoms. The analysis yielded a significant canonical correlation of .71 with a strong effect size, Wilk's Lambda statistic (Wilk's $\lambda = .47$), $F(6, 492) = 37.89$, $p < .001$. As seen in Figure 1, only maladaptive coping significantly loaded on the first canonical variate for coping strategies (x). Conversely, all 3 variables in set 2 (depression, anxiety, and stress) significantly loaded on the first canonical variate for mental health symptoms (y). The significant variable loadings for both sets were all positively correlated suggesting that higher levels of maladaptive coping corresponded with more symptoms of depression, anxiety and stress.

Figure 1. *Loadings and canonical correlations for both canonical variate pairs for coping and psychological distress variables.*
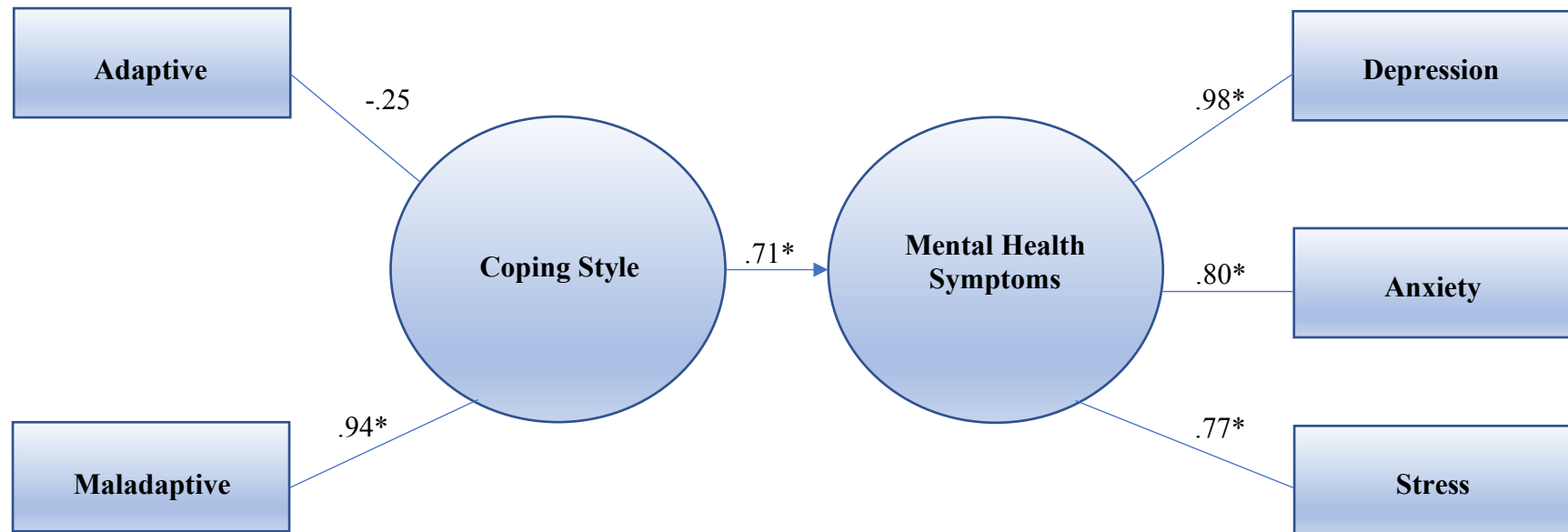
* *p* < .05

Research Question 4: What psychological resources and coping strategies are most effective in helping college students manage mental health symptoms?

Hypothesis 4: It was predicted that adaptive coping strategies and psychological resources will negatively correlate with mental health concerns and maladaptive coping strategies will positively correlate with mental health symptoms. The fourth hypothesis was tested through a linear regression. The predictors (independent variables) will be the composite (total) scores for adaptive and maladaptive coping, positive emotion, mindfulness, hope, meaning in life, and existential thought, and the outcome variables (dependent/criterion) will be the composite score for depression, stress and anxiety symptoms.

Analysis 4: As shown in Table 10, the overall model predicting mental health symptoms from positive psychological resources and coping skills was significant, $F(7, 243) = 42.48$, $p < .001$, and accounted for 54% of the variance in mental health symptoms. As can be seen in Table 10, positive emotion, mindfulness, hope, and meaning in life had significant negative regression weights and existential thought and maladaptive coping had significant positive regression weights, indicating students with higher scores on positive emotion, mindfulness, hope, and meaning in life, and lower scores on existential thought and maladaptive coping were expected to have lower levels of mental health symptoms, after controlling for the other variables in the model. Adaptive coping did not contribute to the linear regression model.

Table 9

Summary Statistics, Correlations, and Results from the Linear Regression Analysis for Positive Psychological Resources, Coping Strategies, and Mental Health Symptoms (DASS-21 Total) (N=251)

Variable	*M*	*SD*	Correlations with Mental Health Symptoms	*B*	*SE B*	*β*
Adaptive Coping	39.21	7.83	-.08	.03	.19	.01
Maladaptive Coping	24.98	6.04	.65**	1.87	.25	.42**
Existential Thought	30.75	9.77	.24**	.41	.14	.15*
Positive Emotion	29.34	8.40	-.38**	-.33	.19	-.10*
Mindfulness	3.67	.89	-.48**	-4.65	1.52	-.16*
Hope	43.48	9.86	-.46**	-.36	.16	-.13*
Presence of Meaning	4.18	1.51	-.48**	-2.44	1.09	-.14*

Note. $R^2 = .55$; adjusted $R^2 = .54$.

* $p < .05$ ** $p < .001$

Supplemental Analysis

Supplemental Research Question: Do the contemplative practices of mindful attention and existential thought work together to help clarify meaning in life for college students?

Hypothesis: It was predicted that students who display a higher degree of existential thought and mindful awareness would have more clarity in their meaning in life. This hypothesis was tested by two linear regression analyses. In the analysis, existential thought and mindfulness served as the predictors (independent variables) of presence (model 1) and search (model 2) for meaning (dependent variables; criterion outcomes).

Analysis: A linear regression analysis was conducted to examine the relationship between existential thought, mindful awareness, and presence of meaning in life and search for meaning in life. As shown in Table 10, the overall model predicting presence of meaning in life from existential thought and mindfulness was significant, $F(2, 248) = 32.04$, $p < .001$. Existential thought and mindfulness had significant positive regression weights, indicating students with a greater degree of existential reflection and mindful awareness were expected to have higher levels of presence of meaning in life.

Table 10

Summary Statistics, Correlations, and Results from the Linear Regression Analysis for Existential Thought, Mindfulness and Presence of Meaning in Life (N=251)

Variable	*M*	*SD*	Correlations with Presence	*B*	*SE B*	*β*
Existential Thought	30.75	9.77	.13*	.03	.01	.22**
Mindfulness	3.67	0.89	.40**	.74	.10	.44**

Note. $R^2 = .21$. Adjusted $R^2 = .19$.
* $p < .001$

As shown in Table 11, the overall model predicting search for meaning in life from existential thought and mindfulness was significant, $F(2, 248) = 7.13, p < .001$. However, mindfulness did not emerge as a significant contributor to this model. Therefore, existential thought alone predicted search for meaning in life.

Table 11

Summary Statistics, Correlations, and Results from the Linear Regression Analysis for Existential Thought, Mindfulness and Search for Meaning in Life (N=251)

Variable	*M*	*SD*	Correlations with Search	*B*	*SE B*	*β*
Existential Thought	30.75	9.77	.23**	.03	.01	.24**
Mindfulness	3.67	0.89	-.03	.01	.09	.01

Note. $R^2 = .05$. Adjusted $R^2 = .05$.
* $p < .001$

Chapter Five

Discussion

This chapter will discuss and interpret the findings of this study, review the study's limitations, share clinical implications, and highlight some areas for future research. The present study investigated the relationships between positive psychological resources, existential thought, coping strategies, and mental health symptoms among a national sample of 251 undergraduate students. The purpose of investigating these factors was to develop empirical support for university college counselors, faculty, and administrators working with college students and to provide a deeper and richer understanding of what psychological stressors students are experiencing.

Summary of Results

The results of the statistical analyses provided partial to full support for the hypotheses of the study. First it was hypothesized that there would be positive correlations between positive emotion, mindfulness, hope, meaning in life, and existential thought and adaptive coping skills. The results of the linear regression analysis partially support this hypothesis. The overall model predicting adaptive coping skills from positive psychological resources was significant with positive emotion and existential thought significantly contributing to the model. However, mindfulness, hope, and meaning in life, did not contribute to the linear regression model. The overall model predicting maladaptive coping skills from positive psychological resources was also significant, with mindfulness, hope, existential thought, and meaning in life contributing to the model. Positive emotion did not contribute to the model. Contrary to our hypothesis, existential thought was positively correlated to maladaptive coping.

Secondly, it was hypothesized that that students who display a higher degree of

existential reflection would have more clarity in their meaning in life. The analysis results fully supported this hypothesis and found that existential reflection significantly predicted both the search for meaning in life and presence of meaning in life.

The third hypothesis predicted that adaptive coping strategies would predict lower levels of mental health symptoms and maladaptive coping strategies would predict higher rates of mental health symptoms. This hypothesis was partially supported as adaptive coping did not emerge significant in the model. Results from the analysis suggest that higher levels of maladaptive coping behaviors corresponded to increased symptoms of depression, anxiety, and stress.

The fourth hypothesis predicted that adaptive coping strategies and positive psychological resources would be negatively correlated with mental health symptoms and maladaptive coping strategies would be positively correlated with mental health symptoms. This hypothesis was partially supported. The overall model predicting mental health symptoms from positive psychological resources and coping skills was significant. However, adaptive coping did not contribute to the linear regression model. Contrary to our hypothesis, existential thought was positively correlated to mental health symptoms.

Lastly, it was hypothesized that mindful awareness would significantly contribute to the models proposed in Research Question 2. This hypothesis was partially supported as only the model for presence of meaning emerged as significant. Mindfulness and existential thought significantly predicted presence of meaning in life. Therefore, students who participate in both of these contemplative practices will be more likely to have meaning in their lives than those that engage in existential thought alone.

Interpretation of Hypotheses

The first research question investigated the relationship between positive psychological resources and coping behaviors. Hypothesis 1 postulated that there would be a positive correlation between positive psychological resources and adaptive coping behaviors and a negative relationship between positive psychological resources and maladaptive behaviors. This hypothesis was partially supported in this study. Positive emotion and existential reflection significantly predicted adaptive coping after controlling for the other psychological resource variables (mindfulness, hope, and meaning in life) in the model. Although mindfulness and hope were not significant in the model, all positive psychological resources had significant positive correlations with adaptive coping skills. Consistent with our hypothesis, maladaptive coping had significant negative correlations with mindfulness, hope, positive emotion, and meaning in life. Surprisingly, existential awareness significantly correlated to maladaptive coping in a positive direction. Mindfulness, hope, meaning in life and existential awareness negatively predicted maladaptive coping behaviors. However, contrary to our hypothesis, existential reflection predicted higher rates of maladaptive coping. These results indicate that existential reflection significantly contributes to the cultivation of both adaptive and maladaptive coping behavior. Yalom (1980) believed that, "the confrontation with the givens of existence is painful, but ultimately healing (p. 8). Therefore, the process of existential reflection may produce painful feelings of doubt, worry, and increased anxiety. However, this provides evidence that existential reflection is also correlated with *healing* and adaptive coping behaviors.

The second research question explored the relationship of existential thought and the presence of meaning in life for college students. Hypothesis 2 postulated that existential reflection would be predictive of both higher levels of presence of meaning in life and search for

meaning in life. This hypothesis was fully supported. Additionally, existential thought was positively correlated with search for meaning and the presence of meaning. However, both of these models had low levels of explanatory power. The relationship between existential reflection and meaning in life is complex and requires further study. More research is needed to test other predictors of meaning in life.

The third research question asked how students' coping strategies influence their overall mental health. Hypothesis 3 predicted that adaptive coping would be negatively correlated with mental health symptoms and maladaptive coping would be positively correlated to mental health symptoms. This hypothesis was partially supported as the relationship between adaptive coping and lower mental health symptoms did not emerge as significant. The canonical correlation model, however, indicated that higher levels of maladaptive coping behaviors corresponded with increased symptoms of depression, anxiety and stress. Therefore, the presence of maladaptive behavior appears to have more of a significant effect than the presence of adaptive coping behavior for participants in the current study.

The fourth research question explored the relationship between psychological resources, coping strategies, and mental health symptoms. Hypothesis 4 predicted that positive psychological resources and adaptive coping would be negatively correlated to mental health symptoms and adaptive coping strategies and psychological resources would be negatively correlated with mental health symptoms and maladaptive coping strategies would be positively correlated with mental health symptoms. This hypothesis was partially supported as the overall model predicting mental health symptoms from positive psychological resources and coping skills was significant. As predicted, the positive psychological resources of mindfulness, hope, positive emotion and meaning in life negatively correlated with mental health symptoms and

maladaptive coping strategies positively correlated with mental health symptoms. Contrary to our hypothesis, existential thought significantly contributed to the model in a positive direction and adaptive coping did not significantly contribute to the model.

Existential thought was correlated with both maladaptive coping strategies and presence of mental health symptoms including depression, anxiety, and stress. Although this appears to be a negative outcome, it is important to consider that existential thought was also correlated to both positive emotion and a presence of meaning in life. Seligman et al. (2005) suggested that a complete view of positive psychology should include, "an understanding of suffering and happiness, as well as their interaction" (p. 410). Frankl (1984) noted that, "we have the freedom to find meaning in existence and choose our attitude toward suffering" (p. 133). This study demonstrated that there is a significant correlation between existential reflection and the presence of meaning in life. Therefore, existential thought has the potential to be a growth promoting agent, but may also bring awareness to the suffering in one's life. Students may first engage in existential thought after experiencing suffering through the end of a relationship, loss of a grandparent, or struggling to adjust to their new college environment. Each of these scenarios has the potential for growth, but also has the potential for further suffering. The development of positive psychological resources may be a potential strategy for reducing the detrimental effects of existential thought.

A supplemental research question hypothesized that existential thought and mindfulness would be predictive of both the presence of meaning in life and the search for meaning in life. Although both models emerged as significant overall, mindfulness only contributed to the model for presence of meaning in life. The inclusion of mindfulness significantly improved the model and increased its explanatory power, meaning that mindfulness and existential thought together

are more predictive of meaning in life than existential thought alone. This is a fascinating result as mindfulness and existential thought were not significantly correlated to each other in this sample, but the two constructs share a lot of similarities conceptually. However, these results should be interpreted with caution given that they were exploratory and not part of our a priori analyses. Future studies could expand upon this finding and explore the benefits of contemplative practices. It is possible that the grounded meditation of mindfulness may work to ease some of the existential anxiety that can emerge when one considers their place in the universe.

Demographics

Based on the complexity of understanding a student's experience of psychological stress in college, it was important to determine the nature of relationships between the demographic variables (age, gender, ethnicity, class year, student type, etc.) and the core variables within this study. Several significant group differences emerged. Contrary to Doronh and colleagues (2009) findings, men in the current study endorsed significantly higher rates of adaptive coping strategies when compared to women. Significant differences were found in adaptive coping across a student's year in college. Freshmen self-reported significantly higher rates of adaptive coping skills than sophomores, juniors, and seniors. This suggests that students arrive to college with higher rates of adaptive coping strategies and these skills and behavioral strategies significantly decrease as they move through their college career. There is substantial evidence that college students respond to college stress with maladaptive and unhealthy behavior (Stoliker &Lafreniere, 2015; Pritchard, Wilson, & Yamnitz, 2007). It is unclear why adaptive coping skills decrease over time, but it is possible that these skills become less effective when paired with the stressors of emerging adulthood. Blanchard-Fields (2007) found that young adults are

more likely to use maladaptive coping strategies including avoidance and substance use than older adults. Freshmen students may enter college with a more idealistic perspective and could potentially develop maladaptive coping strategies in response to the chronic psychological stress of college.

There was also a significant difference in existential reflection across different types of students (commuter, transfer, or first-generation college student). Student's self-reported existential reflection was higher among commuter students when compared to transfer and "other" students. Commuter students also displayed significantly higher existential reflection than the "other" group of students. "Other" students did not endorse that they were a commuter, transfer, or first-generation college student. Perhaps the task of commuting back and forth to school provides students with more time alone with their thoughts to reflect on their beliefs about life and our existence. No significant differences were found for the type of college (public, private, or community) that the student attended.

Clinical Implications

Since the 1990s, university and college counseling centers have been experiencing a shift in the needs of students seeking counseling services from developmental and informational needs, to severe psychological problems. With many college counseling centers struggling to meet the increased demands, many psychologists have claimed that there is a growing "mental health crisis" occurring on American college campuses (Joyce, 2016, p. 17). Analysis of the DASS-21 provides evidence to that statement as over 60% of the undergraduate students in the current sample self-reported *severe* to *extremely severe* rates of depression (60.6%), anxiety (61%), and stress (59.4%).

College often coincides with the developmental period of emerging adulthood. Arnett (2004) describes this stage of life as "unstable" and research has demonstrated emerging adults are more likely to face higher rates of interpersonal, financial, and vocational stress than any other developmental period (Kessler et al., 2005). In order to effectively grasp the unique challenges that emerging adults face, it is necessary for university faculty members, administrators, and college counselors to understand factors that influence mental health symptoms and coping behaviors during this developmental period. This study provides evidence that higher levels of positive psychological resources (hope, meaning, mindfulness, positive emotion) is associated with lower levels of mental health symptoms, and therefore work as protective factors. Additionally, mindfulness, hope, and meaning predicted significantly lower rates of maladaptive coping behaviors among college students. Maladaptive coping behaviors significantly predicted increased rates of depression, anxiety, and stress. These protective factors can all be cultivated through targeted interventions. For example, Davidson, Feldman, and Margalit (2012) developed an intervention for first-year students that focused on promoting hope, self-efficacy, and a sense of coherence. Forty-three first-year students attended the workshop and measurements were recorded directly before, after, and one month later. Students were divided into three groups with 14-15 participants in each group. Students were shown a short lecture on Snyder's (1991) hope theory and were then asked to participate in a 20-minute goal-mapping exercise. This exercise involved writing down one specific goal, identifying three steps necessary to achieve this goal, and also identify any potential obstacles that could get in the way. Next, students were asked to visualize happy moments in their lives in order to promote positive affect. Then students were verbally guided by the group leaders and asked to close their eyes and imagine taking each step on their goal-map. During this visualization, students were

guided back to the positive emotions from earlier. Results indicated that students with increased levels of hope achieved higher grades in the semester following the workshop when compared to their low-hope peers. Additionally, students' sense of coherence and self-efficacy were positively correlated to their level of hope a month after the intervention. Feldman and Dreher (2012) conducted a similar study and demonstrated that even one 90-minute, single-session, intervention can increase a student's level of hope. These results indicate that short on-campus interventions can significantly influence a student's level of hope.

University college counseling centers are often overwhelmed with cases and struggling to meet demand. Reetz et al. (2015) conducted a study with the Association for University and College Counseling Center Directors (AUCCCD) and found that on average there is approximately 1 counselor to every 1,500 students. To assist with the high demand of college counseling centers, some researchers are developing online interventions. Levin et al. (2015) explored the potential of a 4-week online intervention called ACT on College Life (ACT-CL). The program is based on Acceptance and Commitment Therapy (ACT; Hayes, Strosahl & Wilson, 2012). ACT pairs cognitive behavioral therapy with mindfulness-based techniques and focuses on acceptance and increasing psychological flexibility. Psychological flexibility involves an ability to adapt easily to change and is thought to increase tolerance to psychological stress (Hayes, Strosahl & Wilson, 2012). The ACT-CL program included 30 college counselors and 82 student clients from 4 college counseling centers. The ACT-CL program had a counselor portal which included training modules for ACT and described features of the program. The student portal included three 45-minute interactive self-help sessions. The multimedia sessions included training on mindfulness-based techniques and inquired about students' values and acceptance. Results from the program indicated that students significantly increased their degree

of psychological flexibility. Future research should explore how ACT-CL and similar programs influence students' mental health symptoms, dispositional mindfulness, and development of other positive psychological resources.

Contemplative practices such as mindfulness and existential reflection can shift our worldview and positively reframe a challenging situation. For example, many students view their happiness as conditional and believe, "I won't be happy until…" In college counseling, students often share their fears that they won't be happy until they have graduated college, paid off student loans, reunited with their partner, etc. When happiness is thought of as a goal, it is easy to miss out on moment to moment experiences. The contemplative practices of mindfulness and existential thought are not goal-driven. Both emphasize increased awareness and self-reflection, rather than problem-solving or goal-focused thinking. Additionally, both practices can be viewed as transtheoretical (i.e. applicable to all theoretical orientations) and transdiagnostic (i.e. useful in the treatment of a wide range of mental health symptoms). Therefore, contemplative practices could be helpful in the reduction of cognitive distortions in college students and could be useful to help promote a more positive worldview.

Results from this study indicate that dispositional mindfulness can work as a strong protective factor for college students and reduce the negative impact of psychological stress. Dispositional mindfulness is a measure of an individual's moment to moment mindful awareness, regardless of whether one participates in meditation. This means that trait mindfulness can inform clinical practice even when a client has no experience with meditation. The Mindful Attention Awareness Scale (MAAS) is a short 15-item scale that could work as a useful tool to identify a student's level of dispositional mindfulness. The MAAS could be especially useful to identify clients with low levels of dispositional mindfulness and develop an

outreach program. Baer et al. (2006) suggested that the practice of engaging in mindfulness meditation or mindful states can substantially increase an individual's dispositional mindfulness over time. Mindfulness-based group therapy has been shown to be effective with college students (Sears & Kraus, 2009) and existential reflection could be easily implemented into a group setting to help guide students through life's ultimate concerns (i.e., freedom, death, isolation, and meaninglessness; Yalom, 1980). Yalom (1980) suggested that group therapy is one of the most powerful ways to approach and confront these concerns. The integration of both mindfulness and existential thought can be used to maintain a balanced transtheoretical stance. Both practices are applicable to multiple theoretical orientations, research designs, and are useful in both individual and group therapy.

The current study found that existential thought is positively correlated to increased rates of depression, anxiety, and stress. However, greater existential reflection also significantly predicted higher rates of positive emotion and a presence of meaning in life. Supplemental analysis found that the combination of existential thought and mindful attention significantly predicted presence of meaning in life. Mascaro and Rosen (2006) demonstrated that spiritual meaning in life contributes to the reduction of stress and depression. University faculty, counselors, and professors, can be supportive by listening and providing students a space for contemplation. Many students may feel as if they are getting sucked into an existential vacuum (a subjective state of boredom, apathy, and emptiness) or have the sense that they are stuck in their quest for meaning. In many ways, college can be viewed as an existential crisis, yet most students do not have an outlet to process these concerns. An exploration of meaning could be integrated into residence life, counseling and student health centers, and classroom discussions.

Limitations

This study has some limitations that are important to note. The current study relied on self-report measures to assess personal psychological resources, coping strategies, and mental health symptoms. While self-report measures are often utilized in psychological research, there is the potential for error and misrepresentation in the data. Participants were gathered through MTurk, which has shown to produce reliable results (Goodman, Cryder, & Cheema, 2012). However, all responses were anonymous and as such, there was no way to confirm their current enrollment in an undergraduate program.

MTurk workers discovered the survey through keywords associated with this study, such as "existential," "psychology," "meaning in life," and "mental health." Therefore, MTurk workers who chose to participate in this study may be particularly interested in these subjects and may not be reflective of the general college population. Additionally, participants may have responded carelessly due to the fact that the study was administered as an online survey. The data was reviewed for survey completion times and missing responses. Of the 265 participants that started the survey, 251 were included in the final analysis. Over 60% of the final sample endorsed *severe* to *extremely severe* rates of depression, anxiety, and stress. As the survey was administered online and anonymously, there was no way to following up or contact the student to further assess their level of distress. Emergency resources were provided in the Letter of Solicitation, but an in-person study could have potentially referred these students to their university counseling center or community mental health services.

Another limitation of the study was that the demographic variables were skewed with an over representation of Caucasian female participants. According to the National Center for Education Statistics (2014), 57% of undergraduate students identify as female and 43% identify

as male. In the current sample, the data is skewed toward women with 61% identifying as female, 38% as male, and 1% gender nonconforming. The National Center for Education Statistics (2014) found that undergraduate students were predominantly white (58%), followed by Black/African American (16%), Hispanic/Latino (16%), Asian or Pacific Islander (6%), Biracial/Multiracial (3%), and Native American (1%). The current sample was skewed with 67% of respondents identified as White, 14% Black/African American, 9% Asian or Pacific Islander, 6% Hispanic/Latino, 3% Biracial/Multiracial, and 1% Native American.

Future Directions

The current sample included only one gender nonconforming student. The population size of transgender and gender nonconforming individuals in the United States is not well-known, in part because official records, including the US Census, do not include data on gender identity. Flores et al. (2016) estimated that approximately 1.4 million adults in the United States identify as transgender, which is twice the amount of their previous estimate 5 years ago. Flores et al. (2016) hypothesized that this increase is partially due to an increased awareness and acceptance of different gender identities. Estimates of gender nonconforming undergraduate students are even more sparse. Studies specific to LGBTQ, gender nonconforming, and transgender college students are clearly needed. Oswalt and Lederer (2017) examined mental health among college transgender students using a national data set of 547,727 students. Within the sample, 1,143 students identified as transgender. Oswalt and Lederer (2017) found that transgender students were approximately twice as likely to have mental health symptoms when compared to cisgender female students. Other studies have demonstrated that LGBTQ college students have an increased risk of suicide over the general student population (Russell et al., 2011).

GLSEN has explored the school experience of LGBTQ students since 1999 through its National School Climate Survey. The 2015 survey by Kosciw, Greytak, Palmer, and Boesen found that 85.7% of LGBTQ students heard negative remarks about transgender people from their peers, and 63.5% of students reported hearing similar transphobic remarks from their teachers or other school staff. The Obama administration extended sex discrimination protections to transgender students in May 2016 in response to ongoing debates on how schools should accommodate transgender students. However, this interpretation of Title IX was reversed by the Trump administration in February 2017 (Stolzenberg & Hughes, 2017). Therefore, transgender and gender nonconforming students will continue to face discrimination on college campuses and will struggle to have access to bathrooms, locker rooms, and dormitories that match their gender identity. Denying a transperson access to these spaces removes their sense of safety and security on campus and can have a serious negative impact on their mental health. Further research needs to be done to explore the mental health of these students and identify relevant protective factors for trans students and the LGBTQ undergraduate population.

This study provides a snapshot of each student's experience at the moment they started the survey. The positive psychological resources, coping strategies, and mental health symptoms assessed in the study are fairly stable, but future studies could assess changes as the student progresses from freshman to senior year. Additionally, this study utilized the Mindful Attention Awareness Scale (MAAS), which is designed to measure *mindful attention*. Some researchers have argued that the MAAS is too simplistic, and have proposed multidimensional constructs of mindfulness. Baer et al. (2006) developed a five-factor model of mindfulness, which includes observing (internal and external experiences), describing (labeling experiences with words), acting with awareness (i.e. mindful attention), non-judging of inner experience, and non-

reactivity to inner experience. This model is highly correlated to the constructs of openness to experience, emotional intelligence, and self-compassion (Baer et al., 2006). The inclusion of a multidimensional mindfulness scale could provide a deeper understanding of how mindfulness operates as a protective factor for undergraduate students.

Conclusion

It has been suggested that existential reflection is too dark, pessimistic, and tragic, and can contribute to the development of death anxiety in young adults (Berman, Weems, & Stickle, 2006). Conversely, positive psychology has been criticized for being too bright, optimistic, and for ignoring the fundamental aspects of human suffering and the full spectrum of the human experience (Linley, Joseph, Harrington, & Wood, 2006). In 2011, Dr. Paul Wong argued for the inclusion of suffering and negative experiences in all positive psychology research. He called this second wave "Positive Psychology 2.0" and described it a balanced, meaning-centered, and cross-cultural perspective (Wong, 2011, p. 69). The results of this study found a balance in the benefits and disadvantages of existential reflection, as it was positively correlated to presence of meaning in life, adaptive coping skills, positive affect, as well as, an increase in mental health symptoms and maladaptive behaviors. Ivtzan and Lomas (2016) encouraged future positive psychology researchers to move away from the study of *hedonic* well-being (e.g. happiness, positive emotions) and examine *eudaimonic* well-being, which entails "finding purpose and meaning in one's life rather than merely pursuing pleasure and avoiding pain" (p. 37). Existential reflection involves a confrontation with the pains of human existence. In order to adaptively cope, it appears that young adults need a baseline of positive psychological resources so that they can manage the negative feelings that can emerge through existential thought. The results of this study significantly contribute to the literature on existential thought, positive

psychology, and college counseling. Positive emotion, mindfulness, hope, and meaning in life were all positively correlated to adaptive coping behaviors and negatively correlated with mental health symptoms. These positive psychological resources can be cultivated through outreach interventions, campus workshops, classroom activities, as well as individual and group therapy. The light and dark aspects of existential reflection appear to be well-suited as a positive psychological resource in the second wave of positive psychology. It is recommended that psychologists, college counselors, and university faculty explore these constructs with students in order to further develop their individual strengths and help them adapt to the developmental demands of the college experience.

Epilogue - The Light and Dark of Existential Reflection

Contrary to our predictions, existential reflection correlated with higher rates of maladaptive coping, depression, stress, and anxiety. However, it also predicted higher prevalence of positive emotion, adaptive coping strategies, and a presence of meaning in life. At first this seems paradoxical, how can something that facilitates positive emotion and meaning also create psychological stress? Socrates described the unexamined life as "not worth living" (Brickhouse & Smith, 1994, p. 201). However, when we begin to reflect on our lives, we often discover things that are unpleasant. As we increase our self-awareness, some disturbing or even terrifying thoughts may emerge. Our minds spend a lot of time evaluating how we go about our daily life and can often be critical. Contemplative practices like mindfulness can give us a break from the endless chatter of our minds, but they can also bring attention to some of the noise we push into the background. In truth, existential reflection does not *cause* these thoughts. We are simply more attuned and begin to notice things that we were not conscious of before. There is truth to the therapy adage, "things get worse before they get better" (Simon, 2010, p. 54).

In Martin Heidegger's (1964) *The Task of Thinking*, he described the clearing (*Lichtung*) as the site wherein the truth of being is revealed:

> The clearing, the open region, is not only free for brightness and darkness, but also for resonance and echo, for sound and the diminishing of sound. The clearing is the open region for everything that becomes present and absent… But there is no light and no brightness without the clearing. Even darkness needs it. How else could we happen into darkness and wander through it? (Heidegger & Krell,1964/93, p. 442-444).

Heidegger's description of *Lichtung* is conceptually similar to mindfulness in that they both create a clear reflection of the self. Amaro (2010) stated that the Buddha's teachings speak of the importance of *Dhamma-vijaya*, which is a reflective type of meditation that means the "investigation of reality," involves "going to the root of things," and is one of the seven factors of enlightenment (p. 265). Amaro (2010) differentiated between reflective meditation and grounded meditation. Grounded meditation requires an anchor (e.g. attention on the breath, body, a word, or object) and has a calming effect. Reflective or investigative meditation, on the other hand, is a useful tool to recognize the nature of our minds and the assumptions we have about our identity. Investigative meditation begins with questions such as, "who am I?" and exploring from there. Amaro (2010) argued that to successfully engage in this practice, an individual must learn how to ground themselves and reject the temptation to label everything that comes up in the mind. Otherwise, reflective practice can cause us to "suffer enormously" (Amaro, 2010, p. 267). Although investigative meditation and existential reflection have the power to bring clarity and meaning into our lives, both practices may also bring awareness thoughts or feelings that we are not prepared to face. According to Cohen, Janicki-Deverts, and Miller (2007) psychological distress occurs when a situation, event, or environmental stressor

exceeds an individual's perceived ability to cope. Therefore, in order to successfully engage in

existential thought, one must have a baseline of adaptive coping skills and psychological

resources in order to defend against the darkness that can emerge through the clearing.

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Appendix A

Approval Letter from Institutional Review Board (IRB)

SETON HALL UNIVERSITY.
1 8 5 6

September 27, 2017

Ian LeSueur

[REDACTED]

Dear Mr. LeSueur,

The Seton Hall University Institutional Review Board has reviewed your research proposal entitled "An Investigation of Existential and Positive Psychological Resources in College Students" and has categorized it as exempt.

Enclosed for your records is the signed Request for Approval form.

Please note that, where applicable, subjects must sign and must be given a copy of the Seton Hall University current stamped Letter of Solicitation or Consent Form before the subjects' participation. All data, as well as the investigator's copies of the signed Consent Forms, must be retained by the principal investigator for a period of at least three years following the termination of the project.

Should you wish to make changes to the IRB approved procedures, the following materials must be submitted for IRB review and be approved by the IRB prior to being instituted:

- Description of proposed revisions;
- *If applicable*, any new or revised materials, such as recruitment fliers, letters to subjects, or consent documents; and
- *If applicable*, updated letters of approval from cooperating institutions and IRBs.

At the present time, there is no need for further action on your part with the IRB.

In harmony with federal regulations, none of the investigators or research staff involved in the study took part in the final decision.

Sincerely,

Mary F. Ruzicka, Ph.D.

Mary F. Ruzicka, Ph.D.
Professor
Director, Institutional Review Board

cc: Dr. Daniel Cruz

Office of Institutional Review Board
Presidents Hall · 400 South Orange Avenue · South Orange, New Jersey 07079 · Tel: 973.313.6314 · Fax: 973.275.2361 · *www.shu.edu*

A   HOME   FOR   THE   MIND,   THE   HEART   AND   THE   SPIRIT

REQUEST FOR APPROVAL OF RESEARCH, DEMONSTRATION OR
RELATED ACTIVITIES INVOLVING HUMAN SUBJECTS

All material must be typed.

PROJECT TITLE: An Investigation of Existential and Positive Psychological Resources in
College Students

CERTIFICATION STATEMENT:

In making this application, I(we) certify that I(we) have read and understand the University's policies and procedures
governing research, development, and related activities involving human subjects. I (we) shall comply with the letter
and spirit of those policies. I(we) further acknowledge my(our) obligation to (1) obtain written approval of significant
deviations from the originally-approved protocol BEFORE making those deviations, and (2) report immediately all
adverse effects of the study on the subjects to the Director of the Institutional Review Board, Seton Hall University,
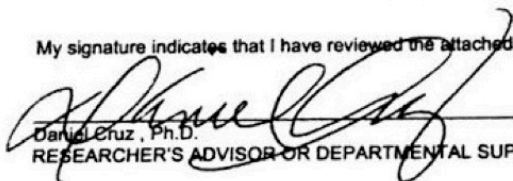South Orange, NJ 07079.

_____   9/5/17
                                                          _____

Ian LeSueur, M.A.
RESEARCHER(S) OR PROJECT DIRECTOR(S)   DATE

**Please print or type out names of all researchers below signature.
Use separate sheet of paper, if necessary.**

My signature indicates that I have reviewed the attached materials and consider them to meet IRB standards.

_____   9/5/17
Daniel Cruz, Ph.D.   _____
RESEARCHER'S ADVISOR OR DEPARTMENTAL SUPERVISOR   DATE
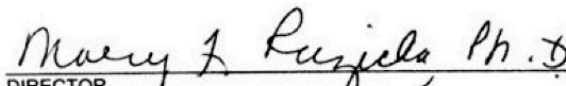
Please print or type out name below signature

The request for approval submitted by the above researcher(s) was considered by the IRB for Research
Involving Human Subjects Research at the ___ Sept 2017 ___ meeting.

The application was approved ✓ not approved ___ by the Committee. Special conditions were ___
were not ___ set by the IRB. (Any special conditions are described on the reverse side.)

_____   9/27/17
Mary F. Ruzicka, Ph.D   _____
DIRECTOR,   DATE
SETON HALL UNIVERSITY INSTITUTIONAL
REVIEW BOARD FOR HUMAN SUBJECTS RESEARCH

Appendix B

Letter of Solicitation

Dear Volunteer:

<u>Purpose and Duration of Research</u>

The researcher conducting this study is a student in the Counseling Psychology PhD program in the Department of Professional Psychology and Family Therapy at Seton Hall University. The purpose of this study is to test the relationship between reflection on meaning in life, mindfulness, hope, positive emotion, and coping strategies college students use to manage their mental health. The current study seeks to discover whether there is an association between positive psychological resources (reflecting on meaning in life, hope, mindfulness, positive emotion), and adaptive coping skills.

<u>Procedures and Voluntary Participation</u>

Participants must be over the age of 18 to participate in this survey and must be currently enrolled as an undergraduate student in a public or private college / university. <u>Participation is completely voluntary. A participant may withdraw from this study at any time without consequence.</u> The participant's consent will be given by going to the survey link. Participation in this study involves completing a background questionnaire and 7 brief surveys including (1) a Demographic Questionnaire; (2) Scale for Existential Thinking (SET; Shearer & Allen, 2012), which measures an individual's process of reflecting on human existence and includes items such as, "Do you think about ideas such as eternity, truth, justice and goodness?"; (3) Meaning in Life Questionnaire (MLQ; Steger et al., 2006), which measures presence of and search for meaning in life and includes items such as "I am looking for something that makes my life feel meaningful."; (4) Mindful Attention Awareness Scale (MAAS: Brown & Ryan, 2003), which is designed to measure the general tendency to be attentive to and aware of present-moment experience in daily life and includes items such as "I find it difficult to stay focused on what's happening in the present."; (5) Adult Hope Scale (AHS; Snyder et al., 1991), which measures an individual's dispositional level of hope and includes items such as, "I energetically pursue my goals."; (6) Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), which is used to assess general affect or mood (Watson et al., 1988). Respondents will be presented with 10 positive words (e.g. "inspired") and 10 negative words (e.g. "guilty") and will rate each word with how they feel right now OR how they have felt over the past week.; (7) Depression Anxiety Stress Scale (DASS-21), which measures symptoms of depression, anxiety, and stress and includes items such as, "I tend to over-react to situations."; (8) Brief COPE Inventory (BCI) (Carver, 1997), which measures coping strategies in response to life stressors and includes items such as, "I've been getting emotional support from others." **Total participation time will take approximately 30-35 minutes.**

<u>Anonymity Preservation and Confidentiality</u>

To the best of the researcher's ability participant answers in this study will remain confidential. Any information gathered from the study will in no way identify participants and results will be reported collectively as averages of all responses. Researchers will only be shown Mechanical Turk users' assigned worker ID numbers. These unique identification numbers will not be shared with anyone, will be removed from the data set, and will not be linked to study responses as participants are taken to an outside survey website called Qualtrics to complete the study. **Please be aware that participant's MTurk Worker ID can potentially be linked to information on their Amazon public profile page, depending on the settings they have for their Amazon profile.** Participants are free to withdraw at any time by closing the browser window. Participation in this survey will earn participants $1.00 via Amazon.com's Mechanical Turk. Please see Mechanical Turk's Privacy Policy for more information at https://www.mturk.com/mturk/privacynotice.

Qualtrics servers are protected by high-end firewall systems and vulnerability scans are performed regularly. By using secure and certified data centers, Qualtrics ensures the highest protection and testing as per HITECH requirements. MTurk uses SSL (Secure Sockets Layer) and is a protocol developed for transmitting private documents or information via the Internet. SSL creates a secure connection between a client and a server, encrypting sensitive information being transmitted through the web page. Many websites, like banking or e-commerce sites, use SSL to obtain confidential user information. SSL encryption is automatically turned on for surveys. **Although both Qualtrics and MTURK have strong security measures, there will always be a possibility of hacking when conducting online research.** The data in this study will be collected through Qualtrics in order to protect subject's confidentiality. **Survey respondents will remain anonymous.** Information and data received from the Qualtrics system will be stored on a USB memory key, which will be kept in a locked, secure location in the principal investigator's office. Completed responses will be kept in a secure location and will only be accessible by Ian LeSueur, and his research mentor Dr. Daniel Cruz, PhD. Data will be stored electronically on a USB memory key and kept in a locked, secure office.

Anticipated Risks and Discomfort

Some of the questions on the self-report measures may be emotionally arousing and could result in psychological stress. Risks to participants are minimized by the following actions: 1. Participants will be administered brief self-report measures, 2. **Participants are free to withdraw from the study at any time without penalty by closing their browser**, 3. The study measures are primarily positive psychological constructs, and 4. Participants who do experience significant distress are urged to discuss those feelings with a mental health professional at the National Crisis Hotline at 1-800-273-8255.

Benefits to Research

Participation in this study will provide valuable information about the positive aspects of the way in which individuals reflect on meaning and purpose in life. There are no direct benefits to the participant.

Contact Information

If there are any questions regarding this study or what is expected of the participant's voluntary participation in this study, please contact the researchers below. Specific questions regarding the research or research subject's rights should be directed to the Director of the Institutional Review Board at Seton Hall University, Dr. Mary F. Ruzicka, Ph.D. at (973) 313-6314.

Sincerely,

Ian LeSueur, M.A.
Counseling Psychology Doctoral Student
Seton Hall University
lesueuia@shu.edu

Appendix C

Demographic Questionnaire

Please complete the following information, remembering that we cannot identify anyone with this data.

1. Age: _____

2. Gender: _____ Female _____ Male _____ Other (self-describe)

3. Ethnicity

_____ African-American

_____ Asian-American

_____ White

_____ Hispanic American

_____ Native American

_____ Biracial/Multiracial (Specify: _____)

_____ Other (Specify:_____)

4. Are you currently enrolled as an undergraduate student at a public or private college / university?

_____ Yes

_____ No

5. What type of school do you attend?

_____ Public

_____ Private

_____ Community College

6. Academic class status:

_____ freshman

_____ sophomore

_____ junior

_____ senior

7. Select any of the following that apply to you:

_____ Commuter student

_____ Transfer student

_____ First generation college student

Appendix D

Scale for Existential Thinking (SET)

Circle answers that best fit for you either now or in the past.

No or rarely.	Sometimes.	Often.	Almost all the time.	All the time.	I don't know.
1	2	3	4	5	6

1. Do you ever reflect on your purpose in life?

2. Do you ever think about the human spirit?

3. Have you ever spent time reading, thinking about, or discussing philosophy or beliefs?

4. Do you have a philosophy of life that helps you to manage stress or make important decisions?

5. Do you think about ideas such as eternity, truth, justice and goodness?

6. Do you spend time in meditation, prayer, or reflecting on the mysteries of life?

7. Do you discuss or ask questions to probe deeply into the meaning of life?

8. Do you ever think about a "grand plan" or process that human beings are a part of?

9. Have you ever thought about what is beyond the "here and now" of your daily life?

10. Do you ever think about life's Big Questions?

11. Have you ever reflected on the nature of reality or the universe?

Shearer, B., & Allan, B. A. (2012). The scale for existential thinking. *The International Journal of Transpersonal Studies*, *31*(1), 21-37.

Appendix E

Meaning in Life Questionnaire (MLQ)

Please take a moment to think about what makes your life and existence feel important and significant to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

_____1. I understand my life's meaning.

_____2. I am looking for something that makes my life feel meaningful.

_____3. I am always looking to find my life's purpose.

_____4. My life has a clear sense of purpose.

_____5. I have a good sense of what makes my life meaningful.

_____6. I have discovered a satisfying life purpose.

_____7. I am always searching for something that makes my life feel significant.

_____8. I am seeking a purpose or mission for my life.

_____9. My life has no clear purpose.

_____10. I am searching for meaning in my life.

Appendix F

Day-to-Day Experiences (MAAS)

Below is a collection of statements about your everyday experience. Using the 1–6 scale below, please indicate, in the box to the right of each statement, how frequently or infrequently you have had each experience in the last week (or other agreed time period). Please answer according to what really reflects your experience rather than what you think your experience should be.

almost always	very frequently	somewhat frequently	somewhat infrequently	very infrequently	almost never
1	2	3	4	5	6

1. I could be experiencing some emotion and not be conscious of it until some time later.
2. I break or spill things because of carelessness, not paying attention, or thinking of something else.
3. I find it difficult to stay focused on what's happening in the present.
4. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.
5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.
6. I forget a person's name almost as soon as I've been told it for the first time.
7. It seems I am "running on automatic" without much awareness of what I'm doing.
8. I rush through activities without being really attentive to them.
9. I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.
10. I do jobs or tasks automatically, without being aware of what I'm doing.
11. I find myself listening to someone with one ear, while doing something else at the same time.
12. I drive places on "automatic pilot" and then wonder why I went there.
13. I find myself preoccupied with the future or the past.
14. I find myself doing things without paying attention.
15. I snack without being aware that I'm eating.

Appendix G

Adult Hope Scale (AHS)

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

1. = Definitely False
2. = Mostly False
3. = Somewhat False
4. = Slightly False
5. = Slightly True
6. = Somewhat True
7. = Mostly True
8. = Definitely True

___ 1. I can think of many ways to get out of a jam.

___ 2. I energetically pursue my goals.

___ 3. I feel tired most of the time.

___ 4. There are lots of ways around any problem.

___ 5. I am easily downed in an argument.

___ 6. I can think of many ways to get the things in life that are important to me.

___ 7. I worry about my health.

___ 8. Even when others get discouraged, I know I can find a way to solve the problem.

___ 9. My past experiences have prepared me well for my future.

___10. I've been pretty successful in life.

___11. I usually find myself worrying about something.

___12. I meet the goals that I set for myself.

Appendix H

Positive and Negative Affect Schedule (PANAS)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extend you feel this way right now, that is, at the present moment OR indicate the extent you have felt this way over the past week:

Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
1	2	3	4	5

_____ interested   _____ irritable

_____ distressed   _____ alert

_____ excited   _____ ashamed

_____ upset   _____ inspired

_____ strong   _____ nervous

_____ guilty   _____ determined

_____ scared   _____ attentive

_____ hostile   _____ jittery

_____ enthusiastic   _____ active

_____ proud   _____ afraid

From "Development and validation of brief measures of positive and negative affect: The PANAS scales," by D. Watson, L. A. Clark, and A. Tellegen, 1988, *Journal of Personality and Social Psychology, 54,* 1063-1070.

Appendix I

Depression, Anxiety, and Stress Scale - 21 Items (DASS-21)

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree or a good part of time	Applied to me very much or most of the time
0	1	2	3

1. I found it hard to wind down
2. I was aware of dryness of my mouth
3. I couldn't seem to experience any positive feeling at all
4. I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)
5. I found it difficult to work up the initiative to do things
6. I tended to over-react to situations
7. I experienced trembling (e.g. in the hands)
8. I felt that I was using a lot of nervous energy
9. I was worried about situations in which I might panic and make a fool of myself
10. I felt that I had nothing to look forward to
11. I found myself getting agitated
12. I found it difficult to relax
13. I felt down-hearted and blue
14. I was intolerant of anything that kept me from getting on with what I was doing
15. I felt I was close to panic
16. I was unable to become enthusiastic about anything
17. I felt I wasn't worth much as a person
18. I felt that I was rather touchy

19. I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)

20. I felt scared without any good reason

21. I felt that life was meaningless

Lovibond, S.H. & Lovibond, P.F. (1995). *Manual for the Depression Anxiety Stress Scales*. (2nd. Ed.) Sydney: Psychology Foundation.

Retrieved from www.psy.unsw.edu.au/dass/

Appendix J

Brief COPE Inventory (BCI)

Instructions: We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Then respond to each of the following items by selecting one of the responses below. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1 = I haven't been doing this at all
2 = I've been doing this a little bit
3 = I've been doing this a medium amount
4 = I've been doing this a lot

1. I've been turning to work or other activities to take my mind off things.

2. I've been concentrating my efforts on doing something about the situation I'm in.

3. I've been saying to myself "this isn't real.".

4. I've been using alcohol or other drugs to make myself feel better.

5. I've been getting emotional support from others.

6. I've been giving up trying to deal with it.

7. I've been taking action to try to make the situation better.

8. I've been refusing to believe that it has happened.

9. I've been saying things to let my unpleasant feelings escape.

10. I've been getting help and advice from other people.

11. I've been using alcohol or other drugs to help me get through it.

12. I've been trying to see it in a different light, to make it seem more positive.

13. I've been criticizing myself.

14. I've been trying to come up with a strategy about what to do.

15. I've been getting comfort and understanding from someone.

16. I've been giving up the attempt to cope.

17. I've been looking for something good in what is happening.

18. I've been making jokes about it.

19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.

20. I've been accepting the reality of the fact that it has happened.

21. I've been expressing my negative feelings.

22. I've been trying to find comfort in my religion or spiritual beliefs.

23. I've been trying to get advice or help from other people about what to do.

24. I've been learning to live with it.

25. I've been thinking hard about what steps to take.

26. I've been blaming myself for things that happened.

27. I've been praying or meditating.

28. I've been making fun of the situation.

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92-100.

Appendix K

Permission to Use the Scale for Existential Thinking (SET)

Very good. Keep me informed of your progress.

Sent from Mail for Windows 10

From: Ian M Lesueur
Sent: Wednesday, August 23, 2017 9:28 AM
To: Branton Shearer
Subject: Re: Request to use Existential Thinking Scale for Dissertation

Excellent! I am excited to see what I learn from this study.

Best,

Ian

--

Ian LeSueur, M.A.
Doctoral Student, Counseling Psychology
Seton Hall University
ian.lesueur@student.shu.edu
(217) 377-1154

On Aug 23, 2017, at 9:04 AM, Branton Shearer <sbranton@kent.edu> wrote:

> Hi Ian,
> Your study sounds quite interesting. Existential Thinking is still something of a
> mystery so maybe your work can add to our understanding of it.
>
> Branton
>
> On Tue, Aug 22, 2017 at 9:19 PM, Ian M Lesueur <ian.lesueur@student.shu.edu>
> wrote:
>
>> Hi Dr. Shearer,
>>
>> Thank you for the clarification. Here is my application. I was able to complete it
>> after reviewing your website. Let me know if you need anything else.
>>
>> Best,
>>
>> Ian

Ian LeSueur, M.A.
Doctoral Student, Counseling Psychology
Seton Hall University
ian.lesueur@student.shu.edu
(217) 377-1154

> On Aug 22, 2017, at 1:19 PM, Branton Shearer
> <sbranton@kent.edu> wrote:
>
> Dear Ian LeSueur,
>
> I am glad to hear of your interest in using the Scale for Existential
> Thinking (SET) for your research. Attached is an application that
> needs to be completed and returned.
>
> I believe most of the materials needed are posted on my website.
> Have you reviewed these?
>
> Best of luck,
> Branton Shearer, Ph.D.
>
> On Mon, Aug 21, 2017 at 7:36 PM, Ian M Lesueur
> <ian.lesueur@student.shu.edu> wrote:
>
>> Dear Dr. Branton Shearer,
>>
>> I am a fourth year Counseling Psychology PhD student at Seton
>> Hall University. I am seeking permission to use your Scale for
>> Existential Thinking. My dissertation is focused on both existential
>> and positive psychology. I am building on a smaller project where I
>> used your scale to examine positive psychological resources
>> among college students. It is hypothesized that students who
>> engage in higher levels of existential thought will have more
>> clarity of their meaning in life and will engage in more adaptive
>> coping skills than students with lower levels of existential thought.
>>
>> Please let me know if you have any additional questions or
>> concerns.
>>
>> Best,
>>
>> Ian
>>
>> Ian LeSueur, M.A.
>> Doctoral Student, Counseling Psychology
>> Seton Hall University
>> ian.lesueur@student.shu.edu
>> (217) 377-1154

Appendix L

Permission to Use the Meaning in Life Questionnaire (MLQ)

The Meaning in Life Questionnaire (MLQ) is a 10-item measure of the Presence of Meaning in Life, and the Search for Meaning in Life. <u>It is free to use for educational, therapeutic, and research purposed</u>. Commercial use is prohibited without permission.

Steger, M. F. (n.d.). *The Meaning in Life Questionnaire.* Retrieved March 21, 2017, from

http://www.michaelfsteger.com/?page_id=13

Appendix M

Permission to Use the Mindful Attention Awareness Scale (MAAS)

VCU
Virginia Commonwealth University

Monroe Campus

Department of Psychology

White House
806 West Franklin Street
P.O. Box 842018
Richmond, Virginia 23284-2018

804 828-6754
Fax: 804 828-2237
TDD: 1-800-828-1120

Dear Colleague,

The trait Mindful Attention Awareness Scale (MAAS) is in the public domain and special permission is not required to use it for research or clinical purposes. The trait MAAS has been validated for use with college student and community adults (Brown & Ryan, 2003), and for individuals with cancer (Carlson & Brown, 2005). A detailed description of the trait MAAS, along with normative score information, is found below, as is the scale and its scoring. A validated state version of the MAAS is also available in Brown and Ryan (2003) or upon request.

Feel free to e-mail me with any questions about the use or interpretation of the MAAS. I would appreciate hearing about any clinical or research results you obtain using the scale.

Yours,

Kirk Warren Brown, PhD
Department of Psychology
Virginia Commonwealth University
806 West Franklin St.
Richmond, VA 23284-2018
e-mail kwbrown@vcu.edu

Appendix N

Permission to use the Adult Hope Scale

A final category of "hope research" is composed of studies that test the development and validation of surveys or scales to assess individuals' level of hope. For instance, *The Hope Scale* has been tested and validated on adult samples (Snyder et al., 1991). The Hope Scale consists of four agency items, four pathways items, and four filler or placebo-like items that measure neither construct. Modifications of this scale have been developed for kids by Snyder et al. (1997) and other groups by others (Scioli & Biller, 2009). Generally, scales demonstrate adequate alpha reliability (alphas averaging 0.92) and all subscales have reliabilities that exceed 0.70. Here are a few sample items drawn from hope scales available in the public domain (Scioli & Biller, 2009; Snyder, 2000):

1. Every day I feel closer to my goals.
2. I am able to rely on others to achieve my goals.
3. I have used prayer to accomplish a goal.
4. I can find lots of ways around any problem.
5. I achieve the goals that I set for myself.

Strayhorn, T. L. (2016). *Student development theory in higher education: A social psychological approach* (pp. 113). New York: Routledge.

Appendix O

Permission to use the Positive and Negative Affect Schedule (PANAS)

From: Lee Anna Clark <lclark6@nd.edu>
Sent: Wednesday, May 31, 2017 9:01 PM
To: Ian M Lesueur
Cc: David Watson; Karen Thomas
Subject: Re: Requesting Permission to use the PANAS

Hello Ian,

Thanks for your interest in the Positive and Negative Affect Schedule (PANAS). David and I are pleased to grant you permission to use it in your research. Please note that to use the PANAS, you need both our permission and the permission of the American Psychological Association (APA), which is the official copyright holder of the instrument. Because I am copying this email to APA, however, you do not have to request permission separately from APA; this single e-mail constitutes official approval from both parties.

We make the PANAS available without charge for non-commercial research purposes. We do require that all written versions of the PANAS (both print and online) include a full citation and copyright information. Thus, any copies should state:

"From "Development and validation of brief measures of positive and negative affect: The PANAS scales," by D. Watson, L. A. Clark, and A. Tellegen, 1988, Journal of Personality and Social Psychology, 54, 1063-1070.

Copyright © 1988 by the American Psychological Association. Reproduced with permission. No further reproduction or distribution is permitted without written permission from the American Psychological Association."

This permission also does not extend beyond you and your immediate research team. Thus, if others wish to use the PANAS in their research, they must contact either one of us or Karen Thomas at APA.

Best wishes for your research,

LAC

Lee Anna Clark, Ph.D.
 William J. and Dorothy K. O'Neill Professor of Psychology
University of Notre Dame   574-631-7482 (voice)
Department of Psychology   574-631-8883 (fax)
124A Haggar Hall
Notre Dame, IN 46556   http://psychology.nd.edu/

Co-Director: Center for Advanced Measurement of
                        Personality & Psychopathology (CAMPP)
501 N. Hill St., Rm 125   574-631-1535 (voice)
South Bend, IN 46617-1908

On May 30, 2017, at 10:34 AM, Ian M Lesueur <ian.lesueur@student.shu.edu> wrote:

Dear Dr. David Watson and Dr. Lee Anna Clark,

I hope this email finds you well. I am writing to request permission to use The Positive and Negative Affect Schedule (PANAS), for a study my adviser and I are currently proposing to the IRB.

Best,

Ian

Ian LeSueur, M.A.
Doctoral Student, Counseling Psychology
Seton Hall University
ian.lesueur@student.shu.edu
(217) 377-1154

Appendix P

Permission to use the Depression Anxiety Stress Scale (DASS-21)

3. How do I get permission to use the DASS?

<mark>The DASS questionnaire is public domain, and so permission is not needed to use it.</mark> The DASS questionnaires and scoring key may be downloaded from the DASS website and copied without restriction (go to Download page).

The DASS questionnaires and scoring key may also be distributed, published or made available electronically, with the restrictions that:

a) the scales are not modified,

b) the scales are not sold for profit,

c) the intended audience is researchers or health professionals rather than end users, and

d) reference is included to the DASS website: www.psy.unsw.edu.au/dass/

Lovibond, P. (n.d.). *DASS FAQ*. Retrieved August 21, 2017, from

http://www2.psy.unsw.edu.au/dass/DASSFAQ.htm#_3.__How_do_I_get_permission_to_

use_

Appendix Q

Permission to use the Brief COPE Inventory (BCI)
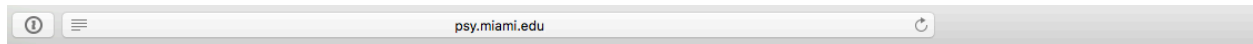
Brief COPE

The items below are an abbreviated version of the COPE Inventory. We have used it in research with breast cancer patients, with a community sample recovering from Hurricane Andrew, and with other samples as well. The citation for the article reporting the development of the Brief COPE, which includes information about factor structure and internal reliability from the hurricane sample is below. The Brief COPE has also been translated into several other languages, which have been published separately by other researchers (see below).

We created the shorter item set partly because earlier patient samples became impatient at responding to the full instrument (both because of the length and redundancy of the full instrument and because of the overall time burden of the assessment protocol). In choosing which items to retain for this version (which has only 2 items per scale), we were guided by strong loadings from previous factor analyses, and by item clarity and meaningfulness to the patients in a previous study. In creating the reduced item set, we also "tuned" some of the scales somewhat (largely because some of the original scales had dual focuses) and omitted scales that had not appeared to be important among breast cancer patients. In this way the positive reinterpretation and growth scale became positive reframing (no growth); focus on and venting of emotions became venting (focusing was too tied to the experiencing of the emotion, and we decided it was venting we were really interested in); mental disengagement became self-distraction (with a slight expansion of mentioned means of self-distraction). We also added one scale that was not part of the original inventory--a 2-item measure of self-blame--because this response has been important in some earlier work.

You are welcome to use all scales of the Brief COPE, or to choose selected scales for use. Feel free as well to adapt the language for whatever time scale you are interested in.

Citation: Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92-100. [abstract]

Following is the BRIEF COPE as we are now administering it, with the instructional orientation for a presurgery interview (the first time the COPE is given in this particular study). Please feel free to adapt the instructions as needed for your application.

Carver, C.S. (n.d.). *Brief COPE.* Retrieved March 21, 2017, from

http://www.psy.miami.edu/faculty/ccarver/sclBrCOPE.html