

EMBODYING CRITICAL CONSCIOUSNESS IN HIGHER EDUCATION:
A PILOT RCT OF A MINDFULNESS-BASED INTERVENTION FOR COLLEGE
STUDENTS OF COLOR

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STUDENTS OF COLOR

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DEDICATION

To my beloved parents, Binoy Sebastian and Elsa Binoy, thank you for every time you said, “We are with you” and “We are so proud of you.”

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....ii

ABSTRACT.....iv

CHAPTER

1. INTRODUCTION.....1

 The Present Study.....5

2. LITERATURE REVIEW.....7

 Sense of Belonging.....7

 Critical Consciousness.....10

 The Role of Mindfulness.....12

 Integrating Mindfulness into Critical Pedagogy.....16

3. METHODOLOGY.....19

 Research Design and Rationale.....19

 Participants and Procedures.....23

 The Intervention.....24

 Quantitative Component.....25

 Qualitative Component.....28

 Quantitative and Qualitative Integration of Data.....34

 Human Subject Research Considerations34

4. RESULTS.....35

 Research Questions.....35

 Characteristics of Participants.....35

Quantitative Results.....	37
Summary of Quantitative Results.....	39
Qualitative Findings.....	39
Summary of Qualitative Findings.....	47
Integration of Quantitative Results and Qualitative Findings.....	47
5. DISCUSSION.....	50
Summary and Interpretation of Statistical Results.....	50
Summary and Interpretation of Qualitative Findings.....	51
Integration between Quantitative and Qualitative Findings.....	51
Implications for Higher Education.....	54
Limitations and Future Directions.....	56
Conclusion.....	57
REFERENCES.....	58
APPENDIX A. IRB APPROVAL LETTER.....	68
APPENDIX B. DEMOGRAPHIC QUESTIONNAIRE.....	69
APPENDIX C. FIVE FACET MINDFULNESS QUESTIONNAIRE.....	71
APPENDIX D. DEPRESSION ANXIETY STRESS INDEX.....	72
APPENDIX E. COLLEGE SELF-EFFICACY SCALE.....	73
APPENDIX F. UNIVERSAL BELONGING QUESTIONNAIRE.....	74
APPENDIX G. CRITICAL CONSCIOUSNESS INVENTORY.....	75
APPENDIX H. INTERVENTION MANUAL.....	77
APPENDIX I. INDIVIDUAL INTERVIEW QUESTIONS.....	80
VITA	93

LIST OF ILLUSTRATIONS

FIGURE 1: First model of embedded-experimental MMR design.....81

FIGURE 2: Detailed model of embedded-experimental MMR design.....82

FIGURE 3: Changes in Total Scores over Time for Each Outcome Measure81

TABLE 1: Participant Demographic Frequencies.....86

TABLE 2: Participant Racial and Ethnic Frequencies by Intervention Group.....87

TABLE 3: Descriptive Statistics for Pretest and Posttest Scores.....88

TABLE 4: Results for Repeated Measures ANOVA89

TABLE 5: Results for Paired Samples T-Test for Intervention Group90

TABLE 6: Overview of Themes Subthemes.....91

TABLE 7: Display of Integration of Quantitative Results and Participants Quotes.....92

ABSTRACT

The purpose of this study was to understand the effectiveness of a mindfulness-based intervention for students of color who experiences a low sense of belonging. An embedded mixed methods design including a quantitative component (RCT of two intervention groups that underwent the same intervention and one control group) and a qualitative component (content analysis) was utilized to test the effectiveness of a mindfulness-based critical consciousness intervention for college students of color. Twenty-eight students of color were randomly allocated to either an intervention or a control group. The intervention groups attended a four-week mindfulness-based workshop series and completed measures of mindfulness, distress, colleges self-efficacy, belongingness, and critical consciousness at pre-intervention and post-intervention. The control group completed the aforementioned measures at pretest and posttest. As predicted, repeated measures ANOVAs revealed increases in mindfulness, colleges self-efficacy, belongingness, and critical consciousness, as well as decreases in distress, for intervention group participants over time relative to control participants. This study also utilized an inductive content analysis to explore how, if at all, the intervention influenced the students of color in the intervention groups. In the qualitative exploration, four subordinate themes emerged: (a) Mindfulness, (b) Motivation to Decrease Academic Distress, (c) Sense of Belonging, (d) Critical Consciousness. Implications for higher education are discussed.

Key words: Students of color, minority distress, mindfulness, critical consciousness, belonging, intervention research.

CHAPTER 1

INTRODUCTION

After the 1954 ruling of *Brown v. Board Education* in the United States, racial segregation in public schools was ruled unconstitutional. Although students of color (defined as black, African-American, Asian, South Asian, Middle Eastern, Pacific Islander, Latinx, Chicana, Native American, and multiracial) were legally allowed to learn alongside their white counterparts, they were met with hostility, unease, feelings of isolation, and discrimination (Buck & Patel, 2016). Historical injustices continue to impact the psychological health of students of color today. College students of color experience higher levels of psychological distress compared to their White counterparts, specifically due to racial differences (Bynum et al. 2007). Students of color also experience disproportionate levels of anxiety, depression, inferiority, physical health issues, isolation, and lower quality of life (Cokley et al. 2017; Soto et al. 2012; Zvolensky et al. 2016). The number of undergraduate students of color has increased from 29.6% in 1996 to 45.2% in 2016, with roughly a doubling of the percentage of Latino students. Considering this growing trend, it is critical that researchers and administrators provide ways in which students of color can thrive in academic settings. This includes addressing their sense of belonging, ability to cope with stress, and their understanding of sociopolitical dynamics that may impact their wellbeing.

Students of color experience interpersonal and race-related difficulties that impact their views of themselves, the world, and their interpersonal relationships. The schemas of students of color are shaped by experiences, interpersonal relationships, and transgenerational factors. Traditional approach to counseling and mental health implemented treatment at individual level and neglected sociopolitical and historical factors. However, the synthesis of mindful pedagogy

and critical pedagogy may allow for a more comprehensive evaluation of the present moment and an acknowledgment that our perceptions are shaped by history, which may free a colonized mind. Mindfulness and critical consciousness are both tools and sources of knowledge that can help shift an internal dialogue of self-blame or self-criticism to a self-evaluation that is present focused and embedded in the awareness of historical and sociopolitical contexts. This study will examine the influence and effectiveness of a mindfulness-based critical consciousness intervention for students of color who experience a lack of belonging to their university.

Plessy v. Ferguson's (1896) "separate but equal" doctrine has been viewed as more of a figurative change than a true transformation of a system that encourages students of color to see themselves as just as capable as their majority peers to achieve success through education (Bell, 2014). Given the mental health disparities among students of color, academic institutions have a responsibility to inquire about and address the mental health needs of their racially and ethnically diverse students. This is especially critical, as students of color are less likely to receive mental health treatment (Herman, et al., 2001), specifically among Asian and African American students (Eisenberg, 2009). This can be due to a variety of factors, including stigma and mistrust (Suite et al., 2007). The racial and ethnic demographic make-up of an institution may also impact the experiences of students of color on campus. For example, one study found that African-Americans students who are enrolled at a predominantly white institution are more likely to experience race-related stress than African-American students at historically black colleges (Greer & Chwalisz, 2007). Because education is a socialization process that impacts views of self and other, institutions that adopt a more context-specific approach to students of color may see both psychological and academic improvement in the students.

Beverly Tatum (2001) described the lifelong process of unlearning misinformation and stereotypes that have been internalized about others and the self in the identity development process. The prejudicial attitudes that have permeated the psyches of individuals in the U.S., before and after the Civil Rights era, continue to impact the lived experiences and perceptions of students of color (Schlosser, 2016). The remnants of colonization feed into a sense of self that is shaped by sociopolitical and historical forces and exists in the internalized beliefs of students of color. In order to address these cross-disciplinary issues, a holistic evaluation and approach is required. In *The Souls of Black Folk* (1903), W.E.B. Du Bois discusses how experiences of systemic oppression and discrimination may lead racial and ethnic minorities to experience a “double-consciousness,” or a fragmented sense of self, filtered through the eyes of the oppressor and hindering one’s ability to cultivate an integrated identity.

To address the disparities among students in education, universities have implemented a wide variety of ineffective diversity initiatives. For example, the ASCD (Association for Curriculum Development and Supervision; 2007) aimed to apply a whole child approach to education and highlighted 5 tenets that ensure students are able to: 1) learn about and practice healthy lifestyles; 2) learn in an environment that is physically and emotionally safe; 3) connect to the school and broader community; 4) gain access to personalized learning and is supported by qualified, caring adults; and 5) is challenged academically and prepared for success in college or further study and for employment and participation in a global environment. Although this framework has been used in academic settings to help integrate minorities into the greater system, it does not consider how the multiple identities of students of color may impact their ability to learn. One theory that gives light to the complexity of how identity overlaps with systems is intersectionality theory (Crenshaw, 2000; Hill-Collins, 2004), which proposes that

individuals hold manifold, layered identities that stem from societal relations, history, and systems of power.

Universities tend to take on a “colorblind” approach in which they treat all students equally, without considering the transgenerational effects of historical injustices. A colorblind approach to education perpetuates a system of racism, discrimination, and oppression that most negatively impacts marginalized individuals who have been integrated into a system in which they are continually oppressed. Because students hold various privileged and oppressed identities, it is vital that they are able to explore these different parts and who they are as a whole. A true education of the whole student takes into consideration students’ non-academic well-being, including social life, physical well-being, emotional health, sense of purpose or meaning and how these various aspects are interconnected with their social identities (Zhao & Frank, 2003). As the racial and ethnic demographics of the educational bodies are rapidly changing, it may be especially important for universities to dismantle colorblind policies and understand students as whole students (Iverson, 2007). The integration of mindfulness with critical consciousness in an intervention may allow for a strong foundation that supports the holistic well-being of students of color.

Although a variety of interventions have been implemented in higher education to enhance the psychosocial well-being of students of color, these interventions seem to lack critical elements that foster the possibility of a sustainable approach to maintaining psychosocial well-being (Engberg, 2004; Schippers, Scheepers, & Peterson, 2015; Schultz, Colton, & Colton, 2001; Walton & Cohen, 2011). Critical pedagogy (Darder, Baltodano, & Torres, 2003; Shor, 1987) is a teaching approach that emphasizes the cultivation of practices that strengthen a sense of autonomy and preparation for discriminatory experiences. The goal of critical pedagogy is to

apply “emancipatory education” and encourage students to challenge dominant structures, engage in meaningful dialogue, and gain a sense of empowerment through the development of critical consciousness (Freire, 1973; 1974).

Given the multifaceted nature of critical pedagogy, it may be helpful to consider factors such as psychosocial health, power structures, interpersonal dynamics, identity development, and the role of the mind-body interaction (McLaren & McLaren, 1995). The practice of mindfulness may serve as a foundation for critical pedagogy that helps minoritized individuals navigate power structures and cultivate a self-understanding that leads to the use of effective, holistic coping skills. Mindfulness has been referred to as a nonjudgmental, curious, awareness of the present moment (Kabat-Zinn, 1996). When this moment-to-moment awareness is practiced in the context of raising critical consciousness, students may be able to gain insight into their stories, rewrite their narratives, and co-create a reality that offers the possibility of liberation and a sense of interconnectedness (Solorzano, 2000). This study investigated the influence and effectiveness of a mindfulness-based critical consciousness intervention for students of color who experience a lack of belonging to their university.

The Present Study

The aim of this pilot intervention study was to investigate the influence and effectiveness of a mindfulness-based critical consciousness intervention for students of color who experienced a lack of belonging to their university. For the quantitative portion of the study, we hypothesized that:

a) relative to the control group, participants who complete the treatment intervention will report higher levels of mindfulness, college self-efficacy, belongingness, and critical consciousness at posttest

b) relative to the control group, participants who completed the treatment intervention will report lower levels of psychological distress (depression, anxiety, and stress) at posttest

c) and for the qualitative portion of the study, we explored the benefits that the participants derive from the intervention, if any at all, including the cognitive, emotional, and behavioral processes of the students.

CHAPTER 2

LITERATURE REVIEW

The following chapter will focus on the psychosocial experiences of students of color, including their sense of belonging, and how mindfulness can be integrated into critical pedagogy in order for students of color to achieve greater levels of well-being. The intervention was guided through a critical pedagogical, ecological, and anti-oppressive framework that incorporates mindfulness into holistic learning and unlearning for students of color. Considering the emphasis on a holistic perspective of the student the variables selected in this study are cross-disciplinary and interconnected. The integrated framework positions students as autonomous beings who are capable of developing autonomy, fostering identity, cultivating compassion, working towards liberation, and creating social change.

Sense of belonging

Maslow described belongingness as a basic human need and a core aspect of the human experience (1954). Baumeister and Leary (1995) discussed belongingness as fundamental human motivation. In the context of education, belongingness refers to feeling accepted and personally connected to a campus community (Strayhorn, 2008). Researchers have found that a strong sense of belongingness predicted high student motivation, engagement, and academic achievement (Zumbrunn et al., 2014). O’Keefe (2013) explored the causes and potential solutions to college student attrition and highlighted the key risk factors which place students at risk of non-completion. These factors include mental health issues, disability, socioeconomic status, and race/ethnicity. O’Keefe emphasized the importance of fostering a welcoming and supportive community within the university and suggested that sense of belonging can be attained through the following: positive student and faculty relationships, access to a well-resourced counseling

center, and an appreciation for diversity. However, higher education administrators have neglected to identify specific ways in which people in authority can address specific aspects of social identities, such as how the impact of transgenerational trauma impacts the link between psychosocial well-being and academic achievement.

Students of color in higher education experience belongingness to a variety of extents, depending on both internal and external factors. One external factor that may impact students' sense of belonging includes the experience of discrimination. Racial microaggressions include subtle or explicit verbal, behavioral, or environmental acts of racism towards a racial/ethnic minority (Sue et al. 2007). Microaggressions have a cumulative effect on the academic achievement, feelings of isolation, and mental health of students of color (Sue, 2010). Students of color may experience everyday racial microaggressions by majority members, including white faculty and students (Hollingsworth et al. 2017; Smith et al. 2011; Sue et al. 2007). Although the offender may perceive the act as innocuous, individuals may experience stress in the effort to determine how to identify, confront, or accommodate an oppressive offense (Pierce 1974; Sue et al. 2008). Additionally, internalized racial microaggressive messages can negatively influence students' self-esteem, (Kohli 2012) ability to concentrate, and overall psychological well-being (Hollingsworth et al. 2017). Therefore, it is important to identify factors that not only protect students of color from experiencing racially-related interpersonal distress, but those that strengthen a students' ability to succeed academically and socially. Steele (1999) argued that when students have a strong sense of belonging, they are able to give more attention to academic and social pursuits.

Hausmann and colleagues (2009) considered students' subjective sense of belonging in an integrated model of student persistence designed to increase sense of belonging; however;

studies have shown that many of these efforts are ineffective and potentially harmful. For example, a study by Jackson et al. (2003) suggest that in some universities' efforts to include Native American students and increase their sense of belonging, administrators committed macroaggressions against the Native students and invalidated their sovereignty. Jackson and colleagues (2003) recommend Westernized educational institutions to create collectivistic safe haven for Native American students to feel validated and accepted; however, these belongingness initiatives depend largely on the university's willingness to implement change and its access to resources. Moreover, the authors suggest relationship building, cultivating cross-cultural competence, and adopting a collectivistic approach to learning and development as ways to include the Native American students, but there are no specific methods in which administration can engage in the practices. Although the article provided a thorough description for what faculty, staff, and the institution can do to aid students in their endeavor to foster a sense of belonging, authors do not mention intrapersonal skills or characteristics that allow students to cultivate a sense of belonging.

Belongingness interventions aim to incorporate cultural factors and informal conversation into interventions (Steele, 1999). Scholars have criticized belongingness interventions in that the limited focus on belonging limits the opportunity for students to consider other forces that can threaten their feelings of trust and belonging (Seider et al., 2015). Belongingness interventions do not necessarily address how students may prepare themselves for the very real adversity they experience on campus compared to their white counterparts. These missing elements may deprive marginalized students of a sense of control or agency in their well-being and social connectedness on campus. An interdisciplinary approach that includes theories from psychology, education, sociology, and political science, may be needed. GinWright (2010) discussed how

recognizing systemic oppression can replace feelings of isolation with a sense of engagement in a broader collective struggle for justice and liberation. This sense of engagement and ongoing effort to gain sociopolitical awareness is related to critical consciousness.

Critical Consciousness

Overview of theoretical framework

Critical consciousness refers to the ability to examine and counter oppressive sociopolitical forces that influence one's view of self, others, interpersonal relationships, and societal norms (Freire, 1973). Thornton (2006) described critical consciousness as the ability to evaluate one's immediate attitudes towards a given moment and reevaluate the circumstance from a broader perspective that focuses on what it means to be human. Critical consciousness has been segmented into critical reflection, political efficacy, and social action (Watts et al., 2011). For individuals who have experienced transgenerational trauma related to racism, the ability to think autonomously and analytically is necessary for liberation and a clearer "reading" of the world. Freire (1968, 1990) recognized how education and literacy can afford oppressed peoples the ability to cultivate a self-concept that is not shaped by the oppressor or by history.

Critical pedagogy, a study of how critical awareness can be fostered through reflection, is also related to liberation psychology. Liberation psychology is a subfield of psychology that focuses on the role of systemic oppression, power structures, and sociopolitical knowledge in psychosocial health. Liberation psychologists encourage the practice of acknowledging colonized histories of people and promoting social change (Martín-Baró, 1996). Ignacio Martín-Baró (1994), the father of liberation psychology, did not believe in Western approaches to freeing oppressed peoples. He argued that those who study the mind need to evaluate how sociopolitical and historical factors impact oppressed groups because a significant portion of the

distress that marginalized individuals are rooted in systemic injustice and oppression. Moreover, Martín-Baró states that oppressed people who have been forced to assimilate or stripped of their identity have a less clear understanding of what caused their oppression, which hinders their ability to investigate how current societal structures has impacted their own psyche and well-being. Critical consciousness and liberation psychology both bring light to strengths-based approaches to freedom. From a liberatory perspective, the oppressed can acknowledge external forces that have shapes their world-view, the traits that have allowed them to survive oppression, and a path towards self-actualization.

Critical consciousness interventions

Critical consciousness interventions have been shown to shift the developmental trajectories of minorities who experience distress related to systemic issues (Garcia-Coll et al., 1996). Scholars, practitioners, and researchers have sought various ways to raise consciousness through immersion experiences (Choi, VanVoorhis, & Ellenwood, 2015), psychoeducation, writing exercises (Stillar, 2013), and dialogue (Kang & O’Neill, 2018). Some critical consciousness interventions are culture specific. For example, Osajima, (2007) found that the process of raising critical consciousness among Asian Americans is multifold and included: a) obtaining resources that aid in the cognitive understanding of how lives are shaped by structural forces; b) conversing with others to build interpersonal relationships that allow them to see their own lives and roles in the lives and roles of others; c) exploring and processing feelings around racism and ostracization; and d) transforming comprehension of structural oppressive forces into action. Osajima calls for a foundation upon which students can view themselves in relation to the world. Developing critical consciousness may allow students of color to adopt a new lens when interpreting or “reading” the world (Freire, 1973).

It is also important to note that there are limitations to critical consciousness as the “antidote to oppression” (Watts et al., 1999). Critical consciousness interventions efforts are typically focused on change within the individual and their cognition rather than collective liberation. Researchers have long called for ways to equip marginalized students with tools and knowledge in order to skillfully respond to discrimination and racism that will further allow these groups to strengthen a sense of self that is not impacted by external sociopolitical forces. Students of color experience internalized oppression and may constantly compromise their identity with systemic ideologies; developing critical consciousness does not necessarily provide a tangible tool for students to recognize when they are compromising their integrity. Moreover, discriminatory experiences are threatening experiences, and students whose stress response has been shaped by these discriminatory experiences have faced violence or othering due to the color of their skin. One way to understand and change the stress response of students of color is through mindfulness.

The Role of Mindfulness

The Origins and Background of Mindfulness

Mindfulness has been described as the ability to direct one’s awareness to the present moment with a nonjudgmental attitude (Kabat-Zinn, 1990). Although mindfulness is often associated with Buddhism, it can be seen in most religious and spiritual traditions, as well as in Western schools of thought (Walsh & Shapiro, 2006). Additionally, mindfulness is not inherently a religious concept (Buchheld et al., 2001). Mindfulness has been examined as a state of mind and a trait. State mindfulness refers to fluctuations in the intentional engagement of mindfulness practice (Peters et al., 2016), whereas trait mindfulness has been referred to as a predisposition to be mindful in daily life (Baer et al., 2006). Over time, with sustained practice, challenge, and

support, state mindfulness may transfer to trait mindfulness. Researchers have found that practicing mindfulness influences neurophysiological, such as emotion regulation, and seem to mediate psychological outcomes, including stress reduction, depression, anxiety, and overall improved health (Carmody & Baer 2008; Grossman et al., 2002; Holzel et al., 2011; Iani et al. 2017; Lutz et al., 2007; Murphy et al., 2012; Hülshager et al., 2013). Mindfulness has been described as entailing two facets: self-regulated attention and a curious nonjudgmental orientation towards the present moment (Bishop et al., 2004). The attitudinal dimension of mindfulness, which often goes unnoticed, must be explicitly described as a part of mindfulness practice (Kabat-Zinn, 1994). Mindfulness practices have also been shown to enhance interpersonal skills and dispositions, including empathy, perspective taking, and compassion (Bruce et al., 2010; Lutz et al.2008; Singer and Lamm, 2009). Operating on automatic pilot, especially when under consistent social threat, trains out brain to react without careful consideration. Mindfulness can be taught through practices such as guided body scans, breath meditation, loving-kindness or metta meditation.

Applications of Mindfulness in Higher Education

Throughout the last decade, the number of mindfulness programs have become more common in U.S. colleges and universities (Shapiro, Brown, & Austin, 2008). Mindfulness practices have been shown to reduce high levels of psychological distress, depression, unhealthy coping, and anxiety among college students (Bamber, & Schneider, 2016; Oman et al., 2008; Ratanasiripong et al., 2015; Song & Lindquist, 2015). However, most studies on mindfulness have been conducted with majority white populations (Caldwell et al., 2010; Bergen-Cico, 2013; Bodenlos, Noonan, Wells, 2013; Oman et al., 2008; Trotter, 2010). There are not many studies on how college students of color practice mindfulness to promote well-being (Peña & Ritzer,

2017). For students of color, mindfulness has been found to be associated with high levels of psychological flexibility, self-compassion, emotion regulation, resilience, and low levels of maladaptive coping, race-related stress, academic stress, depression, and anxiety (Cole, et al., 2015; Graham et al., 2013; Hwang & Chan, 2019; Masuda et al., 2009).

The few studies on students of color who engaged in mindfulness showed promising results. For example, Hwang and Chan developed and evaluated the benefits of a peer-led compassionate meditation program to help marginalized college students heal from race-related stress (2019). Their program showed decreases in distress, depression, anxiety, and PTSD symptoms. The authors suggested that culturally responsive mindfulness interventions may be a promising and cost-effective method to reduce the harmful impacts of racism and race-related stress. Another study conducted by Masuda and colleagues investigated the relations among mindfulness, psychological flexibility, and mental health among African American college students (2009). They found that students who were high in mindfulness were less likely to experience emotional distress in stressful interpersonal and emergency situations and general psychological ill health, after controlling for gender, age, financial background, and religious practice. Graham, West, & Roemer, (2013) conducted a preliminary exploration of whether trait mindfulness buffers against the experience of racism and help individuals cope with the anxious arousal related to racism. They found that trait mindfulness was significantly negatively correlated with anxiety and anxious arousal symptoms. Lastly, Cole et al., (2015) also conducted a cross-sectional study in which they investigated the possible moderating effects of ego resilience and mindfulness on the association between academic stress and mental health symptoms in a sample of Ghanaian college students. They found mindfulness to buffer against the impact of academic stress on depression but not on anxiety. Although these studies show

evidence that college students of color with higher levels of mindfulness experience higher levels of well-being and may be able to cope with stress, there are limitations to these studies. The studies either include relatively small sample sizes, are cross-sectional, and are absent of contextual information, including sociopolitical awareness and ethnic or racial identity.

Mindfulness is a practice that invites individuals to pause, evaluate, and reevaluate circumstances, which allows for an awareness and letting go of conditioned ways of living and “reading” the world. For students of color, mindfulness may allow them to situate their interpretation of the present moment in history, freeing oneself from internalized oppression and conditioned ways of interpreting ambiguous events. Freire describes the historical nature of man, highlighting condition ways of being and seeing the world and the need to examine the point of departure from and live authentically, stated, “the point of departure must always be with men in the ‘here and now,’ which constitutes the situation within which they are submerged, from which they emerge, and in which they intervene. Only by starting from this situation—which determines their perception of it—can they begin to move. To do this authentically they must perceive their state not as fated and unalterable, but merely as limiting—and therefore challenging” (1973; p. 73). Mindfulness may serve as a path towards this departure that Freire discussed. Freire goes on to describe any situation in which individuals keep others from engaging in the process of inquiry as one of violence; this process estranges humans from their own decision making, which is dehumanizing. He also states that the movement of inquiry must be oriented orientated towards humanization, which can be facilitated by mindfulness. The cultivation of present moment awareness encourages cognitive unlearning as the body unlearns conditioned ways of being.

Integrating Mindfulness into Critical Pedagogy

Although mindfulness practices engage and inform students of color about psychological and emotional well-being, most mindfulness interventions do not account for sociopolitical location of the students, which may be invalidating. Integrating a critical pedagogy into mindfulness practices to form an embodied critical consciousness may bolster the impact of the practices in a holistic manner. Mindfulness may lead to an increased awareness that oppression can be intrapersonal, interpersonal, institutional, and shaped by cultural socialization through a variety of powerful forces. This awareness creates a break in the cultural conditioning and an opportunity to name how colonization impacts students of color's interpretation of the world. Activist Audre Lorde also described the importance of understanding one's own pain to transform it: "Pain is important: how we evade it, how we succumb to it, how we deal with it, how we transcend it" (2004; p. 50). Scholars have emphasized the importance of practices such as meditation, journaling, and mindful dialogue in students' ability to focus, cultivate compassion, and deepen introspection (Barbezat & Bush, 2014). For historically oppressed groups, mindfulness through these various contemplative practices may serve as a path to awareness, liberation, and ability to change the system. Scholars (Solorzano et al., 2000) also describe the importance of naming racist ideologies and wounds, which allows victims of racism to develop their voice and their identity.

Mindful pedagogy may facilitate unlearning of messages, ways of being, and "reading" the world (Freire, 1973). Engaging in mindfulness practices that enhance introspection and awareness may further facilitate psychological liberation and emancipation, as mindfulness offers tools which students practice in order to redirect their attention and break free from conditioned ways of interacting with the world of evaluating themselves through the eyes of the

oppressor. Carmen et al. (2015) discussed the development of embodied sociopolitical wisdom and the power of ontological healing for an understanding that sociopolitical awareness extends beyond the cognitive. Sociopolitical wisdom is related to a social analysis cultivated through embodied experience and other forms of knowing. Ontological healing refers to one's existence as autonomous being in the world. The practice of regaining humanity is a critical pedagogical approach to learning and can also be learned through mindfulness practices.

Both critical consciousness and liberation psychology incorporate the idea that liberation is obtained through awareness of the interconnected nature of the self and of oppressive systems. A key principle of mindfulness and Buddhist philosophy is interconnectedness or oneness, also referred to as "no self" or anatta, the illusion of a separate self. (Bergemann et al., 2013; Howell et al., 2011; Wolsko & Lindberg, 2013). Queralt's (1996) description of an ecosystemic perspective, which refers to the process of organizing knowledge in a way that highlights the interdependency among individuals and their social systems, matches the aforementioned ideas. From an interpersonal perspective, researchers have found that mindfulness practices may sculpt intersubjective experience and behavior in certain ways and thereby, amplify the ability to empathize and feel compassion for another being (Birnie et al., 2010; Leiber et al., 2011). It seems that compassion develops when the boundary between self and others is no longer experienced. Yet, most contemplative practices and mindfulness practices are practiced in solitude or encourage introspection. There is a tendency for humans to fall into believing in the illusion of a separate self, or anatta, which is the opposite of acknowledging a collective identity.

The notion of the "separate self" versus the idea that the self is interconnected with other beings can also be seen in the global hemispheres. Western psychological approaches to research and practice have adopted an individualistic view of the psyche, which emphasizes the

individual's actions and feelings as the main factor in one's overall well-being (Greenwald 1980) however, other researchers, specifically in social and intercultural psychologies have highlighted the interdependent nature of self and other (Han et al., 2011). Depending on the cultural context, people relate to the self in different ways (Heine, 2001; Oyserman et al., 2002). Markus and Kitayama (1991) stated that in many Eastern cultures, individuals see themselves as psychosocially connected to others, which has been termed an interdependent self-construal. In contrast, American and other Western cultures are characterized by an independent self-construal, which emphasizes autonomy, consistency, and distinctiveness of the self. Western approaches, as Martin-Baro would agree, may invalidate world-views that value collective identity and well-being over individual advancement. Freire (1973) has also discussed how European-American ideologies that emphasize individual liberation, supremacy, and dominance promotes authoritarianism and suppression of the awareness and wisdom of the oppressed.

The integration of mindfulness and critical consciousness cuts across disciplines, ontologies, and theoretical frameworks, it is important to allow for a thorough understanding of how the merging of these two concepts can inform the well-being of students of color. Previous researchers have suggested that it may be important to study mindfulness using multiple methods, considering the various underlying mechanisms of mindfulness, including moment-to-moment awareness, empathy, and compassion (Christopher et al., 2009; Kelm et al. 2018; Van Dam et al. 2011). As such, we implemented a mixed-methods approach to investigate how this pilot intervention influenced the participants.

CHAPTER 3

METHODOLOGY

This chapter will focus on the participants, rationale for the methodological approach, related philosophical assumptions, the measurement tools, a description of the intervention, and data collection, and analysis. Steps to ensure trustworthiness of the data are also included. The current study is an embedded mixed methods design utilizing a quantitative component (RCT of two intervention, one control group) and a qualitative component (content analysis) that tested the effectiveness of a mindfulness-based critical consciousness intervention for college students of color (see Figure 1).

Research Design and Rationale

This pilot study used transformative, embedded mixed-method, pre/post/follow-up, randomized control design (see Figure 2). The control group was compared with an experimental group. The control group did not receive any treatment. All participants completed a pre-test and were selected to participate in the intervention based on the inclusion criteria. Inclusion criteria for the intervention groups include a belongingness score below 12, which is half of the maximum score one can score on the belongingness questionnaire, indicating a low sense of belonging. Selected participants were randomly assigned to one of two intervention groups (n=14-20) or control conditions (n=14-20) using a standard randomization procedure via computer randomization calculator.

The experimental groups attended the 4-session intervention. Intervention phases occurred during a 4-week period in which participants in the treatment groups attended weekly 1.5-hour group-based sessions. The control group completed the preintervention and postintervention assessment and did not attend the intervention groups.

Mixed methods research (MMR) has been referred to as the “third methodological movement” (Teddlie & Tashakkori, 2009). MMR involves the collection, analysis, and integration of quantitative and qualitative data (Creswell & Plano Clark, 2007). An embedded-experimental mixed methods design is a specific type of MMR design, in which qualitative data served as a supplemental role to the main quantitative data (Creswell, Plano Clark, et al., 2003). In this study, a qualitative component was embedded into the core quantitative randomized control trial (RCT) design. This is an appropriate methodology for the current study, as the qualitative data served to provide additional evidence for and explain the quantitative results. The qualitative integration may illuminate the multilayered lived experiences of marginalized college students of color and allow for a richer understanding of the participants’ experiences. Additionally, the combination of these approaches may offset limitations of one approach, providing further evidence to overall conclusions. Embedding a qualitative component into the RCT design can also inform the feasibility and effectiveness of a multitiered intervention. Qualitative findings may refine and add additional context to the preliminary statistical findings from the RCT.

Following a Transformative Paradigm

This embedded-experimental mixed methods research study was conducted through the lens of a transformative paradigm. In mixed methods research, setting a specific paradigm allows for a consistent way in which the researchers collect, analyze, and interpret data from a specific philosophical perspective (Maxwell & Mittapali, 2010). The transformative paradigm is similar to the constructivist paradigm in that they both consider socially constructed realities; however, the transformative framework centralizes social justice, whereas the constructivist paradigm does not explicitly address issues related to social inequities (Creswell, 2003). Mertens (2003)

outlined the main tenets of transformative research, which calls the researcher to consider (a) benefits to the minority group, (b) credibility of data collection, (c) effective communication between researcher and co-researchers/participants, (d) cultural relevance, and (e) social transformation. This framework calls for the advocating of marginalized individuals and communities, explicitly addresses issues of social justice, and considers issues of power at every stage of the research process. As the intervention groups are a microcosm of the greater society to an extent, it is appropriate for transformative perspectives to guide the current research study. The transformative paradigm encourages the intentional decolonization of research, recognizes the reality of colonization, rejects Western philosophies as superior, and honors indigenous ontologies and understanding history (Tuhiwai Smith, 2012). This is particularly important considering the focus on marginalized students in the current study and adopting a strength-based approach.

Creswell (2014) described transformative scientific inquiry linked to sociohistorical and political knowledge, which may allow for empowerment and liberation of minorities. One of the goals of the transformative application is to understand the impact of social constrictions on self-understanding and alleviate the negative impacts of social constructions. Researchers who follow transformative paradigms also hold the view that building relationships can offer a way to liberate those who are social oppressed (Creswell, 2014). According to Creswell (2003) transformative inquiry needs to be interwoven with politics and a sociopolitical agenda in a way that “may change the lives of the participants, the institutions in which individuals work or live, and the researcher's life.” The experiences of marginalized groups are prioritized, and researchers aim to advance the needs of marginalized populations (Mertens, 2003).

Historically, dominant research frameworks did not adequately account for the experiences of marginalized populations. Before the 1980's, social science research was conducted by and for white, able-bodied male perspectives (Mertens, 2005). Social scientists have also historically adopted a deficit-based approach when studying underrepresented groups. Applying a strengths-based perspective on marginalized populations allows for a shifting of the narratives of students of color, placing attention on positive aspects of marginalized students, such as resilience. The transformative paradigm encourages researchers to be intentional about their design. Each philosophical paradigm encompasses a set of philosophical assumptions that guide research process. Guba and Lincoln (2005) defined paradigms as sets of philosophical assumptions, including epistemology (nature of knowledge), axiology (nature of ethics), ontology (nature of reality), and methodology (nature of inquiry).

Philosophical assumptions

It is common for qualitative researchers to openly declare and describe the philosophical lens used to study a phenomenon in a study. The following section will expand upon the epistemological, ontological, axiological, and methodological assumptions made through a transformative lens.

Epistemology refers to the study of knowledge, which will guide how facts are gathered, including how the relationship between the researched may impact what is known and acknowledged as reality. Under a transformative framework, it is critical for researchers understand the cultural make-up of the community of interest to build relationships with them and establish trust. Ponterotto (2005) provided an overview of various research paradigms, which includes justifications for why selecting a particular research paradigm is important in qualitative research within counseling psychology. He describes how a set of philosophical assumptions

affect data collection and analysis, guide how biases and values are considered, and inform the relationship between researcher and the researched or “co-researchers.” It is vital that researchers how their interactions with and distance from the participants may impact data collection.

Axiology refers to ethical assumptions. ‘Do no harm’ is operating under social justice perspectives and furthering human rights initiatives under the transformative paradigm. It is also important that researchers in the current study do not deny treatment to any groups. *Ontology* is study of reality and existence. Reality is socially constructed in a way that ties present day power structures to historical injustices, and this impacts who defines reality, whose narrative is being told, whose reality is given privilege, and the social implications of accepting a reality that has not been subjected to a critical analysis. *Methodological* assumptions hold that data sampling should be reframed to expose the risks of the myth of homogeneity and to avoid additional damage to marginalized populations. This can be done by cultivating a thorough understand of multicultural concerns related to the population of interest. It is important to resist deficit-based approaches and focus on strength-based and ask questions that addressed institutional power. Data collection should create paths for participants to engage in the social change process.

Participants and Procedures

In the current study, the control group included 13 participants and the intervention groups included 14 participants. Inclusion criteria required students to have completed one semester of undergraduate study, be over the age of 18, and self-identify as a student of color. Examples of students of color includes students who may identify as African American, Native America, Asian American/Pacific Islander, Latino, and multiracial. Exclusion criteria included major psychiatric illness, such as major depressive disorder, posttraumatic stress disorder, or borderline personality disorder. Interested participants were assessed for major psychiatric illness

in the initial pre-assessment survey by answering open-ended questions. In the case that a potential participant endorses a major psychiatric illness that causes clinically significant impairment as evidenced by self-report, they were deemed ineligible and be provided with resources and/or referrals if interested.

Recruitment

Participants included students of color who are currently enrolled at a large Midwestern university. They were recruited through class announcements, social justice centers on campus, snowballing procedures, and flyers. To determine the adequate number of participants to establish significance among findings, a priori power analysis was conducted in Gpower, given 80% power, $p < .05$ (two-sided), and a medium effect size (.05). Participants were screened into the intervention groups in that students who report a low sense of belonging, or report a score of 12 or less on the belongingness measure, were eligible to participate in the intervention.

The Intervention

The core component of this study is the intervention, which is a 1.5-hour, 5 session, group-based manualized intervention in mindful critical pedagogy. This intervention was designed for young adults of color. Sessions were held in a closed space at a university. Mindfulness elements included psychoeducation on mindfulness, and practices included body scans, meditation, relationship mindfulness, loving-kindness meditation, and movement meditation. Critical pedagogy was learned through exercises that encourage identity exploration, understanding of power structures, and social action.

Session topics by week include: (a) Session One: Meeting the Mind and Body, (b) Session Two: Embodiment of Stories and Identities Session, (c) Three: Cultivating Self-Compassion while Learning History as Dharma, (4) Session Four: Transcendence through

Interconnectedness (Appendix G). In the first session, the facilitator guided introductions of the facilitators and group members, established community agreements, and gave a brief introduction to mindfulness concepts. The second session focused on the salient identities of participants and a holistic evaluation of mind, body, and spirit. The third session introduced the concept of critical consciousness and self-compassion. The fourth session focused on philosophical ideas behind interconnectedness and “anatta,” or the illusion of a separate self. We also shared lessons learned from the intervention, reflections, and set intentions for the future.

Researcher and Facilitator Roles

The facilitator is the developer of the intervention and a doctoral student in counseling psychology who has been trained in mindfulness. Treatment fidelity was assessed by check box lists that the facilitator utilized to report the intervention delivered. After each session, the facilitator reflected and processed her experience of facilitating the group by memo-writing. Intervention fidelity refers to the degree to which the facilitator delivers the intervention as intended, which may impact the outcome of the study (Song et al., 2010). Important considerations include executing the intervention with fidelity, awareness of biases that may influence the implementation of the intervention, and examination of the role of power structures or hierarchies, considering the transformative lens applied in this study. These considerations are discussed in detail in the section on trustworthiness.

Quantitative Component

Data Analysis

SPSS was used to analyze quantitative results using descriptive statistics. A repeated measures ANOVA was conducted to determine whether there are any statistically significant differences between the treatment and control groups from pretest to posttest on quantitative

scores. Specifically, the ANOVA was applied to determine whether there are statistically significant differences in how scores in mindfulness, distress (depression, anxiety, stress), college self-efficacy, belongingness, and critical consciousness changed decreased over time between the treatment and control groups in the pretest and posttest. A paired samples t-test was used to determine whether there was a statistically significant mean difference in scores of mindfulness, distress (depression, anxiety, stress), college self-efficacy, belongingness, and critical consciousness for the treatment group from pretest to posttest.

Instruments

Demographic Questionnaire. The initial questionnaire included items regarding participant age, ethnicity, sexual orientation, gender, school year, academic major, socioeconomic status, relationship status, and religion. The questionnaire also asked participants information regarding their previous experience with mindfulness practices, including type of practice, length of practice, and current level of practice (refer to appendix A).

Mindfulness. *The Five Fact Mindfulness Questionnaire-Short Form* (FFMQ-SF; Bohlmeijer et al., 2011) is a 24-item survey that includes 5 subscales: observing, describing, acting with awareness, nonjudgmental, and nonreactive. Items are scored on a 5-point Likert-type scale that ranged from “never or very rarely” to “very often or always true” with higher scores indicating more mindfulness (refer to appendix B). The questionnaire includes items such as, “I watch my feelings without getting carried away by them” and “I make judgments about whether my thoughts are good or bad.” Reliability coefficients for observing, describing, acting with awareness, nonjudgment, and nonreactivity are .78, .91, .86, .86, and .73, respectively. A confirmatory factor analyses was utilized to establish construct validity by relating the FFMQ to

measures of well-being, experiential avoidance, and the personality factors neuroticism and openness to experience.

College Self-Efficacy. *The College Self-Efficacy Inventory* (CSEI; Solberg et al., 1993) contains 20 items assessing students' confidence in their ability to complete college-related tasks. Items gauge participants' confidence in their ability to "Participate in class discussions" and "Keep up to date with your schoolwork." The scale utilized a 10-point scale that ranged from 0 (not at all confident) to 9 (extremely confident). Cronbach alpha estimates in a sample of first year students range between .83 and .88 (Gore et al., 2003). CSEI scores positively correlated with academic persistence (Solberg & Villarreal, 1997). CSEI total scores and scale scores are computed by averaging item responses (refer to appendix D). Validity is evidenced by the negative correlation between CSEI scores and measures of physical and psychological distress and positively correlation with adjustment, academic persistence, and social integration (Solberg et al., 1993, 1998).

Sense of Belonging. *The University Belonging Questionnaire* (UBQ; Slaten et al., 2018) was used to determine students' sense of belonging to their institution across 3 dimensions: university affiliation, university support and acceptance, and faculty/staff relations. The UBQ consists of 24 items with responses ranging from one (*strongly disagree*) to four (*strongly agree*) on a 4-point Likert scale. Items were added to produce scores from 20 to 80, with high scores suggesting a strong sense of belonging (refer to appendix E). Example items include, "*I tend to associate myself with my school*" and "*I am proud to be a student at my university.*" Cronbach alpha was 0.93. Convergent and incremental validity has been established through hierarchical regressions analyses and revealed positive correlations between UBQ subscales and measures of perceived social support and social connectedness.

Critical Consciousness. The *Critical Consciousness Inventory* (CCI; Thomas et al., 2014) is a nine-item scale using a Guttman model of scaling that assesses participants' level of critical consciousness (refer to appendix F). Each item consists of 4 response options. For example, an item may include the following choice responses: 6a. "I don't notice when people make prejudiced comments." 6b. "I notice when people make prejudiced comments and it hurts me." 6c. "It hurts me when people make prejudiced comments but I am able to move on." 6d. "When someone makes a prejudiced comment, I tell them that what they said is hurtful." Each choice response signifies a particular level of critical consciousness including pre-critical, beginning critical, critical, and post critical. Internal consistency was established with a Cronbach alpha of .75. Construct validity has been established with the negative correlation between stigma consciousness and precritical attitudes and the beginning awareness of critical consciousness, and positively related to postcritical consciousness attitudes.

Qualitative Component

This study utilized an inductive content analysis method to interpret the qualitative data. The purpose of an inductive content analysis methodology is to examine themes across participants' experiences that may be apparent or dormant in a textual data (Schreier, 2012; Wildemuth, 2009). This methodology is typically used to study large amounts of textual data gathered through interviews. Researchers are better able to draw inferences about the participants through the examination of content of text using a systematic coding process, which ensures validity of the interpretations (Hsieh and Shannon, 2005). Inductive qualitative approaches are suitable for studies with little prior research (Thomas, 2006), which is appropriate in this study, as there are a limited number of studies on mindfulness-based interventions focused on sociopolitical issues among college students. Inductive reasoning refers to the process of moving

from the specific to the general to identify meanings and discover patterns across participants' experiences (Berg, 2009) by labeling and grouping raw data based on themes, instead of previously established preconceived notions. As such, inductive reasoning was applied to create coding categories directly from the raw data that allows for the development of themes (Hsieh & Shannon, 2005). As categories were developed, researchers implemented procedures to suspend judgement, especially considering the application of a transformative lens that places power structures and power differentials at the forefront throughout the research process. Using an inductive context analysis in this study allowed researchers to gain in-depth knowledge about the effectiveness of the intervention.

Data Collection

Inductive qualitative content analysis is an iterative process that requires researchers to move between data collection and analysis cyclically to reach triangulation. Triangulation is the use of multiple and different data sources, perspectives, sites, and theories is one of the basic strategies (Glesne & Peshkin, 1992). To meet triangulation, we gathered data from multiple sources, including transcriptions of the group sessions, journal entries, individual face-to-face semi-structured interviews. Participants completed journaling activities throughout the intervention, which were transcribed for data analysis. The four sessions were digitally recorded and transcribed for analysis. Additionally, face-to-face semi-structured interviews lasting from 15 to 20 minutes were recorded for transcription and analysis. These data sources contributed to triangulation.

All interviews were digitally recorded and conducted in a private location. Interview questions were modified and developed over time in response to ongoing data develop categories and themes and to enhance saturation. The interview protocol evolved into a list of primary

talking points, as “theoretical sampling” (Glaser & Strauss, 1967), a process in which the researcher “collects, codes, and analyzes his data and decides what data to collect next and where to find them” (p. 45) so that theory can be emergently developed. Example questions included include, “How, if at all, has mindfulness impacted your awareness of social issues?” and “How, if at all, has learning about the stress response impacted your perspectives of racial stress?”

Interviews and intervention sessions were digitally recorded, transcribed verbatim and checked for accuracy. Computer software (NVIVO 9, QSR International Pty Ltd, Doncaster, Victoria, Australia) was used in managing and analyzing data, and this including coding, memo writing, and creating themes until we reach saturation. Interviews were conducted by a doctoral level student in counseling psychology. An undergraduate student in psychology transcribed the interviews. Participants in the control group who completed the first survey received a \$5 gift card, and participants who complete both the pretest and posttest received a \$10 gift card.

Participants in the intervention group received \$30 for completing both surveys and attending the workshops.

Data Analysis

Raw data files were organized in a common format for a more manageable analysis process. All transcripts were transcribed and coded independently. Data were analyzed and summarized via NVivo 10 (QSR International Pty Ltd. Version 10, 2012), which is a qualitative data analysis software.

The Coding Process

Data was coded using inductive content analysis, the most common form of analysis used in qualitative description (Milne & Oberle, 2005; Sandelowski, 2000). Coding refers to the classification process used to generate themes across participants’ lived experiences. Codes may

include topics, worldviews, attitudes, specific experiences, or overarching concepts. Coding also contributes to increased rigor in the qualitative methodology.

In this study, coders included the primary researcher, and two undergraduate students of color who were psychology majors and had interest in mindfulness and critical pedagogy. The primary researcher read the transcripts thoroughly to become familiar with the data (Frieze, 2012). Content analysis involves coding data into units and grouping these into main categories based on shared characteristics (Milne & Oberle, 2005). In inductive qualitative content analyses, open coding, developing categories, and abstraction were applied. A document was created in which document was in which initial impressions and categories were created also known as open coding (Burnard 1991, 1996, Hsieh & Shannon 2005). This phase can be seen as the foundation upon which future categories and themes are created. After open coding, the categories will then be clustered into broader categories by condensing and discerning which segments of text are either related or unrelated to other segments (Burnard 1991; Downe-Wamboldt 1992; Dey, 1993). The last stage of coding is abstraction, which refers to the process of developing categories, or themes, that are related to the research question (Polit & Beck, 2014). Subthemes were categorized as a group, and each group of subthemes will make up a main theme inductive (Dey 1993, Robson 1993, Kynga & Vanhanen 1999). Each of the categories and themes were labeled using “content characteristic words” (Elo & Kynas, 2008). Inductive reasoning was applied to create codes from the data, which allows for a refinement of codes and themes throughout the process.

Qualitative Validity and Trustworthiness

Throughout the data collection and analysis processes, researchers were open to findings while keeping in mind their own biases. Interviewee’s comments may be influenced by the

rapport built between the interviewer and interviewee (Randall and Phoenix; 2009), including interviewee's experience, openness to exploration, motivations, recollection of events.

Researcher bias may also influence the ways of categorizing, coding, and interpreting data.

Lincoln and Guba (2000) claim that qualitative data cannot be assessed based on positivist perspectives of validity, but on an alternative standard and criteria to meet rigor to address the difference in positivist and interpretivist views of reality and appropriateness of methodology. In qualitative studies, threats to validity can be addressed by established measures of trustworthiness (Glesne & Peshkin, 1992). Threats to validity include researcher bias, overinterpretation of the data, few sources of data, and more (Bickman & Rog, 2008).

Qualitative researchers (Lincoln & Guba, 2000) have outlined ways by which trustworthiness can be established: credibility, transferability, dependability, confirmability, and reflectivity.

Credibility is related to internal validity (Morrow, 2005; Rolfe, 2004) and refers to the degree to which the findings accurately reflect the participants' experiences. Credibility can be established through a number of methods, including prolonged engagement with participants (Brown et al. 2002; Morrow 2005), triangulation (Bowen, 2009; Jacelon and O'Dell, 2005), member checks (Carcary, 2009), 'thick' descriptions (Morrow 2005), and theoretical sampling (participant guidance of inquiry)(Cooney, 2010). Member checking involves providing the participants with the data and interpretations of the data and asking them to confirm whether or not the interpretations are conceptually sound.

Transferability is similar to external validity (Morrow, 2005). It refers to the extent to which the findings can be applied in other contexts with similar participants. Accumulating detailed notes, or "thick descriptions" (Geertz, 1973; Kvale & Brinkmann, 2009), on the research, the participants, collected data, and the emerging theory can contribute to

transferability of the findings. These descriptions allow for descriptions of behaviors, experiences, and contexts that may inform other researchers how to conduct and apply the research in other settings. A detailed audit trail may also ensure transferability of findings, providing other researchers the tools needed to conduct the same study in another context (Cooney 2010).

Dependability is a trustworthiness concept that measures reliability of the research. It determines the extent to which the findings represent the contextual nature of the phenomenon of interest from the participants view (Brown et al. 2002; Morrow, 2005; Rolfe, 2004). Participants may contribute to an audit trail, along with other involved researchers (Morrow 2005), which can strengthen reliability of the study. Dependability can be further established by receiving feedback from the participants on the findings.

Confirmability assesses the ‘objectivity’ of research. It refers to the extent to which other researchers can confirm the findings if given the same data. One way to ensure confirmability and provide other researchers with the information needed to replicate the study to is keep a record of the study process (Brown et al. 2002). Examination of a detailed audit trail by an observer ensures that researchers are not being overly interpretative or assumptive but aiming to attain confirmability through transparency of the research process (Brown et al. 2002; Morrow 2005).

Reflexivity refers to the process by which researchers reduce researcher bias by acknowledging biases and preconceptions. Constant and in-depth self-reflection is a part of the iterative process in maintaining reflexivity (Conrad et al., 1993). This reflection may entail reflection on relationships between researchers and the researched and how the relationship may affect responses. Reflexivity can be exercised by keeping a researcher diary in which theoretical

frameworks, assumptions, biases, values, and beliefs are explored. Bracketing refers to the explicit naming of researcher bias. As the researchers were closely situated with the data and participants, it is important to build theoretical sensitivity. Theoretical sensitivity refers to the researcher's insight of research topic, awareness of the nuances of participant experiences, and ability to select relevant information yielded from the data (Mills et al., 2006).

Quantitative and Qualitative Integration of Data

The integration of qualitative content data analysis embedded within a RCT can contextualize and deepen the understanding of how the participants are experiencing the intervention, which will inform the efficacy of the intervention. In the current study, quantitative data were synthesized with the qualitative data in that the qualitative data supplemented the quantitative results. Numerical data from the RCT data analysis were "qualitized" (Teddlie & Tashakkori, 2011). Mixing of the qualitative and quantitative findings occurred after the control group completed post-intervention assessments data.

Human Subject Research Considerations

Approval for the study was attained through the university's Institutional Review Board (IRB). Participants' interviews were recorded using a digital audio recorder and then transcribed using Microsoft Word. The interviews took place in a secured and enclosed space with an audio recorder. Confidentiality of data was ensured in the recruitment process and explicitly stated in the informed consent form. The recording did not include participant names or other identifying information. Audio files were stored electronically in a locked computer and electronic folder. Participants were informed that their participation would grant them a gift card.

CHAPTER 4

RESULTS

The purpose of this pilot study was to investigate the influence and effectiveness of a mindfulness-based critical consciousness intervention for students of color who experienced a lack of belonging to their university. For the quantitative portion of the study, we hypothesized that:

1) relative to the control group, participants who complete the treatment intervention will report higher levels of mindfulness, college self-efficacy, belongingness, and critical consciousness at posttest and

2) relative to the control group, participants who completed the treatment intervention will report lower levels of psychological distress (depression, anxiety, and stress) at posttest.

3) and for the qualitative portion of the study, we explored the benefits that the participants derive from the intervention, if any at all, including the cognitive, emotional, and behavioral processes of the students.

In the following sections, you will find a succinct description of the quantitative results, a succinct description of the qualitative findings, and a brief summary of integration of quantitative results and qualitative findings which was discussed in detail in discussion section.

Characteristics of Participants

As mentioned, the estimated final sample size needed to detect a significant effect is 32. However, of the 33 potential participants who were identified and contacted, 6 of them either declined further contact from study members or were non-responsive in answering or returning calls. Thus, a total of 27 were enrolled in the study. Thirteen participants were randomly assigned to the control group and 14 were assigned to either the first intervention group ($n=8$) or the second intervention group ($n=6$). The mean pretest and posttest scores and descriptive

statistics for all scales are listed in Table 3. All analyses were performed using SPSS 25.0 software.

Participants in the control group included including 11 females (85%) and 2 males (15%). One individual in the control group identified as a freshmen (8%), 3 identified as sophomores, 8 identified as juniors (62%), and 1 students identified as a senior (8%). Regarding racial and ethnic demographics in the control group, 4 individuals identified as Asian or Asian American (31%), 4 individuals identified as Black or African American (31%), and 5 individuals identified as Biracial or Multicultural (39%). Participants were also asked to report their religious or spiritual identification, to which 2 reported to be agnostic (15%), 1 identified as Buddhist (8%), 6 identified as Christian (46%), 1 identified as Hindu (8%), 2 identified as spiritual (15%), and 1 individual marked “none” (8%). Of the participants in the control group, 5 individuals (39%) reported to have engaged in a mindfulness practice and 8 individuals (62%) reported to have never engaged in a mindfulness practice.

The treatment group included a total of 14 students, including 10 females, 3 males (21%), and one student who identified as non-binary. Regarding their year in college, 6 identified as a sophomores, 4 identified as juniors, 4 identified as seniors, and there were no freshmen in the treatment group. Of the individuals in this group, 1 identified as Asian or Asian American, 5 individuals identified as Black or African American, 3 individuals identified as Biracial or Multicultural , and 7 identified as Hispanic or Latin American. Additionally, 1 reported to be agnostic, 1 identified as atheist, 3 identified as Christian, 1 identified as Muslim, 1 identified as Sikh, and 5 individuals marked “none”. Of the participants in the treatment group, 5 individuals reported to have engaged in a mindfulness practice and 8 individuals reported to have never engaged in a mindfulness practice. The participant demographic frequencies are listed in Table 1.

The treatment group included two intervention groups who underwent the same intervention. Intervention group #1 (N=8) included 1 individual who identified as Asian or Asian American, 4 individuals who identified as Black or African American, 2 individuals who identified as Biracial or Multiracial, and 1 individual who identified as Hispanic or Latin American. Intervention group #2 (N=6) included 4 individuals who identified as Asian or Asian American, 1 individual who identified as Black or African American, 1 individual who identified as Biracial or Multiracial, and 1 individual who identified as Hispanic or Latin American. The participant demographic frequencies by intervention group are listed in Table 2.

Quantitative Results

The mean pretest and posttest scores and descriptive statistics for all scales are listed in Table 2. Prior to analysis, all data were screened and no data was missing. All scales were checked for the assumption of normality of the dependent variables, and most of the results for skewness and kurtosis values were within the acceptable range of -1.0 to 1.0 (Meyers et al., 2006) with two values that were slightly larger than 1.0. The data presented was considered normally distributed and used for further data analysis.

Research Hypothesis 1: Repeated Measures ANOVA tests were used for each one of the five dependent variables to determine whether there were increases in mindfulness, colleges self-efficacy, belongingness, critical consciousness, and distress, for intervention group participants over time relative to control participants (Table 4). A paired samples t-test was conducted to test significant change over time for the treatment group from pretest to posttest on each measure (Table 5). Additionally, Cohen's d effect size was calculated and interpreted using guidelines suggested by Cohen (1988): small ($d \geq .20$), medium ($d \geq .50$), and large ($d \geq .80$). See Figure 1 for all mean changes from pretest for posttest for control and treatment group for each measure.

Mindfulness. The repeated Measures ANOVA test was used to determine that there was no significant difference in scores of mindfulness for intervention group participants over time relative to control participants $F(1, 25) = 1.83, p = .19$. Overall, the mean mindfulness scores increased from pretest to posttest for both the treatment and control group, with a stronger increase for the treatment group (See Figure 1). The paired samples t-test indicated that there was a statistically significant change over time for the treatment group from pretest to posttest on mindfulness ($p = .007$). Cohen's d effect size was calculated to be medium at .50.

College Self-efficacy. Repeated Measures ANOVA test was used to determine that there was no significant difference in scores of college self-efficacy for intervention group participants over time relative to control participants $F(1,25) = 2.70, p = .29$. The mean college self-efficacy scores decreased from pretest to posttest for the control group and increased for the treatment group (See Figure 1). A paired samples t-test showed there was no significant change over time for the treatment group from pretest to posttest in scores of college self-efficacy ($p = .397$). Cohen's d effect size was small at .20.

Sense of Belonging. Repeated Measures ANOVA test was used to determine that there was no significant difference in scores of belongingness for intervention group participants over time relative to control participants $F(1,24) = 1.88, p = .86$. According to the results, the mean scores for belongingness increased for both the control and treatment group, with a stronger increase for the treatment group (See Figure 1). A paired samples t-test showed that there was no statistically significant change over time for the treatment group from pretest to posttest ($p = .567$). Cohen's d effect size was calculated to be small at .15.

Critical Consciousness. Repeated Measures ANOVA test was used to determine that there was no significant difference in scores of critical consciousness for intervention group

participants over time relative to control participants $F(1,24) = .70, p=.41$. The mean scores for critical consciousness stayed relatively the same for the control group over time, and it increased for the treatment group (See Figure 1). The paired samples t-test revealed that there was no significant change over time for the treatment group from pretest to posttest on critical consciousness ($p=.083$). Cohen's d effect size was calculated to be medium at .50.

Research Hypothesis 2:

Psychological Distress. The repeated Measures ANOVA test was used to determine that there was no significant difference in scores of psychological distress for intervention group participants over time relative to control participants $F(1, 25) = .70, p = .59$. Overall, the mean scores for psychological distress scores slightly increased from pretest to posttest for the control group and decreased for the treatment group (See Figure 1). The paired samples t-test revealed that there was significant change over time for the treatment group from pretest to posttest on psychological distress ($p=.009$). Cohen's d effect size was calculated to be large at .82.

Summary of Quantitative Results

Quantitative analyses revealed statistically significant increases in mindfulness from pretest to posttest and statistically significant decrease in distress from pretest to posttest for the intervention group. While all other quantitative results did not reach statistical significance, there appeared to be an increase in mean scores for college self-efficacy, belongingness, and critical consciousness from pretest to posttest for those in the intervention group.

Qualitative Findings

After reviewing the transcripts thoroughly to become familiar with the data, data was coded using inductive content analysis (Milne & Oberle, 2005; Sandelowski, 2000). Content analysis involves coding data into units and grouping these into main categories based on shared

characteristics (Milne & Oberle, 2005). Coders included the first author and two undergraduate students of color majoring in psychology and have an interest in mindfulness, critical consciousness, and liberatory practices for students of color. Open coding, a process in which initial impressions and categories were created (Burnard 1991, 1996; Hsieh & Shannon 2005), was conducted and served as the foundation upon which future categories and themes are created. After open coding, the categories were clustered into broader categories by condensing and discerning which segments of text are either related or unrelated to other. The last stage of coding, abstraction, which refers to the process of developing categories, or themes, that are related to the research question, was implemented. Subthemes were categorized as a group. Inductive reasoning was applied to create codes from the data, which allowed for a refinement of codes and themes throughout the process.

In examining the ways in which the intervention influenced the participants, four overarching themes emerged: (a) Mindfulness, (b) Motivation to Decrease Academic Distress, (c) Sense of Belonging, (d) Critical Consciousness. Themes and subthemes are discussed in detail below. Pseudonyms were used in order to protect participants' anonymity. Table 6 provides the title of each theme along with brief descriptions.

Mindfulness

Participants in the intervention group described an increased awareness of how they have become more aware of the contents in their mind, their emotions, and physical body sensations related to distress. This can also be referred to as an increased awareness of cognitive, emotional, and physical symptoms of psychological distress. As such, the subthemes under mindfulness include: 1) mindfulness of thoughts, 2) mindfulness of emotions, and 3) mindfulness of physical sensations related to distress.

Mindfulness of Thoughts. Participants described their increased awareness of judgmental thoughts, racing thoughts, or how their thoughts take them away from the present moment. When asked about specific changes in this increased awareness of thoughts, Mariah stated the following:

I have learned to live in the present. I take my mind into the future too much, but I am learning to live in the present no matter how uncomfortable it might be.

Mindfulness of Emotions. Participants described being more aware of their emotions and without having to control or suppress their emotions. For example, Charity shared:

Something meaningful that I gained is just knowing that my feelings are true and valid. Everything I feel is okay and it is a part of my journey in life. I have learned so much about myself in this process and couldn't be more grateful.

Mindfulness of Physical Sensations. Many of the students described how unaware they were of the physical manifestations of distress before the workshop. Andreas described how he has learned to pay attention to his body's wants and needs:

I've noticed myself becoming more aware of my body and mind have been telling me all of these years, but I've chosen to ignore. Since this practice my mindfulness has changed completely. I have learned to really pay attention to my body and its wants and needs. With these practices, I can tell what cues my body is telling me...when I'm stressed or need to take it slow.

Motivation to Decrease Academic Distress

This theme encompasses students' increased awareness of academic distress and their desire to cultivate skills to manage this distress. They mention various sources of stress, including classwork, leadership positions, extracurricular activities, and relationships. They also

describe how the intervention motivated them to engage in coping skills that help mitigate the impact of academic-related distress, including: 1) increase social support on campus, 2) time management, 3) finding purpose in schoolwork.

Increase social support on campus. Participants described their desire to deepen their connections, reach out to other BIPOC, and communicate how they feel in order to validate their experiences around academic distress. Kya stated:

As students of color, we're more similar than I thought. The most meaningful thing I gained is that we really are not alone in all that we go through and it is best to just communicate how you feel. I want to have more conversations with other students of color about their experiences because it helps me feel like I'm not alone, especially at a PWI (predominantly White institution).

Time management. Multiple participants discussed various ways in which they may better manage their time to include breaks. Managing time effectively seemed to be a salient theme that helped students feel in control. For example, Jayna discussed the importance of taking breaks and self-care. She stated:

I've learned that in order for myself to be genuinely happy, I have to take the time to take a break from school and work on aligning my mind, body, and spirit. If one is off-balance, I will be off-balance.

Find purpose in schoolwork. Several of the students in the intervention group decided to go to college to find a job that fulfills a sense of meaning or purpose. The participants described how the intervention has helped them find purpose in their academic work. As a major in digital storytelling, Shilah shared:

The most meaningful thing from this workshop is that I'm more prone to digging into my story as a student of color because it's clear that there are people who connect with me, will listen to me, and respect my background. I'm a creator, and I've been especially hesitant to delve into my stories of home because I'm unsure of how to always talk about it. This workshop made me confront how I do this, and in turn, I'm more affirmed that people will understand me. I've been making films and art about themes of immigration, family trauma, being a young BIPOC in America. I think coming to workshops has certainly helped me reaffirm my purpose and that I'm not alone in wanting to share these stories; I'm doing this for a reason.

Sense of Belonging

Students reported finding a sense of solidarity in knowing that other marginalized students face similar obstacles. Not only did the students seem to identify with others from their specific ethnic or racial background, they also seemed to appreciate within groups differences and similarities with others in the group. Belongingness can be seen across the participants in their: 1) shared lived experiences regarding discrimination, 2) acknowledgment of their individual role in helping BIPOC community, and 3) solidarity in collective identity.

Shared lived experiences regarding discrimination. Several students described experiencing microaggressions from peers, teachers, and other individuals on campus. They reported how important it was for them to share about these experiences in the workshops, as this is what allowed them to feel like they belonged to a group. Kya shared:

I also noticed that I have been a little bit more calmer. I realized that people are going to make stereotypes and think you are their type of person without even knowing or asking. As students of color, we have gone through similar battles and struggles and are still

standing strong today. I've always felt alone and thought that no one else has been through the traumas like I had. So, knowing that other students could relate gave me a sense of belonging and strength."

Acknowledgment of their individual role in helping BIPOC community. Participants also shared how important it was for them to serve a specific role in a larger community and how this was an important aspect of their sense of belonging. For example, Kai stated:

It really feels good that there is a safe space, and it reminds me that I'm not the only one. there is still a lot of healing that needs to happen, and I am always wondering about what to say. I want to help everyone in here to feel loved. I need to start listening and speaking up. I want to be an advocate. It feels good to have other people feel the same as me.

Solidarity in collective identity. Students also described how they felt they were a part of a community, despite within group differences. While the students in the intervention group varied in their specific race and ethnicities, they also seemed to feel a sense of solidarity in their collective identity as BIPOC students. Nadia stated:

We as students of color go through so many trials and tribulations, so many that many cannot understand or experience. I learned that each of us POC students are so different but yet so much the same. We have a lot of similarities in how we perceive and grapple with our identities; we hold mixed feelings of love and disdain towards our parents, as they both raised us but also made us grow up too fast. I even felt the same familiarity with everyone else in the group, especially as BIPOC I learned to be more grateful of what I have but also use that as a drive to constantly better my life and, one day, others' lives.

Critical Consciousness

Critical consciousness refers to the ability to reflect upon and counteract oppressive sociopolitical forces that influence one's worldviews, relationships, and cultural norms (Freire, 1973). Critical consciousness and liberatory practices overlap in that they both emphasize strengths-based approaches to freedom. The participants in the current study alluded to the three components of critical consciousness, which include: 1) critical reflection, 2) political efficacy, and 3) critical action.

Critical Reflection. Participants shared their increased awareness of how societal inequities have persisted across time and into their current lives. Specifically, participants in this sample discussed the importance of acknowledging the work of their ancestors and how they may honor their ancestors' work. For example, Jayda shared:

Our ancestors were always in alert mode, fighting to stay alive. But us, we don't have to be on alert 24/7. The rest for your mind and body is important for you to function at your best. Sometimes not thinking and not doing is exactly what we may need. Stress passes down, so at this point, who knows how many generations of stress and pressure are on my body from ancestors. I never even knew. Moreover, like my mom says, 'We work hard for you to have a good life.' And it'd be a waste to not rest for her work...or maybe that sounds too harsh? Rather, maybe it's important to rest and restore to honor what life past generations have given me.

Relatedly, Nadia also succinctly stated, "You can't just break toxic cycles without taking care of yourself."

Political Efficacy. Several of the participants outlined their increased capacity to address and change inequitable social conditions. For instances, Jayna shared how she will use her degree in journalism to give voice to marginalized groups including and outside of her own:

As a future journalist I will use my voice for those who don't have one. While I've already been doing work on solo projects in my classes that involve the black community, I have realized that I don't want to just focus on my community, but all other minority groups.

Critical Action. Lastly, the participants alluded to taking critical action in order to heal from transgenerational trauma. While the participants had their own way of engaging in critical action, an overall theme was to change their conditioned ways of being, in the name of transgenerational healing and consideration of future generations. For example, Jayna highlighted the importance of emotional expression as a part of changing transgenerational patterns:

I have learned that I need to start showing my family more appreciation and being my open and honest self to them. I want to deepen my connection with my family. I need to be able to have the close connection to be able to make close connections with friends. Healing as a collective...I feel I do a lot already by being a leader of a large black organization on campus. I really want my people to be able to practice mindfulness and healing so we can do good things.

Similarly, Shilah described the importance of education and familial support:

I would like to educate people about culture. As it stands, there is no formal teaching to educate people about different racial groups. I think that by educating about different cultures, it could help lower racial injustice. Moreover, I would like to support my future

family by giving them the unconditional love and support I wish I received when I was younger, which may allow them to pursue their passions. Both of these continued or combined will help to impact racial injustice.”

Summary of Qualitative Findings

The subthemes under *mindfulness* include mindfulness of thoughts, emotions, and physical sensations of distress. *Motivation to decrease academic distress* included increase social support on campus, time management, and finding purpose in schoolwork. *Sense of belonging* included shared lived experiences regarding discrimination, acknowledgment of their individual role in helping BIPOC community, and solidarity in collective identity. Lastly, *critical consciousness* was comprised of critical reflection, political efficacy, and critical action as subthemes.

Integration of Quantitative Results and Qualitative Findings

The integration of qualitative content data analysis embedded within a RCT seemed to contextualize and deepen the understanding of how the participants experienced the intervention, which may inform the efficacy of the intervention. In the present study, quantitative data were synthesized with the qualitative data in that the qualitative data supplemented the quantitative results. To detail the comparison of quantitative measures to the specific qualitative findings, a visual display (Table 7) compares the quantitative results with participant quotes. Providing specific quotes from participants further provides support for the changes in the quantitative measures and can be seen in participants’ responses.

Mindfulness. From the quantitative and qualitative findings, there seemed to be a strong convergence between quantitative mindfulness and participant stated experiences, as the participants provided numerous quotes that reflected specific items on the FFMQ. The mean

mindfulness scores increased from pretest to posttest for both the treatment and control group, with a stronger increase for the treatment group. The paired samples t-test revealed a significant change over time for the treatment group from pretest to posttest on mindfulness, which can be seen in the participants' responses regarding increased awareness of judgmental thoughts, ability to let go of distressing thoughts, and awareness of physical sensations.

Psychological Distress. The paired samples t-test revealed that there was significant decrease over time for the treatment group from pretest to posttest on psychological distress, which can be seen in the participants quotes. They described they lack of awareness of racing thoughts, inability to regulate their emotions, and how they “ignored” their physical symptoms of distress. By the end of the workshop, the participants described an increased awareness of cognitive, emotional, and physical symptoms of psychological distress.

College Self-Efficacy. While the paired samples t-test revealed no significant change over time for the treatment group from pretest to posttest on college self-efficacy, the mean college self-efficacy scores decreased from pretest to posttest for the control group and increased for the treatment group (See Figure 1). This increase in college self-efficacy is in line with students' reported increase in ability to strengthen social connections on campus, desire to improve time management around academic work, and finding purpose in this academic work.

Sense of Belonging. The paired samples t-test revealed no significant change over time for the treatment group from pretest to posttest on belongingness; however, the mean scores for belongingness increased for treatment group. This increase in sense of belonging can be seen in the participants' responses around feeling affirmed in their sharing of lives experiences and feeling a sense of solidarity among others in their BIPOC student community, which seemed to be cultivated partially due to the workshop, according to the participants' self-report.

Critical Consciousness. While the paired samples t-test revealed no significant change in critical consciousness from pretest to posttest, the mean scores for critical consciousness increased for the treatment group (See Figure 1). The increase in critical consciousness scores can be seen in participants' responses related to increased critical action, political efficacy, and critical action. This includes their desire to address and change sociopolitical systems, whether they started with changing familial dynamics or using their degree to do so.

CHAPTER 5

DISCUSSION

The aim of this pilot intervention study was to investigate the influence and effectiveness of a mindfulness-based critical consciousness intervention for students of color who experienced a lack of belonging to their university. The study examined results of change in mindfulness, distress, college self-efficacy, belongingness, and critical consciousness. The study also explored the qualitative effects that the participants derive from the intervention, if any at all, including the cognitive, emotional, and behavioral processes of the participants. Regarding the quantitative results, statistically significant findings include the increase in mindfulness and decrease in distress from pretest to posttest for the intervention group. All other quantitative results did not reach statistical significance; however, there was a change in mean scores regarding increased college self-efficacy, belongingness, and critical consciousness from pretest to posttest for those in the intervention group. Findings from the qualitative portion of the study revealed four themes: mindfulness, motivation to decrease academic distress, sense of belonging and critical consciousness. According to the results, there seemed to be a convergence found between quantitative data and qualitative findings. A detailed discussion of results, findings, implications, limitations and future directions follows.

Summary of Statistical Results

In the present study, statistically significant results include the change over time in scores of mindfulness and psychological distress for the treatment group. Mindfulness had a posttest increase and psychological distress had a decrease. The small sample size of this pilot trial did not provide power to detect statistically significant changes in mindfulness, distress, college self-efficacy, belonging, or critical consciousness for the intervention group participants over time

relative to control participants. This does not, however, provide strong evidence for a lack of effect; due to the small sample sizes used, there is a strong likelihood that a significant effect may have been missed. The paired samples t-tests also showed that there was no statistically significant change over time for the treatment group from pretest to posttest in scores of college self-efficacy, belonging, and critical consciousness.

Summary of Qualitative Findings

In the exploration of the benefits that the participants derived from the intervention, including the cognitive, emotional, and behavioral factors, four overarching themes emerged. These themes and subthemes included (a) Mindfulness, (b) Motivation to Decrease Academic Distress, (c) Sense of Belonging, (d) Critical Consciousness. The subthemes under mindfulness include mindfulness of: thoughts, emotions, and physical sensations of distress. The subthemes under motivation to decrease academic distress included increase social support on campus, time management, and finding purpose in schoolwork. Sense of belonging included shared lived experiences regarding discrimination, acknowledgment of their individual role in helping BIPOC community, and solidarity in collective identity. Lastly, critical consciousness was comprised of critical reflection, political efficacy, and critical action as subthemes.

Integration of Quantitative and Qualitative Findings

The quantitative results, paired with the qualitative findings, indicate participants' increase in mindful awareness of distress, belongingness, college self-efficacy, critical consciousness, and decrease in psychological distress, which were important parts of the intervention. The participants noted that the intervention contributed to an increase in mindfulness and a decrease in psychological distress, including symptoms of depression, anxiety, and stress. It seemed that the intervention not only gave the participants an opportunity to

become aware of the roots of their distress but also provided coping skills to manage the distress. They also disclosed that their ability to regulate their emotions using mindfulness improved, as they reportedly were able to experience their feelings without having to suppress or control their emotions. These findings are consistent with Peña and Ritzer (2017) year, who found that mindfulness-based practices can reduce stress for students of color.

There was no statistically significant difference in pretest and posttest college self-efficacy scores for the intervention group. However, there was an increase in the mean score of college self-efficacy for the intervention group and a decrease in the mean scores of college self-efficacy for those in the control group. This may be related to the impacts of psychological distress and discriminatory experiences on college self-efficacy for students of color. This may parallel the finding that college students of color experience higher levels of psychological distress compared to their White counterparts, specifically due to racial differences (Bynum et al. 2007). For those in the intervention group, the increase in college-efficacy may reflect the how the mindfulness skills increased sense of empowerment gained through the intervention influenced their self-perceived capacity to persist through academic distress. Perhaps, the interventions buffered against the distress that may have influenced their college self-efficacy otherwise.

The principle of interconnectedness or oneness in Buddhist philosophy (Wolsko & Lindberg, 2013), which overlaps with Queralt's (1996) description of an ecosystemic perspective, was also seen in this study. The intervention seemed to positively influence the interventions participants' sense of belonging, as they reported feeling a stronger sense of "community" and increased awareness that "[they are] not alone." Not only did students seem to find strength in a collective identity with those who came from their specific ethnic backgrounds,

they also seemed to empathize with other students of color outside of their specific ethnic group who had similar discriminatory experiences. The students were able to share examples of how systemic oppression impacts all of them in different ways. The idea that liberation is obtained through awareness of the interconnected nature of oppressive systems is a key aspect of both critical consciousness and liberation psychology. For the participants in the intervention group, the coupling of mindfulness and critical pedagogy seemed to lead to an awareness of distress that is intrapersonal, interpersonal, institutional, and shaped by cultural socialization.

The results of this study also lend tentative support to the value of integration of critical pedagogy into mindfulness practices, as this may lead to the cultivation of an embodied critical consciousness that leads to action and systemic change. The most meaningful aspect of the interventions seemed to be related to the awareness of the impacts of transgenerational trauma and the increased desire to take critical action to mitigate the impacts of said trauma. A few of the students had noted that they already engage in critical action; however, they also seemed to identify new ways to engage in healing transgenerational traumas. The students in the intervention group identified ways to address systemic oppression, including utilizing their college degree to give voices to marginalized communities, educating others, and simply building stronger relationships. The findings of the current study are in line with the idea that culturally responsive mindfulness interventions may be an effective method to reduce the harmful impacts of racism and race-related stress (Watson-Singleton et al., 2019).

As mentioned, Freire's description of the historical nature of man emphasizes conditioned ways of being and the need to live authentically. He stated, "the point of departure must always be with men in the 'here and now...only by starting from the here and now'" can students begin to move. It seemed that in the current investigation, mindfulness allowed the

students to pause, reevaluate circumstances, and let go of conditioned ways of “reading” the world. This break from automatic pilot and conditioning can allow them to see life as “unalterable...but instead, limiting—and therefore challenging” (1973; p. 73). In this study, it seemed that the mindfulness-based intervention to increase critical consciousness served as a path to awareness, liberation, and desire to change the system.

According to this study, the integration of mindfulness with critical consciousness in an intervention may allow for a strong foundation that supports the holistic well-being of students of color. After attending the intervention, the students in this study seemed to have cultivated a sense of control or agency in their well-being, which may help them engage in the process of unlearning internalized stereotypes in the identity development process (Tatum, 2001). The interdisciplinary approach to well-being and identity development resented in this intervention may be to resolve the fragmented sense of self among students of color, particularly if they attend a PWI.

Implications for Higher Education

This study yields findings that may provide higher education institutions with information on how to better support their students of color, specifically through a context-specific mindfulness-based intervention. Considering the growing trend in mental health and physical health concerns among students of color (Soto et al. 2012; Zvolensky et al. 2016), it is critical that researchers and administrators provide ways in which students of color can thrive in academic settings. This includes addressing their sense of belonging, ability to cope with stress, and sociopolitical dynamics that may impact their wellbeing. Given the mental health disparities among students of color, academic institutions have a responsibility to inquire about and address the mental health needs of their racially and ethnically diverse students. This is critical, as

students of color are less likely to receive mental health treatment (Herman, et al., 2001), specifically among Asian and African American students (Eisenberg, 2009). This can be due to a variety of factors, including stigma and mistrust (Suite et al., 2007).

To address the mental health of students of color, mindfulness interventions are becoming more popular across colleges and universities. However, of these interventions do not account for the historical contexts of minoritized students, but rather apply a “one size fits all” approach to student well-being. This colorblind approach missed the opportunity to a) validate the discriminatory experiences that minoritized students may feel and b) give students specific tools to address and manage race-related distress. Higher education administrators may consider offering students of color mindfulness-based practices aimed at increasing critical consciousness, as these practices have been shown to serve as a buffer against psychological distress and increase retention rates for students of color (Davis & BehmCross, 2020). Additionally, implementing critical consciousness interventions without the incorporation of mindfulness practices to support students’ navigation through discussions related to oppression, trauma, and systemic oppression may leave students feeling emotionally unsupported or ill-equipped to tolerate the symptoms of distress that typically accompanies these conversations. Moreover, considering that these conversations can be exhausting, mindfulness may allow students to not only become aware of when they need to set a boundary or disengage from hostile or overwhelming conversations, they may engage in practices that decrease the symptoms of distress, such as breathing or body-oriented exercises. Mindfulness practices allow students to cultivate a nonjudgmental attitude towards what arises for them cognitively, emotionally, and physically, and it seems that students in the intervention group were able to engage in this practice.

There are a plethora of offerings that higher education administrators can provide students of color to help them cultivate mindful awareness of how stress influences them, utilize coping skills to mitigate the impact of academic distress, foster a sense of belonging, and feel empowered to address interpersonal and institutional injustices. One offering may include coursework focused on how transgenerational trauma manifests and utilizes experiential activities such as mindfulness, introspective journaling, and body-oriented exercises, to support students in their learning and exploration. Administrators may also consider creating online courses or programs that offer information on how mindfulness practices and how these practices may support one's approach to dismantling systemic oppression. Additionally, university counseling centers may consider offering group therapy sessions for students of color who are seeking to address, work through, and heal from transgenerational trauma and systemic injustice. The findings of the current study may serve as a foundation for several of these offerings.

Limitations & Future Research

Although this study adds to previous work, it is not without its limitations. The convenience sampling approach employed in this study can be considered biased as only students interested in participating in the intervention were recruited. Given that participants were recruited from one university in the Midwest, findings may not be transferrable to or be representative of all students of color. Additionally, there were also limitations of the present study which requires caution when interpreting results and findings. This study had a small sample size ($n=27$) for dependent t-tests which likely had insufficient statistical power for the measures. There was no measure to account for social desirability; future studies may include incorporate a scale to account for social desirability. Additional threats to validity were the use the facilitator and two undergraduate students, versus a team that may include graduate students

who have research interests in topics such as critical coconscious or experts in the field. The current findings may provide information to guide future research. For instance, future research might include a replication of the results with a larger and more diverse sample. Additionally, the study may be replicated to include two intervention groups with two different facilitators to minimize facilitator effects. Also, a waitlist-control group may be incorporated to provide all participants the opportunity to benefit from the intervention.

Conclusion

This study utilized a mixed-methods research design to investigate the effects of a mindfulness-based intervention on students of color who felt a low sense of belonging. There was no statistical significance found scores of mindfulness, distress, college self-efficacy, belonging, or critical consciousness for intervention group participants over time relative to control participants. However, there were significant findings in test that compared pretest and posttest effects for the intervention group. Specifically, there were significant changes over time for the treatment group from pretest to posttest on scores of mindfulness and psychological distress. While there was no statistically significant change over time for the treatment group from pretest to posttest in scores of college self-efficacy, belonging, and critical consciousness, there was a positive change in the mean scores of these outcome variables. This study added to the research on interventions focused on improving the well-being of students of color by providing an example of a context-specific mindfulness-based intervention that accounts for students' sociopolitical locations. This study showed the benefit of a mixed-methods approach to providing a mindfulness-based approach to addressing the well-being students of color and added many new questions for further research on mindfulness-based practices for students of color.

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APPENDIX A
IRB Approval Letter



Institutional Review Board
University of Missouri-Columbia
FWA Number: 00002876
IRB Registration Numbers: 00000731, 00009014

310 Jesse Hall
Columbia, MO 65211
573-882-3181
irb@missouri.edu

September 23, 2021

Principal Investigator: Bini B Sebastian
Department: MizzouRec

Your IRB Application to project entitled *Embodying Critical Consciousness in Higher Education: A Pilot RCT of a Mindfulness-based Intervention for College Students of Color* was reviewed and approved by the MU Institutional Review Board according to the terms and conditions described below:

IRB Project Number	2071622
IRB Review Number	339588
Initial Application Approval Date	September 23, 2021
IRB Expiration Date	September 23, 2022
Level of Review	Exempt
Project Status	Active - Exempt
Exempt Categories (Revised Common Rule)	45 CFR 46.104d(3)(i)(B)
Risk Level	Minimal Risk
HIPAA Category	No HIPAA
	Consent Form
	Recruitment Letter
Approved Documents	Demographic Questionnaire
	Research Questionnaire
	Local Counseling Centers

The principal investigator (PI) is responsible for all aspects and conduct of this study. The PI must comply with the following conditions of the approval:

- No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date.
- All changes must be IRB approved prior to implementation utilizing the Exempt Amendment Form.
- Major noncompliance deviations must be reported to the MU IRB on the Event Report within 5 business days of the research team becoming aware of the deviation. Major deviations result when research activities may affected the research subject's rights, safety, and/or welfare, or may have had the potential to impact even if no actual harm occurred. Please refer to the MU IRB Noncompliance policy for additional details.
- The Annual Exempt Form must be submitted to the IRB for review and approval at least 30 days prior to the project expiration date to keep the study active or to close it.
- Maintain all research records for a period of seven years from the project completion date.

If you are offering subject payments and would like more information about research participant payments, please click here to view the MU Business Policy and Procedure: http://bppm.missouri.edu/chapter2/2_250.html

If you have any questions or concerns, please contact the MU IRB Office at 573-882-3181 or email to muresearchirb@missouri.edu.

Thank you,
MU Institutional Review Board

APPENDIX B
Demographic Research Questionnaire

The survey includes several demographic items and a few individual scales. Each individual scale has its own instructions. Because no part in the survey will ask your names and any identifying information, your responses will be completely anonymous. There are no right or wrong answers. Please answer all items honestly.

Demographic Items

1. What is your age? _____ years old.

2. What is your gender? Male Female Transgender Prefer not to respond

3. How do you describe yourself? (Check the one that best describes you)
 Caucasian/White American Black/African American
 Hispanic/Latino American American Indian or Alaska Native
 Asian or Asian American Hawaiian or other Pacific Islander
 Biracial/Multiracial International student, from _____
 Prefer not to share Other (*specify*) _____

4. Your current romantic relationship status:
 Married Single but in a committed relationship
 Divorced Single and never had a relationship
 Widowed Other (*specify*) _____

5. What is your sexual orientation?
 Heterosexual Gay
 Lesbian Bisexual
 Asexual Queer
 Prefer not to share Other (*specify*) _____

6. What is your religious affiliation?
 Agnostic Atheist Jewish
 Baptist Catholic Mormon
 Christian Episcopalian Muslim
 Jewish Lutheran Presbyterian
 Buddhist Taoist Hindu
 Prefer not to share Other (*specify*) _____

7. 7a. What is your current school standing?
 Freshmen Sophomore Junior
 Senior Other (*specify*) _____
7b. How long have you attended MU?
 less than 1 semester 1 semester or more

8. Which best describes the social-economic status of your family of origin?
 Upper class Upper-middle class Middle class
 Lower middle class Lower / welfare class
9. What is your major (check all that apply)?
 Psychology Engineering
 Accounting Computer Sciences
 Economics Communications
 Physical Sciences Interdisciplinary
 Humanities Education
 Health Sciences Business
 Other (*specify*) _____
10. Have you received/attended any mindfulness training workshops/lessons? Yes No
11. Do you practice mindfulness (of any kind)? Yes No
12. If “Yes” how often?
 every day 3-5 times a week
 1-2 times a week occasionally (less than 3-4 times a month)
 only few times a year Other (*specify*) _____
13. If “Yes”, what of the following forms of mindfulness have you practiced (check all that apply)?
 Meditation Yoga
 T'ai Chi Support group
 Qigong Dance
 Prayer Faith-healing spiritual practices
 Gardening Art (*specify*) _____
 Sports (*specify*) _____
 Other (*specify*) _____
14. If “Yes” on item #11:
When did you first start to practice mindfulness? _____
When did your mindfulness become regular (if not regular, put N/A)? _____
15. Have you been diagnosed with a major psychiatric illness? If so, please describe how it may cause clinically significant impairment.

APPENDIX C

Five Facet Mindfulness Questionnaire – Short Form (FFMQ-SF)

Below is a collection of statements about your everyday experience. Using the scale of 1 to 5 below, please indicate, on the line to the left of each statement, how frequently or infrequently you've had each experience in the last month (or other agreed-upon time period). Please answer according to what really reflects your experience rather than what you think your experience should be.

never or very rarely true	not often true	sometimes true, sometimes not true	often true	very often or always true
1	2	3	4	5

- _____ 1. I'm good at finding the words to describe my feelings.
- _____ 2. I can easily put my beliefs, opinions, and expectations into words.
- _____ 3. I watch my feelings without getting carried away by them.
- _____ 4. I tell myself that I shouldn't be feeling the way I'm feeling.
- _____ 5. It's hard for me to find the words to describe what I'm thinking.
- _____ 6. I pay attention to physical experiences, such as the wind in my hair or the sun on my face.
- _____ 7. I make judgments about whether my thoughts are good or bad.
- _____ 8. I find it difficult to stay focused on what's happening in the present moment.
- _____ 9. When I have distressing thoughts or images, I don't let myself be carried away by them.
- _____ 10. Generally, I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.
- _____ 11. When I feel something in my body, it's hard for me to find the right words to describe it.
- _____ 12. It seems I am running on automatic without much awareness of what I'm doing.
- _____ 13. When I have distressing thoughts or images, I feel calm soon after.
- _____ 14. I tell myself I shouldn't be thinking the way I'm thinking.
- _____ 15. I notice the smells and aromas of things.
- _____ 16. Even when I'm feeling terribly upset, I can find a way to put it into words.
- _____ 17. I rush through activities without being really attentive to them.
- _____ 18. When I have distressing thoughts or images, I can just notice them without reacting.
- _____ 19. I think some of my emotions are bad or inappropriate and I shouldn't feel them.
- _____ 20. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.
- _____ 21. When I have distressing thoughts or images, I just notice them and let them go.
- _____ 22. I do jobs or tasks automatically without being aware of what I'm doing.
- _____ 23. I find myself doing things without paying attention.
- _____ 24. I disapprove of myself when I have illogical ideas.

APPENDIX D
Depression Anxiety Stress Scale (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:

0 Did not apply to me at all - NEVER

1 Applied to me to some degree, or some of the time - SOMETIMES

2 Applied to me to a considerable degree, or a good part of time - OFTEN

3 Applied to me very much, or most of the time - ALMOST ALWAYS

1. I found it hard to wind down	0	1	2	3
2. I was aware of dryness of my mouth	0	1	2	3
3. I couldn't seem to experience any positive feeling at all	0	1	2	3
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5. I found it difficult to work up the initiative to do things	0	1	2	3
6. I tended to over-react to situations	0	1	2	3
7. I experienced trembling (e.g., in the hands)	0	1	2	3
8. I felt that I was using a lot of nervous energy	0	1	2	3
9. I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10. I felt that I had nothing to look forward to	0	1	2	3
11. I found myself getting agitated	0	1	2	3
12. I found it difficult to relax	0	1	2	3
13. I felt down-hearted and blue	0	1	2	3
14. I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15. I felt I was close to panic	0	1	2	3
16. I was unable to become enthusiastic about anything	0	1	2	3
17. I felt I wasn't worth much as a person	0	1	2	3
18. I felt that I was rather touchy	0	1	2	3
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)	0	1	2	3
20. I felt scared without any good reason	0	1	2	3
21. I felt that life was meaningless	0	1	2	3

APPENDIX E
College Self-Efficacy

The following 20 items concern your confidence in various aspects of college. Using the scale below, please indicate how confident you are as student at JMU that you could successfully complete the following tasks. If you are extremely confident, mark a 10. If you are not at all confidence, mark a 1. If you are more or less confident, find the number between 10 and 1 that best describes you. Levels of confidence vary from person to person, and there are no right or wrong answers; just answer honestly.

Please read each statement carefully, and respond using the given rating scale.

	Not at all Confident				Neutral					Extremely Confident
	1	2	3	4	5	6	7	8	9	10
1. Make new friends at college.	1	2	3	4	5	6	7	8	9	10
2. Divide chores with others you live with.	1	2	3	4	5	6	7	8	9	10
3. Talk to university staff.	1	2	3	4	5	6	7	8	9	10
4. Manage time effectively.	1	2	3	4	5	6	7	8	9	10
5. Ask a question in class.	1	2	3	4	5	6	7	8	9	10
6. Participate in class discussions.	1	2	3	4	5	6	7	8	9	10
7. Get a date when you want one.	1	2	3	4	5	6	7	8	9	10
8. Research a term paper.	1	2	3	4	5	6	7	8	9	10
9. Do well on your exams.	1	2	3	4	5	6	7	8	9	10
10. Join a student organization.	1	2	3	4	5	6	7	8	9	10
11. Talk to your professors.	1	2	3	4	5	6	7	8	9	10
12. Join an intramural sports team.	1	2	3	4	5	6	7	8	9	10
13. Ask a professor a question.	1	2	3	4	5	6	7	8	9	10
14. Take good class notes.	1	2	3	4	5	6	7	8	9	10
15. Get along with others you live with.	1	2	3	4	5	6	7	8	9	10
16. Divide space in your residence.	1	2	3	4	5	6	7	8	9	10
17. Understand your textbooks.	1	2	3	4	5	6	7	8	9	10
18. Keep up to date with your schoolwork.	1	2	3	4	5	6	7	8	9	10
19. Write course papers.	1	2	3	4	5	6	7	8	9	10
20. Socialize with others you live with.	1	2	3	4	5	6	7	8	9	10

APPENDIX F
University Belonging Questionnaire

Strongly disagree	Disagree	Agree	Strongly agree
1	2	3	4

1. I feel that a faculty member has valued my contributions in class.
2. My university environment provides me an opportunity to grow.
3. I have university-branded material that others can see (pens, notebooks, bumper sticker, etc.)
4. I tend to associate myself with my school.
5. I would be proud to support my university in any way I can in the future.
6. I believe there are supportive resources available to me on campus
7. My university provides opportunities to have diverse experiences.
8. One of the things I like to tell people is about my college.
9. I am satisfied with the academic opportunities at my university.
10. I have found it easy to establish relationships at my university.
11. The university I attend values individual differences
12. I feel “at home” on campus.
13. I attend university sporting events to support my university
14. My university provides opportunities to engage in meaningful activities.
15. I feel similar to other people in my major.
16. I believe I have enough academic support to get me through college.
17. I feel connected to a faculty/staff member at my university/
18. I feel a sense of pride when I meet someone from my university off campus.
19. My cultural customs are accepted at my university.
20. I am proud to be a student at my university.
21. I believe that a faculty/staff member at my university cares about me.
22. I take pride in wearing my university’s colors.
23. I feel that a faculty/staff member has appreciated me.
24. I feel like I belong to my university when I represent my school off campus.

APPENDIX G

The Critical Consciousness Inventory

Select one response for each of the nine questions.

- 1a I believe that the world is basically fair
- 1b I believe that the world is basically fair but others believe that it is unfair
- 1c I believe that the world is unfair for some people
- 1d I believe that the world is unfair, and I make sure to treat others fairly

- 2a I believe that all people are treated equally
- 2b I believe that some people don't take advantage of opportunities given to them and blame others instead
- 2c I believe that some groups are discriminated against
- 2d I work to make sure that people are treated equally and are given equal chances

- 3a I think that education gives everyone an equal chance to do well
- 3b I think that education gives everyone who works hard an equal chance
- 3c I think that the educational system is unequal
- 3d I think that the educational system needs to be changed in order for everyone to have an equal chance

- 4a I believe people get what they deserve
- 4b I believe that some people are treated badly but there are ways that they can work to be treated fairly
- 4c I believe that some people are treated badly because of oppression
- 4d I feel angry that some people are treated badly because of oppression and I often do something to change it

- 5a I think all social groups are respected
- 5b I think social groups that are not respected have done things that lead people to think badly of them
- 5c I think people do not respect members of some social groups based on stereotypes
- 5d I am respectful of people in all social groups, and I speak up when others are not

- 6a I don't notice when people make prejudiced comments
- 6b I notice when people make prejudiced comments and it hurts me
- 6c It hurts me when people make prejudiced comments but I am able to move on
- 6d When someone makes a prejudiced comment, I tell them what they said is hurtful

- 7a When people tell a joke that makes fun of a social group, I laugh and don't really think about it
- 7b When people tell a joke that makes fun of a social group, I laugh but also feel uncomfortable
- 7c When people tell a joke that makes fun of a social group, I realize that the joke is based on a stereotype

7d I tell people when I feel that their joke was offensive

8a I don't see much oppression in this country

8b I feel hopeless and overwhelmed when I think about oppression in this country

8c I feel like oppression in this country is less than in the past and will continue to change

8d I actively work to support organizations which help people who are oppressed

9a I don't feel bad when people say they have been oppressed

9b I feel sad or angry when experiencing or seeing oppression

9c I often become sad or angry when experiencing or seeing oppression, but I find ways to cope with my feelings

9d I work to protect myself from negative feelings when acts of oppression happen

APPENDIX H
Intervention Manual for
Cultivating Critical Consciousness
through Mindful Pedagogy

Session One: Meeting the Mind and Body

Focus:

- Introductions, Agreements, and Introduction to Mindfulness

Objective:

- Introduce members, describe the structure of the sessions, ensure confidentiality
- Learn how to notice sensations and automatic thoughts through mindful breathing

Session description:

- Facilitator will prompt the group members to introduce themselves and describing what they hope to get out of the group and explain confidentiality and work with students to create community guidelines.
- Facilitator will spend time helping students build rapport through an icebreaker activity.
 - Icebreaker activity will include students sharing what brings them alive or gives their life meaning and/or purpose.
- Facilitator will also guide members through a mini-lecture on the psychoeducation of stress and mindfulness.
- Facilitator will guide participants through a mini mindful bod scan, in which they pay attention to and relax certain muscles.
- Participants will journal about their experience engaging in the exercise and write what they noticed.
- Session will end with group discussion on their experiences.

Structure:

- Introductions – 15 minutes
- Icebreaker – 10 minutes
- Psychoeducation – 25 minutes
- Exercise: Mindful Breathing – 15 minutes
- Journaling – 10 minutes
- Discussion – 15 minutes

**Session Two: Recognizing Embodied Stories and
The Body as a “Medium for Sense-Making”**

Focus:

- Psychoeducation on the Stress Response and Physical Practice

Objective:

- Explore salient identities
- Help participants think about their relationships with their history, culture, and significant people in their lives

Session description:

- Facilitators will facilitate discussion on participants’ most salient identities

- Facilitator will facilitate discussion on the body as a “medium for sense-making” (Macintyre, Latta and Buck, 2007, p. 316) and the physical impacts of transgenerational trauma
- Facilitators will lead the group members in a body awareness exercise in which they engage in light stretching and become aware of physical sensations in the body.
- Students will journal about what they experienced during the yoga session and how the movements influenced their mental states
- Session will end with group discussion on their experiences.

Structure:

- Check-in – 5 minutes
- Discussion on salient identities – 10 minutes
- Mini lecture on physical impacts of transgenerational trauma – 15 minutes
- Exercise: Psychosomatic practice – 30 minutes
- Journaling – 10 minutes
- Discussion – 10 minutes

Session Three: Rest and Restore to Heal Transgenerational Trauma

Focus:

- Explore the Impact of Transgenerational Trauma on Holistic Health: Mind, Body, and Spirit

Objective:

- Discuss self-care and self-compassion in the work of healing symptoms of transgenerational trauma
- Practice a mindful self-compassion exercise
- Discuss influence of transgenerational trauma on our and our ancestors mind, body, and spirit

Session description:

- Facilitator will check-in briefly with group members
- Faciliator will guide participants in a discussion on the role of self-care and self-compassion in addressing transgenerational trauma
- Facilitator will also guide members through a lecture and practice on mindful self-compassion “How would you talk to a friend” or “How would you talk to your younger self?”
- Participants will journal about their experiences in the activity
- Session will end with group discussion on lessons learned.

Structure:

- Check-in – 5 minutes
- Guided mini lecture – 25 minutes
- Exercise: Mindful Self-Compassion – 20 minutes
- Journaling – 10 minutes
- Discussion – 20 minutes

Session Four: Transcendence through Interconnectedness

Focus:

- Moving towards Critical Action through the Understanding of a Collective Identity

Objective:

- Explore how increased sense of interconnectedness can lead to a sense of liberation and a foundation for critical action

Session description:

- Facilitator will check-in briefly with group members.
- Facilitator will lead discussion on critical consciousness, which will include the subtopics of critical reflection and social action
- Participants will identify individual steps they will take to engage in critical reflection and/or social action and journal about processes.
- Session will end with group discussion on next steps and reflection on the workshop series as a whole.

Structure:

- Check-in – 5-10 minutes
- Guided lecture on critical consciousness – 20 minutes
- Discussion on individual steps to engage in critical action: 25 minutes
- Journaling – 10 minutes
- Discussion – 15 minutes

APPENDIX I
Individual Interview Questions

1. Describe your experience of practicing mindfulness over the last several weeks.
2. What did you find to be the most meaningful part of the workshop series?
3. How, if at all, did your experience in the workshops impact your ability to be mindful?
4. How, if at all, did your experience in the workshops impact your sense of belonging?
5. How, if at all, did your experience in the workshops impact your desire to address systemic injustices?

Figure 1.

First model of embedded-experimental MMR design

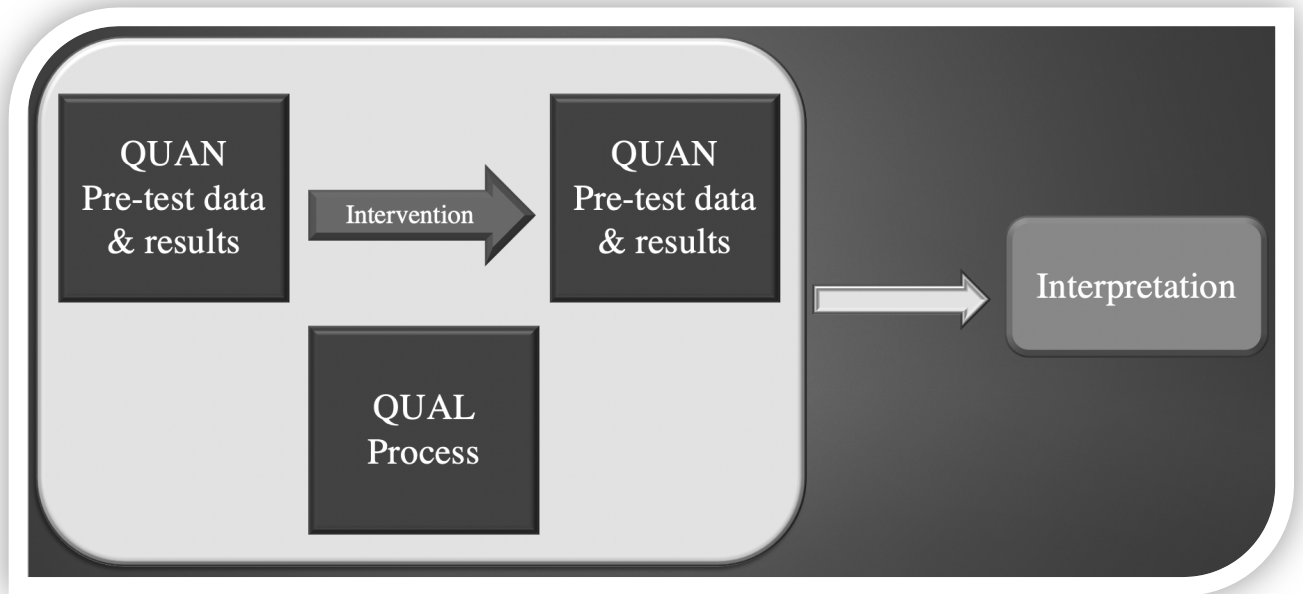


Figure 2.

Detailed model of embedded-experimental MMR design

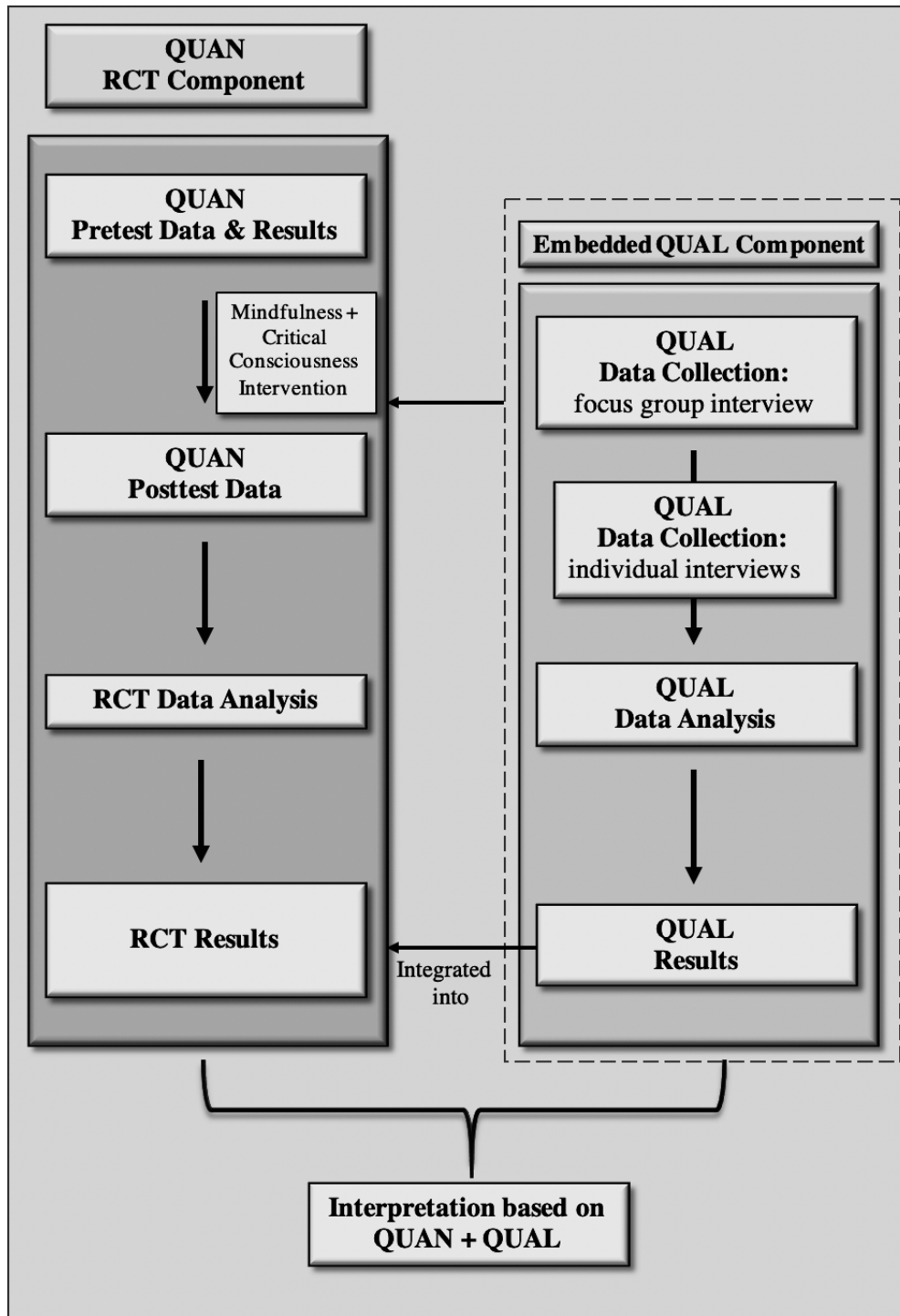
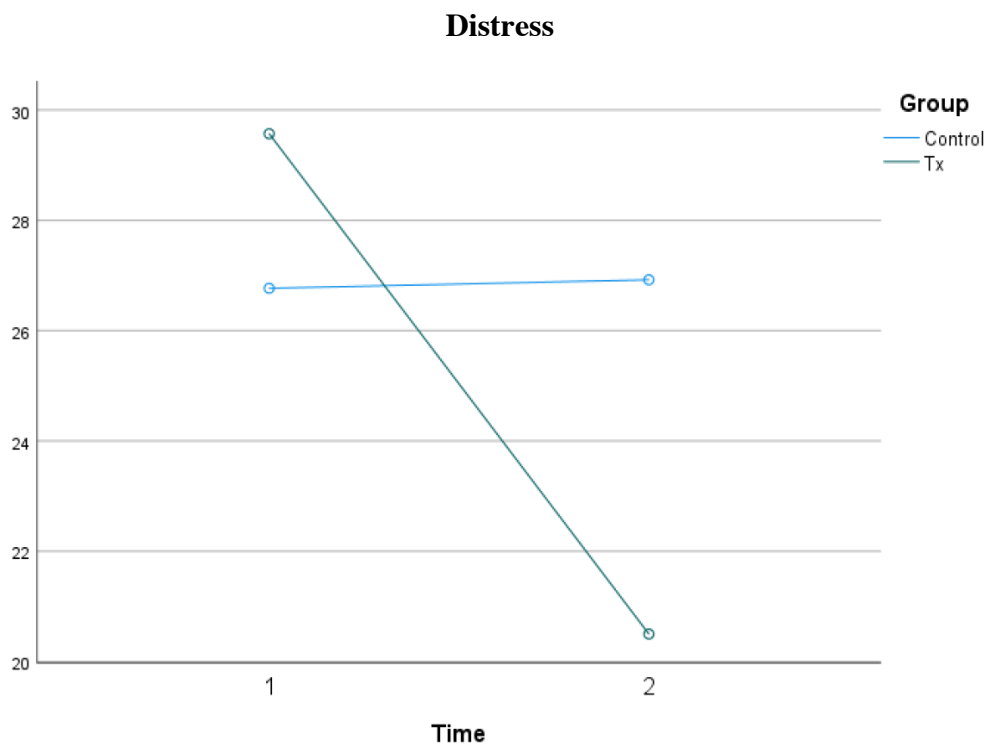
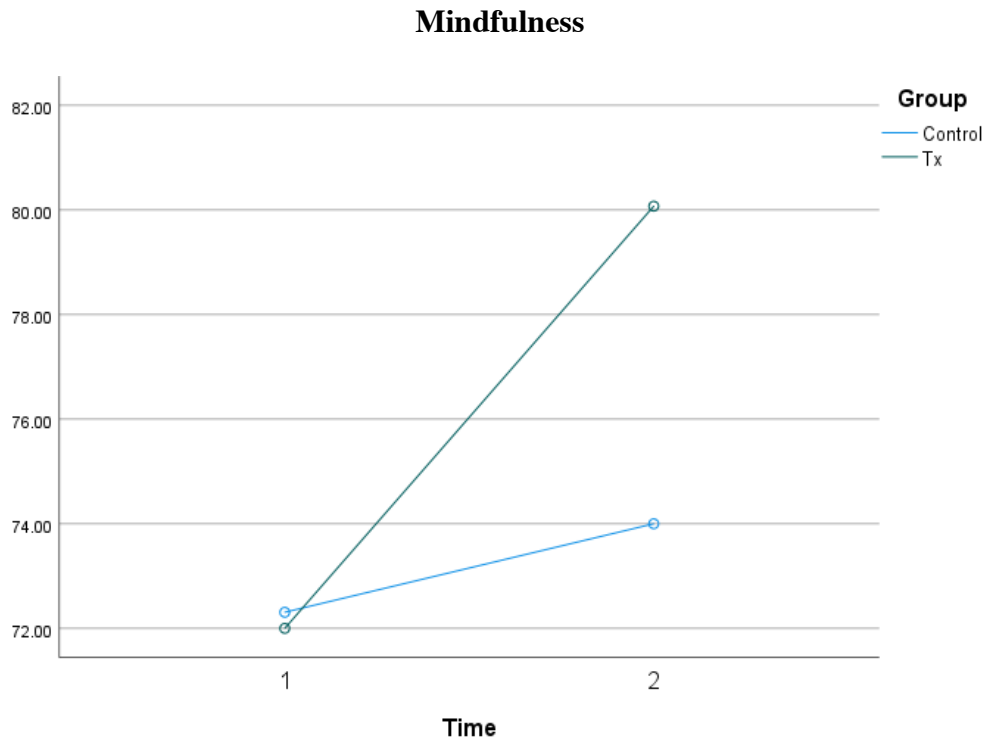
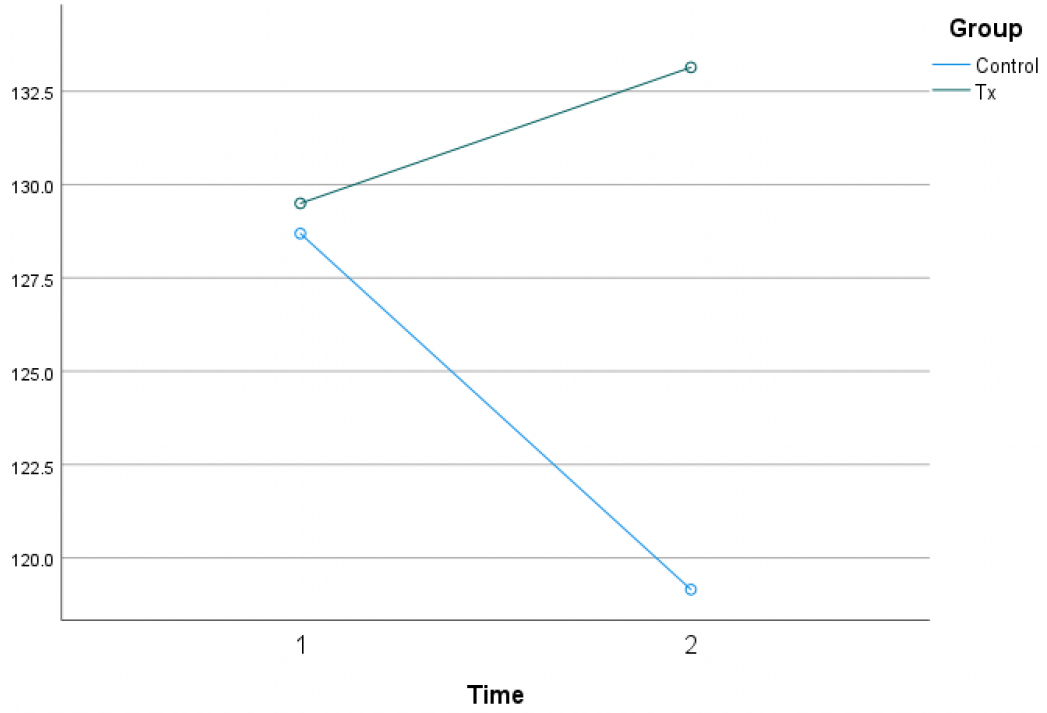


Figure 3.

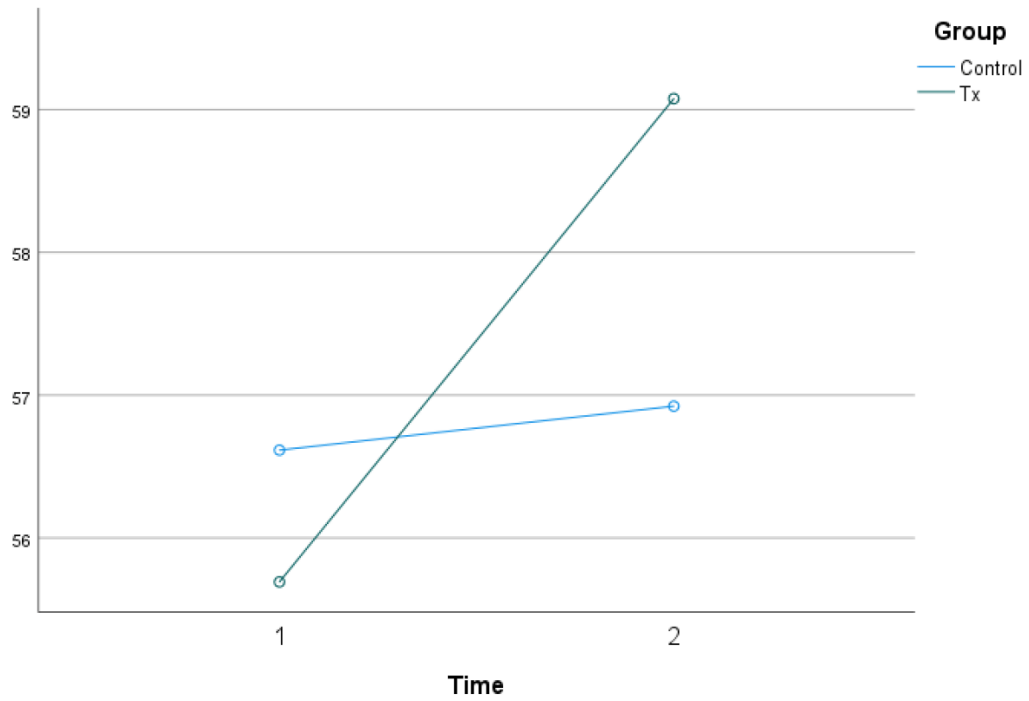
Changes in Total Scores over Time for Each Outcome Measure

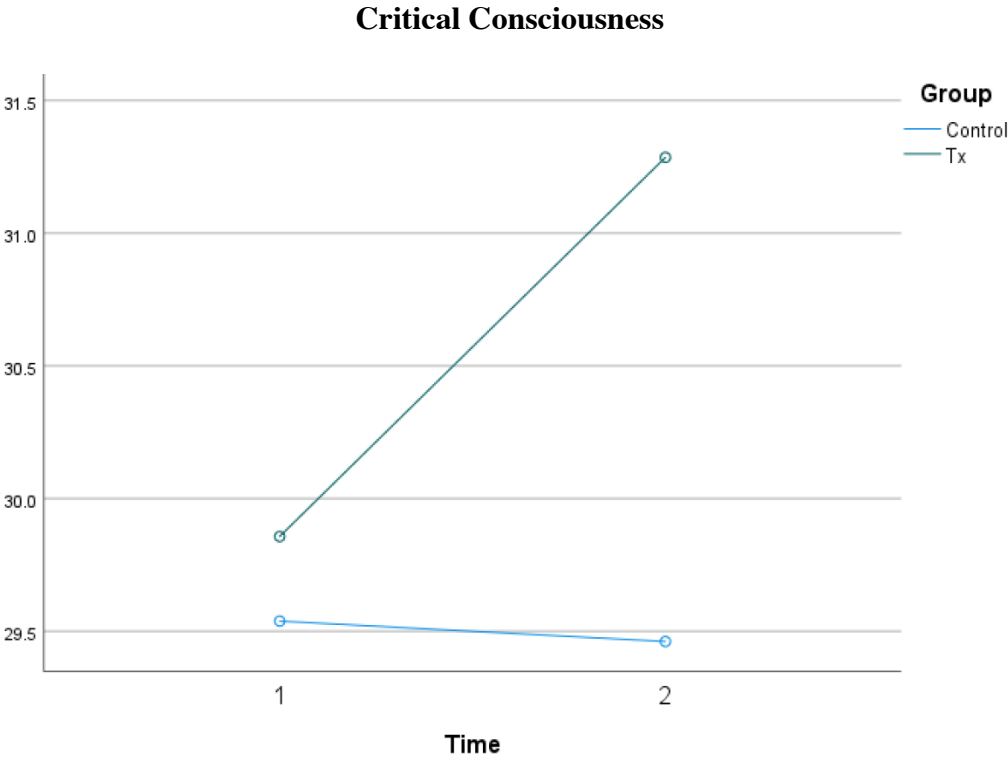


College Self-Efficacy



Sense of Belonging





*Table 1.**Participant Demographic Frequencies*

Variable	<u>Control</u>		<u>Treatment</u>	
	n	%	n	%
Gender				
Female	11	85	10	71
Male	2	15	3	21
Non-binary	0	0	1	7
Year in College				
Freshman	1	8	0	0
Sophomore	3	23	6	43
Junior	8	62	4	29
Senior	1	8	4	29
Ethnicity				
Asian or Asian American	4	31	1	7
Black/African American	4	31	5	36
Biracial/Multiracial	5	39	3	21
Hispanic/Latin American	0	0	1	7
Sexual Orientation				
Asexual	0	0	1	7
Gay	0	0	1	7
Heterosexual	10	77	10	71
Queer	1	8	0	0
Bisexual	1	8	1	7
Pansexual	1	8	1	7
Religion/Spirituality				
Agnostic	2	15	1	7
Atheist	0	0	1	7
Buddhist	1	8	0	0
Christian	6	46	3	21
Catholic	0	0	2	14
Muslim	0	0	1	7
Hindu	1	8	0	0
Sikh	0	0	1	1
Spiritual	2	15	0	0
None	1	8	5	36
Previous Experiences with Mindfulness				
Yes	5	39	3	79
No	8	62	11	21

Table 2.

Participant Racial and Ethnic Frequencies by Intervention Group

Racial or Ethnic Identity	<u>Intervention Group 1</u>		<u>Intervention Group 2</u>	
	N	%	N	%
Asian or Asian American	1	13	4	66
Black/African American	4	50	1	17
Biracial/Multiracial	2	24	1	17
Hispanic/Latin American	1	13	0	0

Table 3.

Descriptive statistics for Pretest and Posttest FFMQ, DASS, CSE, UBQ, and CCI.

Scale	<i>M</i>		<i>SD</i>		<i>SE</i>		<i>Skewness</i>	<i>Kurtosis</i>
	C	Tx	C	Tx	C	Tx		
FFMQ – Pretest	71.50	74.50	9.07	10.03	2.66	2.56	-.61	.37
FFMQ – Posttest	72.92	80.70	10.02	7.82	2.48	2.39	-.30	1.86
DASS – Pretest	26.77	29.57	12.90	11.70	3.57	3.13	.13	-.81
DASS – Posttest	26.92	20.50	12.40	8.58	3.43	2.29	.24	-.74
CSE – Pretest	128.69	129.50	19.81	17.32	5.49	4.63	-.59	-.56
CSE – Posttest	119.15	133.14	25.31	25.31	7.02	5.25	.01	-.87
UBQ – Pretest	56.62	55.71	10.43	10.43	2.89	2.82	-.08	-.77
UBQ – Posttest	56.92	59.08	12.10	15.45	3.60	4.29	-.25	-.93
CCI – Pretest	29.54	29.86	4.70	3.80	1.30	1.01	-.41	-.22
CCI – Posttest	29.46	31.29	4.46	3.17	1.24	.85	-.91	1.51

Table 4.*Results for Repeated Measures ANOVA*

Scale	M		F	P-value
	C	Tx		
FFMQ – Pretest	71.50	74.50	1.83	.19
FFMQ – Posttest	72.92	80.70		
DASS – Pretest	26.77	29.57	2.48	.59
DASS – Posttest	26.92	20.50		
CSE – Pretest	128.69	129.50	2.0	.11
CSE – Posttest	119.15	133.14		
UBQ – Pretest	56.62	55.71	1.88	.86
UBQ – Posttest	56.92	59.08		
CCI – Pretest	29.54	29.86	.70	.41
CCI - Posttest	29.46	31.29		

Table 5.

Results for Paired Samples T-Test for Intervention Group

	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>Cohen's d</i>	<i>Sig. (2-tailed)</i>
Mindfulness	8.07	9.49	2.54	1.88	.50	.007*
Distress	-9.07	11.05	2.95	3.07	.82	.009*
College Self-efficacy	3.64	15.55	4.16	.88	.20	.400
Belonging	3.39	17.83	5.75	.567	.15	.567
Critical Consciousness	1.43	2.89	.76	1.87	.50	.083

Table 6.
Overview of Themes and Subthemes

Theme	Description
(a) <u>Mindfulness</u>	
Mindfulness of thoughts	Increased awareness of thoughts, including racing thoughts, wandering mind, or general lack of present moment awareness
Mindfulness of emotions	Increased awareness and acceptance of emotions
Mindfulness of physical sensations	Increased awareness of physical manifestations of distress
(b) <u>Motivation to Decrease Academic Distress</u>	
Increase social support on campus	Desire to deepen their connections and reach out to BIPOC
Time management	Desire to manage their time to include breaks and mitigate academic distress
Find purpose in schoolwork	Desire to find meaning and purpose in their academic-related work
(c) <u>Sense of Belonging</u>	
Shared lived experiences regarding discrimination	Shared experienced of microaggressions from peers, teachers, and other individuals on campus
Acknowledgment of their individual role in helping BIPOC community	Seeking to serve a specific role in a larger BIPOC community
Solidarity in BIPOC collective identity	Feeling a sense of collective identity, considering within group differences
(d) <u>Critical Consciousness</u>	
Critical Reflection	Increased awareness of how societal inequities have persisted across time and into their current lives
Political Efficacy	Increased capacity to address and change inequitable social conditions
Critical Action	Taking critical action in order to heal from transgenerational trauma

Note. N = 14.

Table 7.

Visual Display: Basic Integration of Quantitative Results and Participant Quotes

Quantitative Measurement	Related Participant Quotes
Mindfulness and Psychological Distress	<p>“I’ve noticed myself becoming more aware of my body and mind have been telling me all of these years, but I’ve chosen to ignore. Since this practice my mindfulness has changed completely. I have learned to really pay attention to my body and its wants and needs. With these practices, I can tell what cues my body is telling me...when I’m stressed or need to take it slow.”</p>
College Self-Efficacy	<p>“I’ve learned that in order for myself to be genuinely happy, I have to take the time to take a break from school and work on aligning my mind, body, and spirit. If one is off-balance, I will be off-balance.”</p>
Sense of Belonging	<p>“We as students of color go through so many trials and tribulations, so many that many cannot understand or experience. I learned that each of us POC students are so different but yet so much the same. We have a lot of similarities in how we perceive and grapple with our identities; we hold mixed feelings of love and disdain towards our parents, as they both raised us but also made us grow up too fast. I even felt the same familiarity with everyone else in the group, especially as BIPOC...”</p>
Critical Consciousness	<p>“As a future journalist I will use my voice for those who don’t have one. While I’ve already been doing work on solo projects in my classes that involve the black community, I have realized that I don’t want to just focus on my community, but all other minority groups.”</p>

VITA

Bini Sebastian is doctoral student in Counseling Psychology at the University of Missouri, and her research focuses on mindfulness, identity development, and critical consciousness. Bini graduated with her B.S. in Psychology from the University of North Texas. During her undergraduate years, Bini found an interest in mindfulness and began exploring the role of mindfulness in cultivating multicultural awareness. She decided to pursue her Ph.D. in Counseling Psychology at Mizzou, where she also received her M.Ed. in Counseling Psychology in 2018. Bini has presented her research and offered workshops at regional and national conferences, and she has taught classes on mindfulness, identity development, and social justice for university students. She has also served as a therapist at the MU Counseling Center for the last three years. Bini matched for internship at the University of California at Berkeley and will focus on further integrating liberatory practices into her clinical work. Ultimately, Bini hopes to bring liberatory and consciousness-raising practices to spaces in higher education, specifically through therapy and teaching courses on holistic approaches to well-being.