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Mindfulness Effectiveness on Strengthening Functional Coping Skills in College Students

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Mindfulness Effectiveness on Strengthening Functional Coping Skills in College Students

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A Capstone Project submitted in partial fulfillment of the
requirements for the Master of Science Degree in
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CERTIFICATE OF APPROVAL

CAPSTONE PROJECT

Mindfulness Effectiveness on Strengthening Functional Coping Skills in College Students

This is to certify that the Capstone Project of

Tea Olsen

Has been approved by the faculty advisor and the CE 695 – Capstone Project

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Abstract

Stress in college students can transpire from academic struggles, social dilemmas, responsibility increases, financial struggles, health concerns, and other personal struggles. Unmanaged stress is a well-documented issue among college students that can lead to numerous mental, physical, emotional, and spiritual problems. Discrimination and racism are additional struggles faced by cultural minority college students that are accompanied with negative coping styles. College students use a variety of coping strategies to resolve stress, often applying dysfunctional coping styles that do not resolve the issue long term. Mindfulness is an emotion-focusing coping style with evidence for effective anxiety and stress reduction through mindfulness-based interventions such as mindfulness-based stress reduction (MBSR). Research has demonstrated mindfulness' success in stress reduction and improvement in overall wellness and have also been demonstrated in cultural minority communities. The present literature review aims to examine mindfulness effectiveness on college students' stress reduction. The facilitation of positive coping skills through mindfulness is examined.

Key words: mindfulness, mindfulness stress-reduction, stress, anxiety, coping, college students

Contents

Introduction5

Review of Literature6

 Stress6

 Anxiety10

 Stress Reduction.....11

 Mindfulness.....14

 Mindfulness Facilitation.....20

Multicultural Considerations.....22

Applications to Clinical Mental Health Counseling.....24

Conclusion.....26

References28

Mindfulness Effectiveness on Strengthening Functional Coping Skills in College Students

Stress in college students can emerge due to various reasons including personal, social, and academic struggles. These stressors can affect overall well-being and daily functioning (APA, 2013). Stress is often unavoidable, therefore learning skills to manage stress can decrease the negative effects (NIMH, n.d.; Astin, 1997). Untreated stress can lead to numerous health concerns including development of anxiety (APA, 2013; AIS, n.d.). Anxiety disorders are the most diagnosed mental health disorders in adults (NAMI, 2017). Furthermore, cultural minorities face additional stress of racism and discrimination leading to multiple health issues (Freligh & Debb, 2019; Barnes & Lightsey, 2005; Gee et al., 2007). Mental health struggles can impact many facets of one's life and can cause daily functioning to suffer. Dysfunctional coping is often utilized by college students but delivers the least amount of long-term stress reduction (Brougham et al., 2009; Barnes & Lightsey, 2005). When functional coping skills are utilized stress relief may be longer lasting. Mindfulness has been shown to reduce stress in adults as demonstrated by Kabat-Zinn et al. (1992) with mindfulness-based stress reduction (MBSR). Recently, research has focused on mindfulness-based techniques and their effectiveness on stress reduction, finding plenty of supporting evidence. Recent research with African American college students shows evidence for mindfulness as a buffer against race-related stress and the related negative health problems (Watson-Singleton et al., 2019). College students would benefit from implementing mindfulness as a possible reinforcer of functional coping skills and promoting long-term stress reduction.

Review of Literature

Stress

Stress is experienced by college students at alarming rates resulting in negative health consequences. The American Institute of Stress (AIS, n.d.) states that the most common definition of stress includes “physical, mental, or emotional strain or tension” (para. 2) and “a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize” (para. 2). According to the National Institute of Mental Health (NIMH, n.d.), stress is the brain and body’s response to a demand. Stress is a reaction to life experiences that can be triggered by genetics and the environment. Stress is an inevitable experience of life and is evolutionarily hardwired to protect humans from physical danger (Greenberg, 2016; Greeson & Brantley, 2009). In modern times, this innate stress response is not helpful in solving daily stressors that require quick problem-solving skills.

Acute Stress

Acute stress is the brain’s fight, flight, or freeze response to perceived danger (Greenberg, 2016). Acute stress is an instant reaction producing symptoms such as tense muscles and increased heart rate (Greenberg, 2016). The effects of acute stress come on quick and last for a short duration of time. Stress can have a positive or negative affect on an individual depending on their perception of their ability to handle it. When stress is perceived as a danger it can be taxing on the body and lead to chronic stress, anxiety, and other health problems (Greenberg, 2016). On the other hand, appropriately managed stress can be positive as it generates motivation, resiliency, and growth (Ponte, 2020). Resilience is quickly bouncing back from acute stress and being able to shield yourself from future stress (Greenberg, 2016).

Chronic Stress

When stress becomes chronic and is not managed well, it can affect the body physically, emotionally, and mentally (Greenberg, 2016; APA, 2013). Chronic stress from unresolved negative life circumstances and feelings of helplessness in ability to change current situations can cause long-term damage (Greenberg, 2016). This long-term stress can lead to various severe health issues including heart disease, chronic pain, anxiety, and depression (AIS, n.d.). Chronic stress can trigger mental health disorders or worsen symptoms of preexisting disorders (Ponte, 2020).

Accumulated stress threatens holistic wellness (physical, mental, psychological, and spiritual). Lack of sleep, minimal or no support network, life changes, poor physical health, and bad eating habits make people most vulnerable to stress (NAMI, n.d.) The same behaviors that can make people vulnerable to stress, can also be a result of the stress. Additionally, unhealthy learned lifestyle behavior responses to stress, such as risky behaviors, may result in short-term relief but do not resolve the issues long-term. Unmanaged stress is quite troubling considering the damage it can cause to the body by increasing susceptibility to diseases (Greeson & Brantley, 2009).

College Students and Stress

There are many shared stressors experienced by all groups of people such as the COVID-19 pandemic, financial burden, relationship issues, and distress. In addition, research has demonstrated that college students have heightened stress levels compared to the rest of the population groups (APA, 2020). The shared stressors experienced among college students make them vulnerable to stress and mental health issues and in need of support. The ACHA-National College Health Assessment II (ACHA-NCHA II) reports that when college students were

surveyed about their overall level of stress experienced in the past 12 months, 45.3% reported experiencing more than average levels of stress (ACHA, 2019). This report shows that nearly half of college students feel overly stressed. Additionally, 13% of male and 28.4% of female college students reported that they were diagnosed with or treated for anxiety within the past 12 months (ACHA, 2019). College students are at risk for developing anxiety as they experience a lot of stress during this time and explore coping styles that might be maladaptive. This data demonstrates the need for well-established adaptive coping strategies for this population.

Traditional college students experience developmental stress as they are young adults stepping into their new roles into adulthood. Stress experienced from developmental transitions is often temporary and can inspire motivation and responsibility which would lead to positive outcomes (Greenberg, 2016). However, this stress or anxiety can have a negative impact if it lasts beyond an appropriate amount of time and is persistent (DSM-5, 2013). Developmental stress also increases college student's vulnerability to stress (Brougham et al., 2009; Baghurst & Kelley, 2013). College students encounter multiple challenges as they settle into their new roles as young adults. In this role they begin learning financial responsibility, time management, achievement and career options, and other independent accountabilities (Greenberg, 2016; Baghurst & Kelley, 2013). The stressors can lead to negative psychological experiences including increased anxiety, hopelessness, and depression (Baghurst & Kelley, 2013). College experiences can bring about stress especially if they do not have the resources available to address all these aspects.

“Gen Z” (adults ages 18–23 as defined by APA, 2020) are experiencing college in the pandemic where the future is uncertain, and everything is constantly changing. Gen Z adults in college report the highest level of stress compared to other generations, with the average stress

level over the past month being at 6.1 out of 10 (with 1 being low and 10 being high) (APA, 2020). Academic, social, and personal identity are heavily shaped during this stage of development and high stress can negatively affect the outcomes. In the past year, 78.4% of male and 91.5% of female college students reported that they “felt overwhelmed by all you had to do” (ACHA, 2019, p. 13). Feeling overwhelmed is often caused by high levels of stress and the fact that most college students feel this way is cause for concern.

In a study conducted by Pierceall & Keim (2007) with community college students, they found that students who reported to be more stressed did not feel confident about their academic future. Stress can cause issues in attention and focus causing college student’s learning to be negatively impacted when they don’t have functional coping skills to implement to resolve the issue (Yamada & Victor, 2012). Gen Z adults in college reported concerns around education as the reason for their most significant stress (APA, 2020). The ACHA (2019) survey states that 34.2% of college students reported stress as a factor in negatively affecting their academic performance. Followed by 27.8% of college students reporting anxiety as a factor, and then 22.4% reporting sleep difficulties (ACHA, 2019). These findings are consistent with research on academic stress experienced by college students.

Stressors experienced by college students include relationship problems, academic failure, financial issues, chronic stress, low self-esteem, and daily hassles (Pierceall & Keim, 2007). Increased stress levels can lead to unhealthy behaviors and dysfunctional coping tactics. In the American College Health Association (ACHA, 2019) report, 55.7% of males and 60.1% of females (58.4% combined) reported engaging in any use of alcohol within the past 30 days. In the report the data also shows 22.6% of males and 21.4% of females (22.1% combined) reported any use of marijuana within the past 30 days (ACHA, 2019). College students will remedy by

using drugs or alcohol to cope to get a fast feeling of resolution (Pierceall & Keim, 2007). Dysfunctional strategies are more commonly used among college students (Brougham et al., 2009). Unhealthy coping styles do not resolve the issue long term and can cause health issues over time (Baghurst & Kelley, 2013).

Anxiety

Stress and anxiety are normal human experiences that do not necessarily conclude any dysfunction. Stress is usually brought on by external forces and goes away once the problem is resolved (NIMH, n.d.). However, severe, overwhelming, and persistent stress is a risk factor to the development of anxiety disorders (NIMH, n.d.). Experiencing major life events, especially those that are traumatic, can also increase the likelihood for development of anxiety or depression (Greenberg, 2016). Personal situations (e.g., personality, temperance, financial situation) can impact the level of stress that major life events will pose on an individual's life. Feelings of hopelessness about the outcome of the major life event and limits to resources one has available in aiding them to deal with it can lead to overwhelming stress and anxiety (Greenberg, 2016). "Adults with generalized anxiety disorder often worry about every day, routine life circumstances, such as possible job responsibilities, health and finances, and health of family members, misfortune to their children, or minor matters" (DSM-5, 2013, p. 222). These are matters that often affect college students' lives on top of possible experienced academic stress. People with anxiety often have thoughts about possible future dangers, making mindfulness a difficult but beneficial skill to learn.

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, 2013) defines anxiety disorders by "features of excessive fear and anxiety and related behavioral disturbances" (p. 189). The National Alliance on Mental Health (NAMI, 2017) reports anxiety as

a persistent worry that increases over time with symptoms that interfere with daily functioning. Symptoms of anxiety include physical (e.g., increased heart rate, sweating, etc.) and mental (e.g., nervousness, worrying, etc.) sensations (Mayo Clinic, 2018). Anxiety disorders include separation anxiety disorder, selective mutism, specific phobia, social anxiety disorder, panic disorder, agoraphobia, and generalized anxiety disorder (DSM-5, 2013). Anxiety disorders have high rates of comorbidity with each other and other mental health disorders such as depression (DSM-5, 2013; Greeson & Brantley, 2009). Risk factors associated with developing anxiety include trauma, stress from an illness, stress buildup, personality, other mental health disorders, family history of anxiety, and drugs or alcohol (Mayo Clinic, 2018). It is important to note that anxiety disorders are two times as likely to occur in females than in males (DSM-5, 2013).

Stress Reduction

Stress can be an unpredictable small or major event affecting daily life. Since stress can be inevitable it is important to learn effective management skills. Stress can lead to symptoms of mental illnesses worsening, therefore, emphasizing the importance of applying functional coping skills as prevention (NAMI, n.d.). Folkman (1984, p. 843) defines coping as “cognitive and behavioral efforts to master, reduce, or tolerate the internal and/or external demands that are created by the stressful transaction”. Coping refers to how a person aims to minimize their stress through cognitive mechanisms or behaviors to protect from a perceived threat. Functional coping skills lead to stress reduction and overall problem resolution. Dysfunctional coping behaviors provide short term relief but cause harm over time and are not sustainable (Greeson & Brantley, 2009). It is critical to acquire functional coping skills to protect oneself from the negative aspects associated with stress. “By creating healthy routines, you can lay a foundation for stress resilience” (Greenberg, 2016, p. 52).

Functional Coping Strategies

The American Psychological Association (APA, 2018) reports having a good support network, regular exercise, and ample sleep as effective coping strategies. The National Alliance on Mental Illness (NAMI, n.d.) provides additional coping strategy ideas including accepting your needs, time management, relaxation, scheduling time for yourself, eating well, getting enough sleep, dedicating time for prayer and/or meditation, and avoiding alcohol and drugs. The National Institute of Mental Health (NIMH, n.d.) describes similar stress management techniques with the addition to being observant, talking to a health professional, creating goals and priorities, and considering a clinical trial. These are functional coping skills that can be used to manage stress appropriately. This literature review will focus on mindfulness as a reinforcer for increased use of positive coping skills.

The transactional theory of stress and coping (TTSC) states that stress is a transaction between the person and their environment (Lazarus & Folkman, 1984). The individual processes whether the stressor will impact them positively or negatively and the severity of that impact, conducting an “appraisal” (Lazarus & Folkman, 1984). The stressor, how the person responds to the stressor (the appraisal), and their reaction to that response describe the interactions. When facing a challenge, the individual will appraise the stressor as threatening or non-threatening and then evaluate whether they have the resources to cope with the stressor (Lazarus & Folkman, 1984). The theory emphasizes that an event will be appraised as stressful as it relates to the individual experiencing it, therefore, an event that is not stressful to one person may be stressful to the next (Lazarus & Folkman, 1984).

Carver et al. (1989) developed the instrument “COPE” to assess people’s coping styles in response to stressors. They added to the previous work conducted by Lazarus & Folkman on

assessing active coping strategies by measuring different item sets and assessing dysfunctional coping. The aim of their study was to look at numerous self-regulatory functions involved in measuring coping. They concluded that “coping strategies postulated to be adaptive are in fact linked to personality qualities that are widely regarded as beneficial” (p. 276). Self-regulation is a positive personal quality and a big part of mindfulness techniques. This study shows insight into how mindfulness could be used to strengthen functional coping.

Coping Styles

There are three functional (also called adaptive) styles of coping which include problem-focused coping (directly confronting the stressor), emotion-focused coping (regulating reaction to stressor), and wellness-focused coping (addressing one of the eight dimensions of wellness) (Ponte, 2020). The eight dimensions of wellness include physical, intellectual, financial, environmental, spiritual, social, occupational, and emotional areas (Ponte, 2020). The eight dimensions of wellness each have their own applied coping strategies such as using exercise to address the physical dimension or spending time in nature to work on the environmental dimension. Avoidance coping is a dysfunctional (also called maladaptive) coping style where the individual avoids or denies the cause of the stressor such as by oversleeping (Barnes & Lightsey, 2005; Freligh & Debb, 2019).

Mindfulness as an emotion-focused coping style has been studied as of recently. Carver et al. (1989) report their research on expanding the coping styles described by Lazarus and colleagues. They determine acceptance as a functional coping response because if the person is accepting the stressor, then they are engaged in actively solving it. Some studies report that emotion-focused coping is the best option for uncontrollable and unexpected stress, while others

report that emotion-focused coping employs positive effects no matter the controllability of the situation (Finkelstein-Fox et al., 2019).

Mindfulness

According to Kabat-Zinn (2003) mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (p. 145). Bishop et al. (2004, p. 232) offers the definition “self-regulation of attention [and] adopting a particular orientation toward one’s experience in the present moment, an orientation that is characterized by curiosity, openness, and acceptance.” Another definition comes from Baer (2003, p. 125) as “the nonjudgmental observation of the ongoing stream of internal and external stimuli as they arise.” Mindfulness harbors many meanings, but most contemporary teachings tend to agree that it is centered around being aware of the present moment and accepting it without judgement (Kabat-Zinn, 1990). The operational definition is outlined by Dimidjian & Linehan (2006) for empirical evaluation and research of the specific components of mindfulness and their possible separate effects. They define three qualities while practicing as (1) observing, noticing, bringing awareness; (2) describing, labeling, noticing; and (3) participating and three qualities for actions of practice (1) nonjudgmentally, with acceptance, allowing; (2) in the present moment, with beginner’s mind; and (3) effectively (Dimidjian & Linehan, 2006).

Mindfulness “requires noticing what’s happening while it’s all happening, using all five senses” (Neff & Germer, 2018, p. 45). When an individual is engaged in auto-pilot or multi-tasking modes, they are being mindless (Germer, 2005). Mindfulness practice is a purposeful and intentional action. It involves remembering to bring attention and focus to the activity and experience in the moment (Germer, 2005). Implementing mindfulness means that judgements of

yourself, others, and personal thoughts are let go. Mindfulness doesn't involve eliminating negative thoughts as all thoughts are free to flow in and out and accepted simply as they are. The idea of focusing attention on the present moment can be applied to thoughts and behaviors related to stress and anxiety. Suppressing the feelings of anxiety and stress is a short-term fix. However, to experience the effects of long-term stress reduction, anxiety and stress are allowed in and let go (Greeson & Brantley, 2009; Gockel, 2010). The associated negative feelings may arise, but the mind and body will learn to let them roll by, as to not give them all their attention. When the anxious sensations are allowed in nonjudgmentally versus avoided, it can lead to emotional reactivity reduction therefore teaching toleration of the symptoms when they naturally occur (Baer, 2003).

Mindfulness is the core teaching of an eastern practice that has been taught for over 2,500 years originating with Buddha (Gockel, 2010; Germer, 2005; Sockolov, 2018). Mindfulness as a clinical practice has gained popularity and more recently has become of interest in research in the western world. Formal mindfulness practice as taught in Buddhism, is a specific spiritual practice with the main purpose of addressing psychological suffering (Germer, 2005). Mindfulness has been adapted for secular use in a therapeutic context with multiple interventions established. The interventions that have incorporated mindfulness practices include mindfulness-based stress reduction (MBSR), dialectical behavior therapy (DBT), mindfulness-based cognitive therapy (MBCT), acceptance and commitment therapy (ACT), and relapse prevention for substance abuse (Baer et al., 2006).

Mindfulness practice among college students has shown effectiveness. Mindfulness-based interventions show improvement in health problems (Berghoff et al., 2017). A large component of mindfulness practice is meditation. The present study conducted by Berghoff et al.

(2017) aims to examine whether the length of practice (10 minute versus 20-minute daily meditation) impacts the improvement of symptoms. The participants consisted of undergraduate students and the study indicated it was racially diverse as they included 14.3% African American, 14.3% African American, and 10.4% Asian American students. The researchers provided guided meditation audiotapes that the participants would use to practice meditation in their homes. The outcomes provide evidence for increased mindfulness and stress decline for both groups with no difference in length practiced (Berghoff et al., 2017). This study represents that mindfulness practice is beneficial to college students in stress reduction no matter if it is practiced daily or practiced for a certain length of time.

There are many mindfulness techniques that can be used to practice mindfulness. Some mindfulness interventions such as MBSR and MBCT teach formal meditation practice while others such as DBT incorporate components of meditation into short exercises, skills, and attitudes (Gockel, 2010). Some teachings are flexible and can be incorporated into everyday tasks such as while eating or brushing your teeth, making it a sustainable practice over time for even the busiest of people like college students. Creating time and space for meditation, intention setting, consistency, good social support, and journaling are some strategies for building an effective practice (Sockolov, 2018).

Relaxation can be achieved through mindfulness practice and can provide immediate stress relief. The stress reduction experienced while performing mindfulness stress reduction techniques lasts past the time of completion of the exercise such as that demonstrated in MBSR (Baer, 2003). Personal investigation and dedicated effort are required to get the most out of mindfulness practice (Sockolov, 2018). Both dedication and effort are required for best results like a sports player improving at their sport through consistent practice.

Resting in the present moment, called meditation, is the vehicle for cultivating mindfulness (Gockel, 2010). Baer (2003) describes mindful meditation as the observation of internal and external stimuli presently being experienced. Meditation can be performed wherever an individual feels comfortable, as it does not require a specific set up. Formal meditation practice requires sitting, focusing on something such as the breath, and experiencing acceptance (Siegel et al., 2009).

Mindfulness-Based Stress Reduction

Jon Kabat-Zinn created the Mindfulness-Based Stress Reduction Program at the University of Massachusetts Medical Center in the 1970s (Sockolov, 2018). MBSR is a mindfulness-based practice with evidence in effectiveness in reducing stress, anxiety, depression, and physical pain (Yamada & Victor, 2012; Sockolov, 2018). Mindfulness-based training programs have shown brain and behavior changes even in beginner practitioners (Gockel, 2010). Participants in these studies have also been able to demonstrate positive effects lasting up to one year after the completion of the program (Sockolov, 2018).

MBSR is an 8-10 weeklong group therapy style program for adults with each session lasting 2-2.5 hours and including sitting meditation, body scan, and Hatha yoga (Baer, 2003). Sitting meditation is done in a relaxed position with eyes closed and attention on breathing (Baer, 2003). Body scan is a 45-minute exercise where attention is drawn to different parts of the body as the sensation of the body part is observed (Baer, 2003). Lastly, Hatha yoga is the attention to body sensations through practice of gentle body movements (Baer, 2003). Mindfulness is also practiced in daily activities like while eating. MBSR teaches people how to develop awareness of their mind and body and how to readily recognize body sensations that come up when experiencing stress and negative thoughts. Once the person can recognize the experience as it

occurs, they can accept the perceived stress by accepting it nonjudgmentally and then using appropriate coping skills to remedy it (Baer, 2003). Kabat-Zinn (2003) also reports that therapists who implement MBSR with clients should be knowledgeable in and practice mindfulness themselves as a daily life practice.

Shapiro and colleagues (1998) conducted a study presenting a course elective modeled after the MSBR program for premedical and medical students. The researchers found support for MSBR including reduction of psychological discomfort, reduction of anxiety, increase of empathy levels, and increased spiritual experiences once the class ended. These results are important as premedical and medical students experience a lot of stress in their personal and professional lives. MSBR intervention has proven to be effective in this group of college students that is highly susceptible to stress. The researchers report that future research should be conducted to examine what independent components of mindfulness contributed to the successful stress reduction reported by the college students (Shapiro et al., 1998).

Benefits

Research has established that mindfulness practice unlocks many benefits producing enhanced holistic well-being. Well established improvements include stress reduction, focus, physical experiences (i.e., lower blood pressure, better digestion), sleep, creative problem solving, less loneliness, self-esteem, and mood regulation (Sokolov, 2018). Mindfulness is relatively new to clinical application, so it is quite fascinating that clients are willing and interested in incorporating mindfulness activities “with 85% of participants completing the treatment programs” (Dimidjian & Linehan, 2006, p. 170).

Research of mindfulness on increased well-being was conducted in a 2-part study by Brown and Ryan (2003) to develop the Mindfulness Attention Awareness Scale (MAAS). Part 1

of the study was conducted with college students and indicates findings supportive of mindfulness being associated with well-being and relates to lower anxiety and depressive symptoms. Brown and Ryan (2003) report that the MAAS was associated with higher self-esteem, life satisfaction, competence, optimism, and other positive aspects.

Mindfulness-based interventions are used as effective therapeutic treatments backed by empirical studies that have demonstrated positive results for mental health disorders and physical illnesses. Anxiety has been a leading focus for mindfulness-based interventions with a lot of solid support in decreasing anxiety symptoms in adults. Alongside lowering anxiety, mindfulness-based interventions also have been effective in treatment of depression, addiction, eating disorders, and personality disorders (Gockel, 2010).

Dorian & Killebrew (2014) conducted research with graduate students through a 10-week-long course. The graduate students reported increased acceptance, compassion, awareness, and attention. These increases are consistent with mindfulness benefits and items such as attention can be useful in terms of college work and lessening academic stress experienced by college students. The study also provides support for mindfulness impact on relaxation, enjoyment, and gratitude (Dorian & Killebrew, 2014).

Mindfulness allows space for the individual to gain self-awareness to their emotional responses, to acknowledge these habits, and to accept them (Greeson & Brantley, 2009). From here, the individual can decide to make changes to their harmful habits in response to stress and work to improve their wellbeing. The ability to be less reactive to the internal and external environment is self-regulation which includes three strategies of biofeedback, meditation, and relaxation. The awareness learned through mindfulness allows one to be intentional about their

response to stress versus letting automatic reactivity simply just occur and cause all kinds of emotional and physical tension (Greeson & Brantley, 2009).

Mindfulness Facilitation

Mindfulness has the potential to provide college students with many benefits. A study conducted with social work college students reports that mindfulness can provide new psychotherapy tools, help deepen clinical skills and integrate self-care right into the clinical training program which may also help prevent burnout and vicarious trauma (Gockel, 2010). With the research presented on the effectiveness of mindfulness stress reduction techniques, such as MBSR, on mental and physical health concerns, researchers have recently taken interest to exploring the application of mindfulness in the academic sphere. Yamada & Victor (2012, p. 140) report that recent literature provides evidence for the benefits of implementing mindfulness into early educational settings as demonstrated by students' "improvements in attention, social skills, mood (e.g., anxiety, depression), academic functioning, externalizing problems, and excitative function."

The prospect that practicing mindfulness leads to development of functional coping skills has been limited. Researchers report that mindfulness practice may strengthen and promote the use of functional coping skills (Baer, 2003). The outcome of strengthening positive coping skills could lead to successful long-term stress reduction. Baer (2003, p. 129) reports that "mindfulness training may promote recognition of early signs of a problem, at a time when application of previously learned skills will be most likely to be effective in preventing the problem". Mindfulness techniques can help college students manage stress effectively by choosing to engage in learned positive coping skills instead of participating in negative coping outlets.

Keng and colleagues (2012) examined the effects of mindfulness and self-compassion as independent aspects of the success with MBSR. In the study, mindfulness (when self-compassion was controlled) mediates effects of MBSR on emotion regulation. As demonstrated by Keng et al., mindfulness as a mechanism for change could be implemented to encourage functional coping skills. Previous findings demonstrate MBSR increasing self-reported mindfulness and decreases stress, anxiety, and worry (Keng et al., 2012). These findings expanded research considerations to assess mindfulness as the mediator of MBSR outcomes as suggested by Shapiro et al. (1998).

A study conducted by Finkelstein-Fox (2019) and colleagues consisted of 157 first-year undergraduate students from the same university with majority being white females with average age of approximately 18 years old. The measures used in the study were mindfulness, daily stressors, daily appraisals, daily coping, and daily positive and negative affect. The results of the study report “lower average stress appraisals mediated 19% of mindfulness’ effects on negative affect”, and the “use of some mindful emotion-focused coping strategies (i.e., non-self-blame and acceptance) independently mediated 3-13% of mindfulness effects on positive and negative affect” (Finkelstein-Fox et al., 2019, p. 1). The results show some success in confirming mindfulness’s positive effects on coping skills and stress. Additional research should be conducted to expand the knowledge of mindfulness as a reinforcer to appropriate and functional coping skills used when experiencing daily stress. The authors of the study suggest that mindful emotion-focused coping strategies would have the most effect when applied alongside problem-focused coping strategies (Finkelstein-Fox et al., 2019).

Finkelstein-Fox (2019) and colleagues add to minimal research conducted on mindfulness effects on stress and coping by investigating the independent aspects of mindfulness. Finkelstein-Fox et al. (2019, p.1) assess the

degree to which (a) lower stress appraisals mediate mindfulness' effects on daily positive and negative affect; (b) daily coping mediates mindfulness' impact on daily positive and negative affect, above and beyond the effects of stress appraisals; and (c) coping flexibility mediates mindfulness' impact on positive and negative affect, above and beyond the effects of stress appraisals and average daily coping.

Finkelstein-Fox et al. (2019, p.2) also report that previous research indicates that "higher levels of mindfulness are characterized by a greater tendency to use certain functional coping strategies for responding to distress."

Multicultural Considerations

It is important to acknowledge that there are unique stressors experienced by minority groups that can impact stress levels therefore leading to negative consequences. Racism and discrimination lead to stress and this adds to the stressors already shared by the college student population. African Americans deal with daily racism and socioeconomic inequality which negatively impacts overall health and self-care (Freligh & Debb, 2019). The experience of racism among African American college students is correlated with stress (Barnes & Lightsey, 2005).

A study conducted by Gee (2007) and colleagues on Asian Americans found that experiences with discrimination can lead to chronic stress which leads to negative effects on health. The researchers' findings show discrimination is associated with cardiovascular health issues, vulnerability to respiratory problems, and pain (Gee et al., 2007). Furthermore, self-

concealment is a form of dysfunctional coping used to suppress personal information related to cultural experiences which may be used as a protective factor among African Americans (Masuda et al., 2009). Self-concealment is reported to be associated with stress, depression, and anxiety making it a negative choice for dealing with stress (Masuda et al., 2009).

Microaggressions and derogatory comments and behaviors experienced by American minority communities lead to unique experienced stress (Proulx et al., 2019). Proulx et al. (2019) report that American minority communities experience various stressors and therefore coping strategies may be different across cultures demonstrating the importance of identifying stress reduction that will resonate with the group's cultural understanding.

Considering mindfulness through a cultural lens, mindfulness may be beneficial to American minority communities in stress reduction by providing "insight, peace, and compassion" (Proulx et al., 2018, p. 2). Mindfulness interventions can be of benefit in Native American communities when used in combination with traditional Native practices to reduce stress and other health conditions experienced in the community (Proulx et al., 2018). In a study with African American college students experiencing race-related stress, when higher levels of mindfulness were reported, they correlate with lower levels of depressive symptoms (Watson-Singleton et al., 2019).

Mindfulness as a facilitator has also been examined among African American college students. Research conducted by Masuda et al. (2009, p.123) reports that mindfulness serves as the connection between self-concealment and endured negative psychological well-being in African American college students. According to the researchers, self-concealment does not directly cause stress but rather the lack of mindfulness is attributed to the experienced stress. Mindfulness may act as a facilitator for functional coping strategies that then lead to stress

reduction in the case of self-concealment. Their findings also indicate “that mindfulness is a unique predictor of emotional distress in stressful interpersonal and emergency situations, general psychological ill health, and self-concealment even when the impacts of gender, age, financial background, and religious practice are taken into account simultaneously” (p.123).

Freligh & Debb (2019) report findings that support trait mindfulness as a reinforcer for resilience and protective factor against stress in the African American college student population.

Furthermore, the researchers report that mindfulness practice can protect against racism related stress. A study conducted by Watson-Singleton et al. (2019, pp. 7-8) report

novel empirical support for protective role of mindfulness in the context of race-related stress, such that higher levels of mindfulness, relative to low and average levels, buffered the impact of both past discrimination and race-related vigilance on depressive symptoms among African Americans.

Barnes & Lightsey (2005) conducted a study with African American college students and whether the relationship between perceived racist discrimination, stress, and life satisfaction can be moderated by coping strategies. Their findings support research that problem solving coping is beneficial and avoidance coping is detrimental to racism-related stress. The study did not examine emotion-focused coping style so there is room to build research for mindfulness and African American college students. As the previous studies show that mindfulness has a positive impact on cultural minorities, research should be conducted on the relation to facilitation of functional coping skills.

Applications to Clinical Mental Health Counselors

College students’ experience with stress is inevitable and therefore brings about various mental health concerns. College students use various coping strategies to deal with their

perceived stress, with some coping choices being more functional than others. Clinical mental health counselors working with this population should be knowledgeable on techniques and resources that aid in decreasing stress effectively. Empirical evidence supports mindfulness as effective with college students on reduction of stress and anxiety. Mindfulness techniques can be incorporated as a formal practice or implemented through shorter exercises into their daily routines (Berghoff et al., 2017; Gockel, 2010). Although there is limited information on mindfulness facilitating functional coping skills, there is research that provides evidence for mindfulness or its components leading to positive aspects of stress reduction (Finkelstein-Fox et al., 2019; Keng et al., 2012; Yamada & Victor, 2012; Gockel, 2010; Baer, 2003). These findings provide insight into the benefits of teaching college students mindfulness to encourage functional coping skills therefore leading to reduction in stress.

Having awareness that mindfulness may reinforce positive coping skills, mindfulness could be taught to clients who are engaging in positive coping skills to strengthen them (Baer, 2003). Mindfulness may also be taught to clients engaging in negative coping skills to reduce and replace them with more adaptive options (Barnes & Lightsey, 2005). Mindfulness has also shown to be a reinforcer to the effectiveness of MBSR (Keng et al., 2012). As evidenced throughout this paper, students who practice mindfulness can achieve stress reduction and therefore reducing risks for mental and physical illnesses.

High stress in college students is well examined and negative coping skills are frequently utilized (Brougham et al., 2009). This information makes stress reduction an important value for the college institutions to evaluate and implement. Promoting functional coping skills to improve students' overall health should be a main objective of the institutions (Shapiro et al.,

1998; Gockel, 2010). Incorporating mindfulness into school curriculum could benefit college students and should be considered by counselors.

Counselors should help their African American clients avoid dysfunctional coping that exacerbates the issue and instead teach more functional coping strategies to reduce avoidant style behaviors to stress (Barnes & Lightsey, 2005). Integrating mindfulness into minority college students' lives can help by increasing the use of functional coping skills instead of avoidance-based coping (Freligh & Debb, 2019). Stress reduction for college students is important as it can reduce psychological and physical symptoms and therefore lead to a more satisfactory lifestyle. Mindfulness as a daily practice would provide optimal results in reinforcement of positive coping skills which are used for reducing stress experience. By serving our client's needs, counselors should advocate for implementation of mindfulness into student culture.

Conclusion

College students experience stress and require knowledge and implementation of functional coping skills to increase quality of life. Mindfulness interventions such as MBSR have demonstrated effectiveness in reduction of stress and symptoms related to psychological disorders in clinical and non-clinical college student populations. Mindfulness techniques may decrease stress by improving emotional regulation using mindful practice, therefore allowing for more functional coping skill utilization (Keng et al., 2012). Although there have been some studies examining mindfulness as a reinforcer of coping skills, more research is needed to establish certainty. Mindfulness should also be examined as the component of the positive outcome of mindfulness-based stress reduction to contribute further upon current literature. Realistic ways to incorporate mindfulness into the daily lives of college students through educational institutions should also be assessed.

There were not many studies available while investigating the usefulness of mindfulness on coping facilitation with cultural minority college students. This is a flaw as there is evidence demonstrated by multiple studies that mindfulness can be beneficial in minority cultures. These minimal studies examining diverse students provide evidence for mindfulness being impactful in the communities as it can be used in a culturally appropriate way. It is recommended that future studies focus on diverse populations and when conducting studies on mindfulness and college students.

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