Explorations of Racism-Related Stress, Mindfulness, and Psychological Health

Explorations of Racism-Related Stress, Mindfulness, and Psychological Health

by

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Presented to the Graduate and Research

Committee of Lehigh University

in Candidacy for the Degree

of Doctor of Philosophy

in

Counseling Psychology

Lehigh University

April 22, 2025

Approved and recommended for acceptance as a dissertation in partial fulfillment of requirements for the degree of Doctor of Philosophy.

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ACKNOWLEDGMENTS

I am truly humbled, grateful, and inspired by those who have provided me with support in my journey of completing this dissertation. First, I would like to thank my dissertation committee members who provided me with encouragement, guidance, and feedback to make this dissertation something I am proud of. To each of you, I know that I will continue to learn and gain insight both professionally and personally from our work together for years to come. To Dr. Shamell Brandon, thank you for the insightful wisdom, knowledge, and depth you brought into our work together both academically and clinically. Your work as a clinician inspires my own work as a clinician, for which I am so grateful. To Dr. Nicole Johnson, thank you for modeling and being a leader in your strength, transparency, and authenticity as an educator. You have taught me to be brave and authentically me in times of challenge and discomfort. To Dr. Fu, thank you for your patience, openness, and encouragement throughout this and past research experiences. I have learned so much from you, including the belief in myself.

I would like to give a heartfelt thank you to my advisor, dissertation chair, and mentor Dr. Christopher Liang. I cannot express enough how much your words of encouragement, excitement, and hope motivated and inspired me throughout my doctoral journey and completion of this dissertation. You have profoundly impacted my life by modeling how vulnerability, hard work, and laughter can create growth and change. Thank you for your support and kindness throughout this project, it would not be what it is without you.

I would like to also acknowledge the support of my peers at Lehigh University and on internship at University of Delaware Center for Counseling and Student Development. Teresa Rosenberger, Morgan Benner, Natania Lipp, and Raquel Sosa, you all have been an incredibly important, supportive part of this journey and I am so proud of the counseling psychologists we

are growing into. Douglas Glenn, Emily Junkin, and Ryann Siegel, thank you all for giving me the time, feedback, and words of encouragement during the final stretch of this journey. I feel so lucky to have shared our internship year together and am excited to see our professional journeys ahead.

I would like to thank my family for their unwavering support, encouragement, compassion, and kindness throughout this experience. To my partner Mike, you have been with me throughout every step of my doctoral journey. You have supported me with love and cheer and provided me with strength in moments of challenge. I love you and would not be here without you. To my parents, thank you for instilling the belief in me that I can follow my dreams. Your trust in me allowed me to trust and believe in myself. I love you.

Finally, I would like to acknowledge and thank all of those who I have learned from and will continue to learn from regarding the topics of mindfulness, racism, and psychological health. This body of work would not exist were it not for the contributions of authors, researchers, thought-leaders, community members, and practitioners that have dedicated time, energy, and resources toward learning about these areas of research and lived experience. I aspire to continue to learn, advocate, and practice this knowledge, and I dedicate this project to you.

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Abstract

Perceived racism is associated with adverse mental and physiological health outcomes for marginalized racial and ethnic groups, including symptoms of anxiety, depression, and stress. Mindfulness, including the practice of compassion, may be one helpful coping strategy to mitigate the effects of racism-related stress. Mindfulness has been shown to moderate the effects of anxiety, depression, and distress. Although research on mindfulness and stress has increased in recent years, mindfulness has been rooted in religious, secular, and spiritual traditions among people of color and known to have connections with numerous multicultural traditions and religions long before inclusive in Western research. A dearth of research exists in the mindfulness literature around the relationships between racism, mindfulness, and psychological health outcomes among people of color. As such, additional research is warranted to understand stress and coping mechanisms used by people of color to combat the effects of racism. The current study used a cross-sectional research design to examine the relationships between recent experiences of racism and psychological outcomes (e.g., anxiety, depression, stress, hope) for people of color, and explored the relationships of recent experiences of racism with psychological outcomes for people engaging in various levels of mindfulness. Results indicated there were significant relationships between recent racism experiences and psychological distress as well as significant relationships between recent racism experiences and hope. Results also suggested that mindfulness served as a buffer between recent racism experiences and psychological distress, such that people of color with higher levels of mindfulness experienced less psychological distress in response to recent racism experiences compared with people of color with lower levels of mindfulness. Lastly, results suggested that people of color with higher levels of mindfulness may maintain relatively stable levels of hope regardless of their recent

experiences with racism. Understanding of relationships may add further knowledge in the stress and coping literature to support the psychological well-being of people of color impacted by racism.

CHAPTER 1

INTRODUCTION

The impacts of racism and racism-related stressors on mental health among people of color are prevalent in the scientific literature (Phelan & Link, 2015; Priest & Williams, 2021; Williams et al., 1997). Comprehensive research has examined the psychological and physiological effects of racism (Alvarez et al., 2016; Mouton et al., 2017; Paradies et al., 2015); however, additional research and understanding of coping strategies to prevent and mitigate adverse health outcomes is warranted. Although systemic level change is necessary to reduce racism, it is also important to discern strategies to support the immediate impacts of racism and perceived discrimination. Mindfulness and mindfulness-based interventions have been applied in an array of clinical and non-clinical settings for a variety of psychological and physiological benefits (Blanck et al., 2018; Chi et al., 2018; de Abreu Costa et al., 2019; Khoury et al., 2013, 2013, 2015; Li & Bressington, 2019). Although research in mindfulness and psychological health outcomes is growing (Goldberg, 2018), research in mindfulness and racism among people of color is limited (DeLuca et al., 2018; Waldron et al., 2018) with encouraging evidence (Martinez et al., 2022; Shallcross & Spruill, 2018; Watson-Singleton et al., 2019). Moreover, the definition of mindfulness encompasses numerous practices, definitions, and even philosophies in scientific research (Anālayo, 2020; Kabat-Zinn, 2013; Khoury et al., 2017; Nilsson & Kazemi, 2016; Trousselard et al., 2014). A more detailed understanding of the specific components of mindfulness and compassion may provide additional insight into culturally responsive interventions for people of color impacted by racism. As such, the purpose of this study is to investigate racism and its relationship with mindfulness and psychological outcomes.

Statement of the Problem

Substantial research documents the deleterious psychological and physiological health effects of racism, perceived racial discrimination, racism-related stress, and race-related stress (Carter et al., 2019; David et al., 2019; Gale et al., 2020). According to Harrell (2000), *racism-related stress* is defined as "the race-related transactions between individuals or groups and their environment that emerge from the dynamics of racism, and that are perceived to tax or exceed existing individual and collective resources or threaten well-being," (p. 44). Racism-related stress is experienced as an additional stressor that adversely contributes to health outcomes for people of color. Thus, as people of color experience racism, they are exposed to more hardships that may negatively impact their psychological health and well-being than their White counterparts. *Perceived discrimination* is defined as the unfair treatment of individuals that can be attributed to various identities (e.g., discrimination related to one's race, ethnicity, skin tone, ability status, sexual identity, gender identity, citizenship status, age, size; Harrell, 2000). Perceived racial and ethnic discrimination occurs when individuals directly or vicariously experience or perceive unfair treatment related to one's racial or ethnic identity. Experiences of perceived racial and ethnic discrimination for people of color occur at the interpersonal level through direct and observed experiences of verbal, nonverbal, and paraverbal behaviors (Harrell, 2000). According to Harrell (2000), perceived racial discrimination is a contributing factor toward experiences of racism-related stress for people of color; however, the terms racism and perceived racial discrimination are seemingly used interchangeably to describe how people of color experience differential treatment based on race within the literature. As such, the terms racism-related stress and race-related stress are both used by authors to describe the outcomes of experiencing racism. The term used by authors will be reported here but when discussing this study the terms *racism* and *racism-related stress* will be used.

Perceived racial discrimination and racism-related stress are associated with adverse mental and physiological health outcomes for marginalized racial and ethnic groups (Alvarez et al., 2016; Chou et al., 2012; Pieterse et al., 2012; Williams & Mohammed, 2009, 2013), including symptoms of anxiety, depression, and stress (Lewis et al., 2015; Mouzon et al., 2017). Further, scholars note that research on intervention efficacy for people of color is lacking (DeLuca et al., 2018). As the effects of racism pervasively and disproportionately affect the psychological and physical health of people of color compared to non-Hispanic White individuals (Williams & Cooper, 2019), coping strategies to mitigate their impact are warranted. It is imperative to examine, understand, and challenge the systemic, institutional factors that disproportionately impact people of color; and, it is important to learn more about adaptive strategies to respond to racism (Lewis et al., 2015; Martinez et al., 2022).

Mindfulness may be helpful in mitigating the effects of racism. Mindfulness has been rooted in religious, secular, and spiritual traditions among people of color and known to have connections with numerous multicultural traditions and religions (Kabat-Zinn, 1982, 2011; Lindahl et al., 2017; Rahula, 1974; Thupten, 2019; Trousselard et al., 2014). Scientific literature on mindfulness is broad in scope and has been expressed as an "umbrella term" in research that encompasses various ways to pay attention, increase awareness, and practice kindness and compassion (Hangartner, 2013; Kabat-Zinn, 2013; Rahula, 1959; Tirch, 2010). Within the literature, mindfulness has been conceptualized as both a *state* (Frewen et al., 2011; Grund et al., 2021; Lau et al., 2006; Friese & Hofmann, 2016), in which a characteristic may occur during a certain time or event, as well as a *trait*, in which a characteristic may be more enduring or stable over time and across different contexts (Baer et al., 2006; Karl et al., 2021; Medvedev et al. 2017; Noguchi, 2017; Roeser & Eccles, 2015; Truong et al., 2020; Warren et al., 2023).

Research demonstrates that participation in mindfulness-based interventions that increase trait mindfulness improve psychological benefits (Carmody et al., 2008; Kiken et al., 2015; Shahar, et al., 2010). Meta-analytic data of 148 studies suggested trait mindfulness has been associated with propensity toward lower anxiety, depression, and symptoms of psychological disorders (Carpenter et al., 2019). Moreover, a study by Kiken and colleagues (2015) demonstrated that participants with "greater rates of increase in state mindfulness increased more in trait mindfulness" and "decreased more in psychological distress," (p. 45).

Mindfulness has been shown to moderate the effects of anxiety, depression, and distress (Khoury et al., 2013; 2015). Although research on mindfulness and stress has increased in recent years (Goldberg, 2018), a dearth of research exists in the mindfulness literature around the relationships between racism, mindfulness, and psychological health outcomes among people of color (DeLuca et al., 2018; Eichel et al. 2021; Waldron et al., 2018). The literature indicates that mindfulness may be helpful in mitigating the effects of racism, but it is not known how or to what extent various components of mindfulness are associated with racism among people of color. Limited but emerging evidence has indicated associations between mindfulness and adverse health outcomes among people of color (Martinez et al., 2022; Shallcross & Spruill, 2018; Watson-Singleton et al., 2019). Understanding the relationships between racism and psychological outcomes through mindfulness may further knowledge in the stress and coping literature to support the psychological well-being of people of color impacted by racism and perceived racial and ethnic discrimination.

Statement of Purpose

In addition to challenging systemic oppression, it is important to understand what types of coping strategies support people of color to prevent and mitigate the adverse effects of racism.

Thus, the purpose of this quantitative study is to examine the relationships between racism and psychological outcomes (e.g., anxiety, depression, hope) for people of color, and to explore the relationships of racism to psychological outcomes for people who use mindfulness in daily life, including the practice of compassion.

Conceptual Framework

Within the stress and coping literature, research on the impact of life-related stressors originally focused on social and contextual factors linked with "chronic and acute stressors" that impacted mental health (Pearlin et al. 2005; Turner 2013; Vega & Rumbaut 1991). Notably, researchers such as Harrell (2000) expanded upon previous stress and coping theories (Breznitz & Goldberger, 1993; Lazarus & Folkman, 1984; Pearlin et al., 1981) and assessed racial stressors' unique impact on mental and physical health. Harrell's (2000) conceptualization of racism-related stress is rooted in stress and coping theory, which posits that individual adaptations can result from exposure to stress and mediating circumstances (Goldberger & Breznitz, 1993; Lazarus & Folkman, 1984; Pearlin et al., 1981). However, coping has also been argued to be a moderating variable, such that it can moderate or impact the level of the effects of a stressor that may endanger or protect psychological well-being (Holmbeck, 1997). Regarding moderation and mediation, "moderators are characteristics of the individual and/or his or her social network prior to the stressor," (p. 453), and "mediators *become* characteristics of the individual and/or his/her social network *in response to* the stressor," (Grant et al., 2003, p. 453). As mindfulness is a characteristic that individuals can experience prior to a stressor like perceived racial or ethnic discrimination, moderation will be explored as the hypothesized model in the current study. Comparatively, as mindfulness can also be utilized in response to a stressor, mediation will be tested as the alternative model.

According to Harrell's (2000) conceptualization of racism-related stress, racial stressors are uniquely experienced stressors that are "interconnected" with other social, cultural, structural, contextual, and role-related stressors (Harrell, 2000). This conceptualization suggests that racism-related stress contributes toward compounding effects of stress among people of color, experiencing racism-related stress in addition to other life-related stressors (Harrell, 2000). Harrell (2000) highlights how further exploration of racism-related stress and other *antecedent* variables is critical to understand the processes of racism-related stress and psychological well-being. The study of intervening variables, such as mindfulness to counter the effects of the racism, is needed (Alvarez et al., 2016)

Research Questions and Hypotheses

With Harrell's (2000) conceptualization of racism-related stress as a framework, the following study will attempt to address the following research questions and hypotheses:

RQ1: Is the relationship of recent racism experiences to negative psychological outcomes (e.g., anxiety, depression, stress) moderated by mindfulness?

$H1_0$: Mindfulness will affect the relationship between recent racism experiences and negative psychological outcomes such that the relationship between recent racism experiences and negative psychological outcomes will be stronger and negative for those with lower levels of mindfulness.

RQ2: Is the relationship of recent racism experiences to positive psychological outcomes (e.g., hope) moderated by mindfulness?

$H2_0$: Mindfulness will affect the relationship between recent racism experiences and positive psychological outcomes such that the relationship between recent racism

experiences and positive psychological outcomes will be stronger and positive for those with higher levels of mindfulness.

Significance of the Study

As indicated by Harrell's (2000) conceptualization of racism-related stress, it is necessary to study the psychological and physiological effects of racism and protective factors. Examining the associations between perceived racial and ethnic discrimination, mindfulness, and mental health outcomes may offer insight regarding coping strategies that people of color may utilize in order to alleviate immediate effects of racism. The use of coping strategies like mindfulness are not suggested as a sole strategy to dismantle systemic oppression; but rather may be used as one way to support the health of people of color experiencing racist events. Learning about the utility of mindfulness, as well as various components of mindfulness (e.g., observation, awareness, self-compassion, compassion for others), may offer insight into prevention-based strategies to offset the adverse effects of racism.

Further, this study will contribute to the research on perceived racial and ethnic discrimination, racism, and mindfulness among people of color. Although growing, a lack of research exists in mindfulness literature with a focus on people of color compared to studies that have samples of majority-White populations (DeLuca et al., 2018; Eichel et al. 2021; Waldron et al., 2018). As mindfulness literature has demonstrated mixed but encouraging evidence in psychological and physical distress outcome reduction (de Abreu Costa et al., 2019; González et al., 2019; Parsons et al., 2017; Strauss et al., 2014), it is important to understand and further examine the unique ways in which mindfulness may or may not be beneficial among people of color experiencing racism. Moreover, it is important to understand the negative effects of perceived racial and ethnic discrimination toward people of color; however, it is also paramount

to explore whether mindfulness may contribute to psychological health and well-being. As such, examination of hope as it relates to perceived racial and ethnic discrimination and mindfulness among people of color in the current study will be a unique contribution to the literature.

Finally, results of this study will provide new information in the stress and coping literature regarding the use of mindfulness with an emphasis of compassion as a factor in the relationship between racism and psychological health outcomes. As people of color experience negative health effects of racism, additional understanding of coping strategies and practices are warranted. Despite mindfulness and compassion sharing similar historical origins (Rahula, 1959), limited research exists examining the relationships between mindfulness and compassion (including self-compassion and compassion of others) as they are defined in psychological literature. Whereas mindfulness is often defined as paying attention through observation (Kabat-Zinn, 2013; Baer et al., 2006), compassion is often described in the literature as a component of mindfulness, including loving-kindness meditation, that includes the recognition of universal suffering and empathy towards the self or others experiencing distress (Strauss et al., 2016). Learning about the relationship between mindfulness and compassion may offer insight into sub-components of mindfulness and how the constructs are related among people of color.

Acknowledgment of Positionality

One decolonization effort in research is to shift from the notion of being expert of knowledge to that of a facilitator of knowledge. The primary researcher of this study is a White, cisgender woman studying race and racism as it affects people of color, as well as mindfulness, which is a spiritual practice rooted in Buddhist philosophy (Rahula, 1959; 1974; Thupten, 2019). Although the focus of the current study explores the relationships between experiences of racism, mindfulness, and psychological health, the author acknowledges that she does not speak on

behalf of experts and individuals whose lived experiences align with these areas of focus. Rather, the author intends to center participants' experiences through this research and welcomes additional perspectives in future iterations and collaborations of this research.

CHAPTER 2

LITERATURE REVIEW

This chapter begins with the presentation of a theoretical framework and then provides a literature review on the scholarship on racism, racism-related stress, and psychological health outcomes (depression symptoms, anxiety symptoms). Notably, within the racism literature, depression and anxiety symptomatology are sometimes studied on their own or in conjunction with the other; therefore, the research will be presented as portrayed in the literature. Further, this literature review will synthesize the research on mindfulness in psychology, as well as research on mindfulness related to negative psychological health outcomes (e.g., depression symptoms, anxiety symptoms) and positive psychological health outcomes (e.g., self-compassion, compassion of others). Finally, this chapter will conclude with a discussion of gaps in the literature and need for the current study.

Theoretical Framework

Racism is an everyday experience that shapes the experiences of all people (Harrell, 2000; Lavalley & Johnson, 2020; Simpson & Yinger, 1985). Racism operates at the individual level as well as throughout policy and culture within the United States. Individuals experience *differential racialization*, in which they are racialized by society in different ways based on historical, sociocultural context or needs (Delgado et al., 2012). Racism impacts individuals' and groups' well-being, including the ways one experiences and/or mitigates stress, including use of support resources and coping options (Clark et al., 1999; Harrell, 2000). Shelly Harrell's (2000) conceptualization of racism-related stress is an important framework to understand the psychological and physiological impacts of racism and racial oppression. According to Harrell (2000), the "unique person-environment transactions involving race" are important

considerations for people of color experiencing stressful life events (Harrell, 2000, p. 44). Harrell (2000) distinguishes the effects of racism as a unique factor contributing to one's "transactions" between the individual self and their external environment.

Harrell's (2000) conceptualization of racism-related stress portrays six distinct types of racism-related stressors: racism-related life events, vicarious racism experiences, daily racism microstressors, chronic-contextual stress, collective experiences of racism, and the transgenerational transmission of group traumas. Through these racism-related stressors, racism impacts well-being through physical, psychological, social, functional, and spiritual domains (Harrell, 2000). Various variables, or *antecedent conditions*, impact the intensity and ways in which one experiences racism-related stressors. For instance, an individual's internal and external characteristics can impact the effects of racism at the psychological, physical, and behavioral level (Harrell, 2000). Harrell (2000) further indicates that antecedent variables including one's acculturation status, cultural values, and worldview contribute toward one's ability to cope with racism-related stress. Members of the non-dominant racial group may experience compounded stress as they experience or perceive the possibility that one can encounter any of these racism-related life experiences (Harrell, 2000). Further, intersectionality of one's own unique identities, generic stressors, and contextual experiences of racism may compound, impact, or mitigate the effects of stress (Cook et al., 2018; Comas-Diaz & Greene, 1994; Harrell, 2000). Overall, this conceptualization underscores the importance of exploring racism-related stress as it relates to psychological well-being, and what antecedent variables contribute toward the "racism-related stress process," (Harrell, 2000, p. 48). As such, the current study will utilize Harrell's (2000) conceptual framework to explore the psychological effects of racism-related stress as it relates to psychological health outcomes (depressive symptoms,

anxiety symptoms, self-compassion, compassion of others) and exploration of mindfulness as an antecedent variable. The following section will review the literature regarding racism, racism-related stress, and these variables.

Racism

Substantial research has identified racism as a determinant of health inequalities for racialized groups (Phelan & Link, 2015; Priest & Williams, Williams, 1997). Although there have been increases in media attention to anti-Asian and Black violence over recent years, racial discrimination toward racial and ethnic populations have been embedded within the sociocultural, historical, and economic structures of American society (Delgado et al., 2012; Harrell, 2000). Thus, research has indicated a need to address racism-related disparities in mental health outcomes.

Individuals may experience racism overtly, covertly, intentionally, and unintentionally (Harrell, 2000; Jones, 1972). For instance, anti-Asian violence and xenophobia has increased over recent years in part due to the onset of the coronavirus-2019 (Covid-19), negatively impacting the mental health of Asians and Asian Americans in the United States (Gover et al., 2020; Huynh et al., 2022; Lantz & Wenger, 2023; McGarity-Palmer et al., 2023; Shang et al., 2021). Moreover, research demonstrates the impacts of racial discrimination at institutional and structural levels, including discrepancies among treatment in banking, commercial transactions, housing and housing policy, and within the workplace (Lavalley & Johnson, 2020; McMurtry et al., 2019). Such incidents are evidence of racism and exacerbate feelings of racism-related stress, which influence health outcomes.

Perceived racial and ethnic discrimination and health

Perceived discrimination has been demonstrated to be positively associated with various negative mental health outcomes among racially and ethnically marginalized groups (Alvarez et al., 2016), including anxiety symptoms, depression symptoms, psychological distress, and psychiatric disorders (Lewis et al., 2015; Mouzon et al., 2017). Early research on the effects of racial discrimination and mental health-outcomes focused on cross-sectional and self-report measures of African Americans within the United States (Brown et al. 2000; Krieger, 1999; Klonoff & Landrine, 1999; Williams et al., 2003). Subsequent meta-analyses and systematic reviews supported the associations between perceived racism and health (Chou et al., 2012; Pieterse et al., 2012; Williams & Mohammed, 2009, 2013).

Research demonstrated associations between perceived racial and ethnic discrimination and adverse mental health outcomes (Chou et al., 2012; Paradies et al., 2015). In a meta-analysis of 293 unique studies from 1983 through 2013, meta-analytic data suggested greater effects of racism on negative mental health outcomes than other health outcomes (e.g., physical health, general health, positive mental health; Paradies et al., 2015). Depression, self-esteem, psychological stress, distress, and anxiety were reported as the most frequently reported mental health outcomes of racism (Paradies et al., 2015). Paradies and colleagues (2015) also indicated several physical health outcomes of racism, including blood pressure, hypertension, overweight-related outcomes, heart conditions and heart-related illnesses, diabetes, and cholesterol.

In another meta-analysis of racial discrimination, health, and cultural outcomes, 285 studies published between 1998 and 2015 indicated significant correlations between racial discrimination and health overall (r = .16), as well as racial discrimination and mental health (r = .21, substance use (r = .16), cultural variables (r = .10) and physical health (r =.07; Carter et al., 2019). Notably, *race-related discrimination*, or racism experienced over the past year, was found

to be of greater significance than race-related discrimination over an individual's lifetime (r =.19 compared to .16; Carter et al., 2019). Stress appraisal also demonstrated a strong correlation with racial discrimination (r = .19) and was significantly higher than emotional distress (r = .14; Carter et al., 2019).

Race-related stress has been documented by numerous racial and ethnic groups, including African and Black Americans (Carter & Reynolds, 2011), Asians and Asian Americans, Indigenous women (Benoit et al., 2016), and Latine and Latinx populations (Lee & Ahn, 2012). Research also contends the need for more research on ethnic subgroups. Among a study of African American men and women, perceived racial discrimination was positively associated with suicide ideation (Walker et al., 2014). Moreover, in a sample of Black attorneys, cultural racism, a component of race-related stress, was associated with higher levels of perceived stress, depression, and anxiety symptoms (Cokley et al., 2022). In a study of Black and Latinx college students at a predominantly White institution, racial and ethnic discrimination were associated with stress, depressive symptoms, and anxiety symptoms (Hope et al., 2018). Research among individual racial groups was also found to demonstrate the negative impacts of race-related stress on anxiety, depression, and psychological distress among Asian Americans (Hwang & Goto, 2008). Racial microaggressions, or daily racism microstressors as indicated by Harrell (2000), have also been studied within the stress and coping literature and yielded significant impacts on mental health (Forrest-Bank & Jenson, 2015; Nadal et al., 2015; Sue et al., 2008). In a study of Asian, Latino/Hispanic, Black, and White college students, students of color reported experiencing higher levels of microaggressions than White participants, with Black participants reporting the highest levels of interpersonal microaggressions (Forrest-Bank & Jenson, 2015). Within a systematic review, analysis of 23 peer-reviewed articles identified associations between

racial microaggressions and discrimination with mental and physical health outcomes among Asians in the United States (Kim et al., 2023). Microinvalidations, a form of subtle microaggressions, were found to negatively impact Asian Americans' psychological well-being (Nadal et al., 2015).

Dimensions of racism-related stress

In addition to microaggressions, research has explored dimensions of racism-related stress, including perceived racial and ethnic discrimination of past events, and race-related vigilance. Perceived racial and ethnic discrimination, in which an individual directly experiences racism, has been demonstrated to negatively impact individuals' ability to cope or mitigate stress (Cano et al., 2023; Pieterse, 2012). Perceived racial and ethnic discrimination has been demonstrated to act as a moderator between psychological distress and negative coping mechanisms. For example, in a study of perceived racial and ethnic discrimination and mental health and behaviors of veterans regarding the murder of George Floyd in May 2020, perceived discrimination was found to moderate unhealthy alcohol use and psychological distress (Cano et al., 2023).

People of color may also experience race-related vigilance, or stress based on anticipation and perseveration of racial-related discrimination (LaVeist et al., 2014). Race-related vigilance significantly contributes to psychological distress indicators such as depression (LaVeist et al., 2014; Watson-Singleton et al., 2019) and physiological distress indicators (Sawyer et al., 2012), including positive associations with cardiovascular disease risk (Clark et al., 2006), heart-rate variability (Utsey & Hook, 2007) and sleep difficulties (Hicken et al., 2013). A systematic review identified 28 studies that analyzed the associations between racial discrimination and symptoms of trauma (Kirkinis et al., 2021). Within the meta-analysis, moderate to strong

positive associations were found between racial discrimination and trauma among participants, with strong correlations between veterans who experienced both combat-related trauma and race-related trauma, and moderate correlations between racial discrimination and symptoms of posttraumatic stress disorder (PTSD; Kirkinis et al., 2021). Further, Kirkinis and colleagues (2021) indicate a need for more research on the effects of race-related stress on people of color.

In a study of rumination, anxiety-sensitivity, race-related stress, and sleep, rumination was found to act as a main effect and as a moderator of race-related stress and sleep outcomes (sleep duration, sleep quality, global sleep quality; Otto et al., 2022). Vicarious racism has also been associated with increased symptoms of anxiety and depression among Asian and Black Americans (Chae et al., 2021). Through qualitative research, participants have cited historical mistrust through encounters of racism-related life events which has decreased participants' willingness to trust medical institutions or disclose information regarding one's mental health (Williams et al., 2013).

More research is warranted when taking intersectionality into consideration with racism-related stress. In a meta-analysis of perceived discrimination and psychological well-being, individuals in targeted groups (e.g., racism, sexism, heterosexism, mental illness, physical illness/disability, HIV positive, weight) perceived greater discrimination than individuals in advantaged groups (Schmitt et al., 2014). Although racism was perceived as a weaker main effect compared to other social stigmas (e.g., discrimination based on sexual orientation, mental illness, physical disability, HIV+ status, weight), in the meta-analysis, ingroup racial status significantly moderated self-esteem and psychological distress (B -.13; B = -.25; Schmitt et al., 2014). Moreover, a systematic review of National Institute of Mental Health-funded studies yielded 615 articles that indicated the impacts of racial and ethnic disparities and mental health,

including the associations between mental health outcomes and the effects of racial discrimination (Cook et al., 2018). Cook and colleagues (2018) highlighted that various types of race-related discrimination were associated with different types of symptomatology, as well as various means to cope with race-related stress, such as tobacco use, alcohol use, illicit drug use, eating a diet of high sugar and fat (Mezuk et al., 2013). Further, distinctions were found within the research between perceived racial discrimination, symptomatology, and gender (Greer et al., 2009; Smith-Bynum et al., 2014). Among youth of color, a systematic review of 29 studies yielded associations between race-related stress and trauma (RST) and emotion dysregulation (Roach et al., 2023). Emotion dysregulation was identified to mediate associations between RST and health outcomes, such that RST was associated with increased emotional dysregulation, negative health outcomes (e.g., anger/hostility, outward anger expression, trait anger, trauma symptoms, rumination), and negative well-being (e.g., anxiety, depressive symptoms, internalizing/externalizing behaviors, rule-breaking behavior, smoking, somatic symptoms, and substance use; Roach et al., 2023).

Racism-related stress and depression

Within the literature, associations of race-related stress and depressive symptoms have been demonstrated for African Americans racial groups (Hill & Hoggard, 2018; Hunter et al., 2017; Obenauf et al., 2022). Among a sample of Black American adults, race-related stress predicted higher depressive symptoms, higher PTSD symptoms, and lower subjective social status, or one's view of their place in societal context (Galvan et al., 2022; Obenauf et al., 2022). Cultural race-related stress was also found to have an indirect association on depression symptoms through subjective social status (Obenauf et al., 2022). Among a sample of 55-and-older African American and Caribbean Black adults perceived discrimination was associated

with an increase in depressive symptoms and psychological distress (Mouzon et al., 2017). Literature has also indicated associations between depression symptoms and chronic-contextual stress. In a longitudinal study of racial discrimination and depressive symptoms, associations were identified between racial discrimination and depressive symptoms in African Americans (Watson-Singleton et al., 2021). Notably, both perseverative cognition, a construct that prolongs "active and persistent cognitive images of previously experienced stressors" (Watson-Singleton et al., 2021, p. 28) and engagement in the Black Lives Matter movement moderated the associations between racial discrimination and depressive symptoms (Watson-Singleton et al., 2021). Research has additionally demonstrated associations between race-related stress, depression, and eating pathology (Hoggard et al., 2023; Salami et al., 2019), as well as parenting stress (Condon et al., 2022; Holloway & Varner, 2021).

Racism-related stress and anxiety

Significant associations have been found between racism and anxiety symptoms in African and Black Americans (Dawson-Andoh, & BeLue, 2011; Hoggard et al., 2023; Lee et al., 2014; MacNear & Hunter, 2023; Mekawi et al., 2021; Sosoo et al., 2020; Utsey & Payne, 2000). Within the literature, anxiety symptoms have been attributed to various racism-related stressors. For instance, internalized racism was found to moderate the associations between racial discrimination and distress due to anxiety symptoms (Sosoo et al., 2020). In a study of college-aged Black American women, racial discrimination was significantly associated with anxious arousal and low positive affect (Mekawi et al., 2021). Moreover, in a study of individual racism and anxiety symptoms among a sample of African Americans, public regard was significantly associated with symptoms of anxiety (Hoggard et al., 2023). Greater individual racism was also associated with institutional and cultural racism. In this same study, greater associations between

individual racism and anxiety symptoms were also exhibited by study participants who experienced adverse coping strategies, such as moderate emotional eating (Hoggard et al., 2023). In another study among Black American college students, institutional race-related stress was found to be positively associated with symptoms of anxious arousal (MacNear & Hunter, 2023). This study's findings indicated that Black American college students who reported high levels of race-related stress and anxious arousal also indicated low levels of public regard. Despite these findings, students' sense of belonging appeared to act as a protective factor toward the impacts of race-related stress on anxious arousal (MacNear & Hunter, 2023).

Racism and hope

In a study of hopefulness, racial and ethnic discrimination, and allostatic load, findings indicated significant associations between hopefulness and allostatic load (Mitchell et al., 2020). Results demonstrated that greater hopefulness was associated with decreased allostatic load among White participants, and that it varied for Black participants based on the type of discrimination they experienced. For instance, Black participants who identified experiencing discrimination at least one time in their lifetime indicated an inverse association between hopefulness and allostatic load. Conversely, Black participants who did not report experiencing discrimination indicated a positive association between hopefulness and allostatic load. Greater hopefulness was not associated with lower allostatic load among Hispanic participants (Mitchell et al., 2020). Mitchell and colleagues (2020) underscore the lack of research between hope and race-related stress and suggest further research is needed. Comparatively, hope was found to positively moderate perceived racial discrimination and stress in a study of first-year U.S. Black college students and was negatively associated with perceived stress and academic integration (McDermott et al., 2020). From these findings, McDermott and colleagues (2020) underscore the

complexity around perceived racial discrimination and hope and hypothesize that stress could be a "natural and adaptive reaction to meeting systemic barriers to one's personal or professional goals for Black students with high levels of hope," (p. 642). More research around the associations between racism and hope is warranted, including additional strategies to reduce psychological stress.

Racism and coping strategies

In addition to microaggressions, research has explored the ways in which people of color have coped with racism (Watson-Singleton et al., 2019). Various adaptive, maladaptive, and promotive strategies have been implemented by nondominant racial and ethnic groups to cope with the effects of racism (Coleman et al., 2013; Hill & Hoggard, 2018). Research of different coping strategies to racism is associated with various health outcomes; however, it is important to not pathologize the responses to such race-related experiences (Hill & Hoggard, 2018).

Previous research explores the use of avoidant coping strategies to attempt to alleviate the effects of race-related stress (Greer, 2011; Krieger, 1990; Shorter-Gooden, 2004). For example, in a study of race-related stress coping strategies among African American women, participants indicated they used strategies of cognitive-emotional debriefing, or the action of processing cognitive or emotional stresses with others (Greer, 2011). Cognitive-emotional debriefing has been described as a passive, or avoidant, coping strategy (Greer, 2011). Notably, findings from this study suggested that the use of ritual-centered coping strategies (e.g., lighting a candle, burning incense, belief in religious or spiritual symbols) increased participants' anxiety symptoms and internal sensitivity that were associated with race-related stress (Greer, 2011). Although avoidant coping strategies have been used to mitigate the effects of race-related stress, research suggests that they have been associated with low life-satisfaction, low self-esteem, and

general psychological distress (Thomas et al., 2008; Utsey, Ponterotto, et al., 2000), suggesting a need for alternative stress and coping strategies.

Mood and emotional states of people of color may also be impacted by racism. Emotion regulation difficulties have been associated with greater anxiety symptoms (r = .35) and worse perceived health (r = .17) among African Americans (Carter & Walker, 2014). Notably, less access to emotion regulation strategies were also associated with increased anxiety symptoms and worse perceived health (Carter & Walker, 2014). Positive affect has also been examined in relation to coping with race-related stress (Mekawi et al., 2022; Ong & Edwards, 2008). In one study, positive affect was found to moderate race-related stress across African American, Asian American, and Latino racial groups (Ong & Edwards, 2008). In a study of anxiety symptomatology, race-related stress, religious involvement, and optimism among African American young adults, optimism was found to moderate individual race-related stress and cognitive anxiety (Lee et al., 2014). Additionally, religious involvement was found to enhance the protective role of optimism between both individual and cultural race-related stress and cognitive anxiety symptoms (Lee et al., 2014). In addition to the previously stated strategies, a growing area of research includes the use of mindfulness as a coping strategy to combat the effects of racism. The subsequent sections will review the mindfulness literature and the use of mindfulness with psychological health outcomes, as well as the research on mindfulness and racism.

Mindfulness

Mindfulness may be helpful to mitigate the effects of racism. In contemporary Western literature, mindfulness is frequently used as an "umbrella term" (Kabat-Zinn, 2013) to describe practices in which people pay attention through focus (Thupten, 2019) and meditation (Rahula,

1974). In the psychological scientific literature, mindfulness has been defined in a variety of strategies, applications, and approaches that do not always distinguish differences between mindfulness, meditation, and spiritual practices (Lindahl et al., 2017; Thupten, 2019).

Compassion has roots in mindfulness and Eastern Buddhist philosophy (Hangartner, 2013; Rahula, 1959; Tirch, 2010). In a review of measures and definitions of compassion, findings indicate that compassion is described to include both Buddhist and Western conceptualizations, including the 1) recognition of suffering, 2) understanding the universality of suffering, 3) feelings of sympathy, empathy, or concern for people who are suffering, 4) tolerance of the distress associated with the experience of another individual suffering, and 5) the motivation to act or alleviate suffering (Strauss et al., 2016). This five-factor structure as proposed by Strauss and colleagues (2016) was substantiated through an empirical study consisting of a systematic consultation with experts, exploratory factor analysis, and confirmatory factor analysis (Gu et al., 2017); however, Gu and colleagues (2017) recommended further research was warranted to explore the "tolerance" factor of compassion. Self-compassion and compassion for others is often cited in the psychological literature as distinct terms; however, the concept of compassion is not separated or distinct within Buddhist teachings (Neff, 2003b). In a systematic review of compassion-based interventions, 21 studies conducted across several different countries between 2005 and 2017 demonstrated moderate effect sizes for compassion, self-compassion, mindfulness, and well-being between pre- and post-intervention, as well as decreased symptoms of anxiety, depression, and psychological distress (Kirby et al., 2017). Both concepts of self-compassion and compassion of others within the literature will be explored in this review.

Although mindfulness has been largely adapted as a psychological intervention

(Goldberg, 2018), mindfulness as a spiritual and conceptual philosophy and practice precedes its therapeutic application. Mindfulness is rooted in religious, secular, and spiritual traditions in literature derived from Buddhist contemplative practices (Kabat-Zinn, 1982, 2011; Lindahl et al., 2017; Rahula, 1974; Thupten, 2019), and has also been known to have connections to Christianity, Judaism, and Islam (Trousselard et al., 2014). Meditation was first introduced as a psychotherapeutic function in Western science in 1931 by Franz Alexander for clients with chronic pain who did not respond to allopathic treatment (Surmitis et al., 2018). Mindfulness in psychology and as a therapeutic application grew in popularity in Western science (Goldberg, 2018) and various evidence-based mindfulness approaches, or mindfulness-based interventions (MBIs) were researched and implemented to mitigate and alleviate the impacts of addiction (Chiesa & Serretti, 2014), chronic pain (Chiesa & Serretti, 2011a), mood disorders (González-Valero et al., 2019; Hofman et al., 2010; Straus et al., 2014), psychiatric disorders (Chiesa & Serretti, 2011b), stress (Goyal et al., 2014), and improve emotion regulation (Chambers et al., 2009) and cognitive abilities (Chiesa et al., 2011). A prominent MBI in the mindfulness literature includes *Mindfulness-Based Stress Reduction* (MBSR). Participants engaged in a MBSR program learn secular mindfulness strategies to reduce psychological and physical stress throughout an 8-week training program (Grossman et al, 2004; Kabat-Zinn, 2003). In *mindfulness-based cognitive therapy* (MBCT), another evidence-based approach, participants learn mindfulness strategies to deter reoccurrence of mental health disorders such as depression and anxiety (Segal et al., 2018; Williams et al., 2008). Evidence-based treatments including dialectical behavioral therapy (Lynch et al., 2006) and acceptance and commitment therapy (Harris, 2006) also incorporate mindfulness strategies to promote client awareness and change.

Mindfulness and evidence-based treatment

Emerging studies of mindfulness and mindfulness-based interventions offer mixed but encouraging evidence of reduction in psychological and physical distress outcomes (de Abreu Costa et al., 2019; González et al., 2019; Parsons et al., 2017; Strauss et al., 2014). In a systematic review of MBSR and MBCT interventions and disorders related to anxiety and stress, 10 studies indicated that mindfulness interventions were significantly better at improving internalizing symptoms of anxiety and depression than control groups (de Abreu Costa et al., 2019). Although researchers recommended caution of publication bias among these findings, the use of MBIs were found to work as well at treatment of distress-related symptoms of anxiety and depression as cognitive behavioral therapy, but not as well at treating fear-related symptoms as CBT (de Abreu Costa et al., 2019). A systematic review of MBSR and MBCT treatments yielded 49 studies that incorporated at-home mindfulness practice for participants (Parsons et al., 2017). Results indicated a small association between practice and outcomes among clinical and participant groups (Parsons et al., 2017). Systematic analyses have also demonstrated MBSR as a moderately effective intervention for depression for youth ages 12 to 25 (Chi et al., 2018) and for older adults with depression (Li & Bressington, 2019); albeit, more research is warranted to determine the effect of MBSR for older adults with anxiety and stress.

In a meta-analysis and systematic review of mindfulness-based interventions as a stand-alone intervention, 18 studies were examined and indicated small to medium effect sizes in decreased symptoms of anxiety (hedges' $g = 0.39$) and depression (hedges' $g = 0.41$; Blanck et al., 2018). These findings were similar to a previous meta-analysis (Hoffman et al., 2010) that reviewed mindfulness-based therapy in clinical populations. Comparatively, medium to large effect sizes have been found for anxiety and depression symptoms in systematic reviews of manualized mindfulness-based interventions (Khoury et al., 2013; 2015). In another meta-

analysis, 12 studies on randomly controlled trials and people who met criteria for diagnosed anxiety or depressive disorder and a current episode found that MBIs significantly decreased symptom severity when compared with control conditions (Strauss et al., 2014). Although results from this systematic review found that MBIs were effective for depressive symptom severity, results indicated that they were less effective for anxiety symptom severity (Strauss et al., 2014). In a meta-analysis of mindfulness and somatization disorders, small to moderate effects were found for mindfulness-based therapies and depression, anxiety, and pain reduction associated with somatization disorders (Lakhan & Schofield, 2013).

MBIs have demonstrated decreased symptoms of anxiety depression among oncology patients (Chayadi et al., 2022; Oberoi et al. 2020), as well as cancer-related fatigue among oncology patients (Chayadi et al., 2022). Decreases in anxiety and cancer-related fatigue symptoms remained decreased for oncology patients at a three-month follow up (Chayadi et al., 2022). Meta-analyses have also suggested that MBSR is an effective intervention for youth with anxiety symptoms (Borquist-Conlon et al., 2017; Zhou et al., 2020), and found to be helpful and not carry out iatrogenic harm (Zoogman et al., 2015). Systematic reviews of the use of mindfulness during pregnancy articles indicated that mindfulness was associated with improved symptoms of anxiety, depression, and perceived stress during the perinatal period (Dhillon et al., 2017; Lever Taylor et al., 2016).

In addition to research on both anxiety and depressive symptoms, mindfulness literature has solely focused on the effects of depressive symptoms (Goldberg et al., 2018; Hilton et al., 2017). In a systematic review, large effect sizes were found for mindfulness meditation and depression (Hilton et al., 2017). Out of 38 RCTs, 12 reported significant decreases in symptoms of depression when compared with other interventions or control groups. Moderate and low

effect sizes were also found for mental-health quality of life and improved pain symptoms (Hilton et al., 2017). In a systematic review of 171 studies on MBIs for adults with psychiatric diagnoses published between 2000 and 2016, mindfulness-based interventions were found to be helpful when compared to no-treatment, minimal treatment, and specific and non-specific treatment conditions (Goldberg et al., 2018). Although MBIs were not found to differ in efficacy to EBTs, MBIs demonstrated significant effects on outcomes specifically related to anxiety, depression, pain, schizophrenia, and weight/eating related disorders (*ds* ranging from 0.45 to 0.89; Goldberg, 2018). MBIs were found to be equally effective as EBTs in treatment for depression (d = 0.04) and more effective than comparison groups (d = 0.35; Goldberg, 2018).

Mindfulness and hope

Meditation has been recommended as a strategy to generate hope and decrease stress (Snyder, 1994). In a study of mindfulness meditation and hope among a sample group of White participants, mindfulness was positively associated with increased hope and lower perceived stress (Munoz et al., 2018). Further, both mindfulness and hope were found to improve negative mood and anxiety symptoms among women with cancer recurrence (Thornton et al., 2014). Notably, the treatment used an intervention process of mindfulness, followed by hope and goal setting, which yielded significant decreases in negative affect and positive changes in positive affect and mental health quality of life (Thornton et al., 2014). Among an international study of the general population and university student participants in the United Kingdom, mindfulness was found to have significant positive outcomes on state hope and state gratitude compared to control groups (Strohmaier et al., 2021). In another study, mindfulness and hope among Chinese college students during the Covid-19 pandemic indicated hope and mindfulness were associated with internalizing and externalizing behaviors (e.g., conduct problems, hyperactivity, emotional

problems, peer problems) over time (Sun et al., 2022).

Mindfulness and racism

In addition to psychological effects, MBIs have demonstrated mixed but encouraging evidence regarding physiological effects, including reduction in hypertension and perceived stress among African American women (Johnson et al., 2018). Further, within a randomized pilot study of African American older adults, an adapted 8-week MBSR program provided a decrease in blood pressure compared to a social support control group (Palta et al., 2012). In one study, Park and colleagues (2014) African American men with chronic kidney disease were found to have reduced blood pressure and muscle sympathetic nerve activity after practicing a 14-minute mindfulness meditation compared to participation in a blood pressure education intervention. Within the literature, mindfulness has been demonstrated to moderate associations between racism and adverse mental health symptoms; however, less is known about the role of mindfulness and other coping strategies used to mitigate the effects of racism, such as compassion. Thus, the following section will review the literature around compassion, racism, and mindfulness.

In the context of stress and coping literature, mindfulness is an affect-based coping strategy that may mitigate the risks associated with racism. Meta-analyses and systematic reviews of mindfulness and racially marginalized populations have indicated that mindfulness has an effect on psychological and physiological outcomes (Cotter & Jones, 2020; Dawson et al., 2022; DeLuca et al., 2018). A systematic review of 24 diversity-focused mindfulness studies indicated small-to large effect sizes in RCTs and effect sizes of small to medium in single-sample studies (DeLuca et al., 2018). Within a systematic review of mindfulness and acceptance-based interventions for Black Americans, mindfulness was found to have a moderate effect size

on depressive symptoms (Dawson et al., 2022). A systematic review yielded 20 studies that focused on mindfulness-based programs in which the majority of participants identified as Hispanic and/or Latino (Cotter & Jones, 2020). Results indicated MBIs to have moderate to large effect sizes among Hispanic and Latino populations health outcomes, including anxiety, depression, stress, large effect sizes in physical outcomes, and small to medium effect sizes among social outcomes (Cotter & Jones, 2020). Mindfulness-based interventions were also found to have a positive effect on symptoms of anxiety for college students in a meta-analysis of eleven studies (Li et al., 2023).

In another study, Latino adolescents demonstrated decreased depressive symptoms and perceived stress, and increased self-compassion after participation in an MBSR for Teens intervention (Edwards et al., 2014). In a study of race-related stress and cognitive and somatic anxiety among African American young adults, significant main effects were found for institutional race-related stress and increased somatic anxiety and cognitive anxiety symptoms (Lee et al., 2015). Results further indicated that optimism served as a moderator between individual race-related stress and cognitive anxiety symptoms (Lee et al., 2015). Although the study by Lee and colleagues (2015) did not indicate significant findings between individual race-related stress and anxiety symptoms, prior research suggests that there may be positive associations (Banks et al., 2006; Ong et al., 2009). In a study of institutional race-related stress and anxious arousal, Black college students experienced higher levels of anxious arousal when perceiving higher levels of institutional race-related stress (MacNear & Hunter, 2023). Additional regression analysis demonstrated that these associations were statistically significant among Black college students who reported higher levels of public regard, or how Black individuals experienced their racial group being perceived by others (MacNear & Hunter, 2023).

Mindfulness has been shown to moderate the effects of depression in marginalized populations (Brown-Iannuzzi et al., 2014; Shallcross & Spruill, 2018; Watson-Singleton et al., 2019). Among a study of racial and ethnic minority participants (Hispanic, Black (not Hispanic), Asian (not Hispanic), Other (not Hispanic), trait mindfulness moderated the relationship between perceived racial and ethnic discrimination and symptoms of depression (Shallcross & Spruill, 2018). Study results indicated that participants with lower levels of mindfulness were associated with higher levels of perceived racial discrimination and depressive symptoms. In a study among African American adults ages 18 to 53, depressive symptoms were negatively associated with mindfulness ($r = -.52$, $p < .001$), and mindfulness was inversely associated with participants' experiences of past discrimination ($r = -.14$, $p = .05$)) and race-related vigilance ($r = -.22$, $p < .001$; Watson-Singleton et al., 2019). Interaction effects were not significant in predicting depressive symptoms; however, mindfulness was found to moderate the association between race-related stress and symptoms of depression, and increased levels of mindfulness were significantly associated with lower symptoms of depression (Watson-Singleton et al., 2019).

Mindfulness and compassion

More research is warranted in understanding the effects of mindfulness and compassion. Substantial research has been conducted on evidence-based mindfulness interventions, and growing research is evaluating mindfulness-based programs that specifically focus on self-compassion (Bergen-Cico & Cheon, 2014; Evans et al. 2018; Golden et al., 2021; Kuyken et al., 2010). In a systematic review and meta-analysis of mindfulness-based programs that address self-compassion among non-clinical samples, 26 studies published between 2005 and 2020 indicated a medium effect size of change in self-compassion between pre- and post-intervention (Golden et al., 2021). Results also indicated the lack of available data as a limitation of this meta-

analysis, and noted more research was warranted to examine the relationship between self-compassion and anxiety and depression (Golden et al., 2021). In a systematic review and meta-analysis of 59 studies on loving-kindness and compassion meditation and anxiety symptoms, studies that combined mindfulness meditation and loving-kindness meditation were found to yield the largest effect sizes compared to meditations that focused on only mindfulness or loving-kindness (Zheng et al., 2023). Positive associations were found between self-compassion, mindfulness and emotional reappraisal among participants who participated in a compassion training program (Roca et al., 2020).

Self-compassion

Similar to mindfulness, self-compassion has been defined in various ways and applications within the scientific literature. One definition of self-compassion within Western psychology, popularized by Neff (2003b), draws upon Buddhist teachings of compassion, with self-compassion described to include three main components of a) common humanity, b) kindness, and c) mindfulness (Neff, 2003a; 2003b). Notably, Neff (2003b) indicates that mindfulness is a key element of self-compassion because it is necessary to draw awareness to one's current emotional, cognitive, and experiential state. If one becomes "over-identified" with thoughts and feelings, then it can be more difficult to interpret a situation with objectivity (Neff, 2003b). Thus, utilizing mindfulness, in which one acknowledges one's feelings without judgment, allows an individual the "mental space" to cultivate kindness and empathy towards oneself and others (Neff, 2003b, p. 224). It is noted that practicing self-compassion does not negate negative emotions, but rather acknowledges all feelings that one may experience.

Although interest in self-compassion as an intervention is growing in Western psychology, more multicultural research is needed to understand its efficacy, how it is defined,

and how it is practiced and applied by individuals with multicultural identities and backgrounds. Within a Buddhist historical context from primary textual sources including the *Kālāma-sutta* from the fifth to third century BCE, *compassion* is defined as a meditative practice that removes "ill will as a precondition for being able to engage in the boundless meditative radiation of compassion" that converges "on the need to be unconfused and to establish the qualities of mindfulness and clear or right knowing," (Anālayo & Dhammadinnā, 2021, p. 1351; Anālayo, 2020). In this context, compassion extends beyond the self and radiates in all directions (Anālayo & Dhammadinnā, 2021). This definition varies from that often studied in Western psychology, which conveys compassion and self-compassion as a strategy that is directed toward the self or toward others.

Greater self-compassion has been associated with lower levels of anxiety and depression (Neff, 2003a; Neff et al., 2007; MacBeth & Gumley, 2012) as well as physiological processes linked to stress indicators (e.g., lower cortisol levels and increased heart-rate variability; Rockliff et al., 2008). Self-compassion interventions include Mindful-Self Compassion, which demonstrated significant increases in mindfulness, self-compassion, and well-being (Neff & Germer, 2013), and compassion-focused therapy, which incorporates a group-therapy format for clinical populations to practice skills of self-compassion (Gilbert, 2014). Scholars have also explored self-compassion as a moderating variable between maladaptive perfectionism and depression symptoms among adults and adolescents (Ferrari et al., 2018). In comparison, a meta-analysis of 27 randomized control treatment studies on self-compassion indicated small effect sizes for life satisfaction, negative affect, and positive affect; moderate effect sizes for anxiety, depression, mindfulness, self-compassion scores, and self-criticism; and large effect sizes for eating behavior and rumination (Ferrari et al., 2019). Another systematic review of self-

compassion effectiveness among university students yielded 12 studies with small effect sizes of addressing positive (g = 0.14) and negative affect (g = 0.28; Póka et al., 2023).

Self-compassion and racism

Studies have also demonstrated that self-compassion may be a helpful buffer against racism (Browne et al., 2022; Liu et al., 2020; Watson-Singleton et al., 2022; Zhang et al., 2021). In a study of self-compassion among anti-Asian discrimination, daily self-compassion was found to serve as a protective buffer for Asian Americans who experienced discrimination related to the Covid-19 pandemic (Zhang et al., 2021). Self-compassion has also been shown to moderate the relationship between public stigma and help-seeking attitudes among Asian American college students (Mateer et al., 2023), as well as the relationship between psychological distress and body appreciation/eating psychopathology among diverse racial groups (Pullmer et al., 2021). In a study of racial discrimination, self-compassion, and mental health among BIPOC college students, self-judgment, the opposite of self-kindness (Neff, 2003b), was found to moderate the relationships between racial discrimination and somatic and anxiety symptoms, such that participants who expressed higher levels of self-judgment experienced greater somatic and anxiety symptoms (Browne et al., 2022). In a study of self-compassion and self-coldness among African American college students, frequency and appraisal were not significantly related to dimensions of self-compassion; however, self-coldness, a recently explored construct composed of self-judgment, over-identification, and isolation (Brenner et al., 2017), was found to be associated with psychological distress (Watson-Singleton et al., 2022).

Compassion for others

Research regarding compassion for others is increasing, including how it is conceptualized in the literature. Compassion for others has also been applied in a similar way to

Neff's (2003) self-compassion model to include a) *common humanity*, the awareness that all people experience suffering; b) *kindness*, or understanding of those who are suffering, and c) *mindfulness*, the ability to notice the suffering of others with openness (Pommier, 2010). In a review of 94 RCTs on compassion for others and self-compassion, findings indicated fewer studies on compassion for others than studies on self-compassion or both self- and compassion for others (Quaglia et al., 2020). Notably, Quaglia and colleagues (2020) highlighted a moderate emphasis of studies that focused on training in compassion for others compared to training in self-compassion and observed a "dualistic" approach to training in which compassion for others and self-compassion were treated as two individual areas of focus (Quaglia et al., 2020).

In a study of compassion among first responders, increased levels of self-compassion significantly predicted lower levels of PTSD symptoms, psychological distress, and secondary traumatic stress. Self-compassion was associated with greater resilience, greater personal accomplishment, greater life satisfaction, and less emotional exhaustion. Further, greater compassionate love for others was significantly associated with less depersonalization, greater compassion satisfaction, and greater personal accomplishment (McDonald et al., 2020). In addition to psychological effects, previous research has indicated positive physiological effects of compassion for others, including decreased blood pressure reactivity and cortisol reactivity, as well as increased high-frequency heart rate variability (Cosley et al. 2010).

Compassion for others and racism

Less is known about the relationships between compassion for others and racism in the psychological literature. One area of study includes that of compassionate meditation, in which empathy and caring is cultivated towards those who are suffering (Dalai Lama, 2001). Similarly, loving-kindness meditation is a meditation practice in which practitioners send well wishes and

freedom from suffering to those they know, do not know, and dislike (Dalai Lama, 2001). In a study of a peer-led compassionate meditation intervention and race-related stress, Asian heritage college students indicated significant decreases in anxiety, depression, psychological distress, PTSD, and increases in self-compassion (Hwang & Chan, 2019). In another study of racial discrimination, self-compassion, and social connectedness among Asian American college students, both mindfulness and self-kindness in conjunction with social connectedness were found to significantly moderate the relationship between racial discrimination and depressive symptoms (Liu et al., 2020). Notably, social connectedness and the *common humanity* component of self-compassion were not found to moderate racial discrimination and depression symptoms (Liu et al. 2020); therefore, additional research is warranted to expand on the relationships between compassion and racism.

The Current Study

The effects of racism are pervasive and cause adverse health effects for people of color. As people of color experience various dimensions of racism, coping strategies are employed to alleviate the effects of racism (Alvarez et al., 2016; Coleman et al., 2013; Greer, 2011; Hill & Hoggard, 2018; Krieger, 1990; Watson-Singleton et al., 2019). Notably, it is not implied that the practice of mindfulness is a strategy that eliminates racism. Racism is a systemic, institutionalized force that permeates throughout culture, policy, and society, and it is vital to continue working toward dismantling systemically oppressive systems that cause and uphold racism. Rather, mindfulness may be one coping strategy that people of color may use to mitigate and alleviate the negative psychological effects of racism. Further, the current literature around compassion and self-compassion is often defined in a way that may be interpreted as a "modern" interpretation of Buddhism or one that does not align with historical Buddhist texts (Anālayo &

Dhammadinnā, 2021). Thus, exploration of multicultural considerations when exploring mindfulness and compassion (i.e., exploring mindfulness factors alongside self-compassion rather than as distinct variables) may offer insight into how mindfulness can be practiced and applied.

There is sufficient evidence for the benefits of mindfulness to support mental health and psychological well-being. Albeit limited, research also suggests that mindfulness may mitigate the adverse psychological outcomes associated with racism. Specifically, mindfulness has been shown to moderate the effects of race-related stress and psychological and physiological outcomes (Shallcross & Spruill, 2018). Evidence suggests that mindfulness may be a helpful coping strategy for racism; however, more research is needed to explore the relationships between mindfulness and psychological health outcomes among people of various racial and ethnic backgrounds. As people of color have experienced negative health outcomes as a direct result of racism, more research is needed to explore mindfulness as a possible coping strategy for racism and symptoms of anxiety and depression.

Furthermore, emergent research has indicated self-compassion and compassion of others as a means to buffer against the effects of race-related stress (Hwang & Chan, 2019; Liu et al., 2020). Although research posits that mindfulness is a component of compassion (Neff, 2003a, Neff 2003b), less is known about the dimensions of compassion and the multicultural considerations of compassion and mindfulness (Anālayo & Dhammadinnā, 2021; Barnard & Curry, 2011). Scholars note that compassion may be a skill that can be trained and practiced (Ferrari et al., 2019); however, research is still exploring the various components of compassion, and self-compassion in particular (Anālayo & Dhammadinnā, 2021; Dreisoerner et al., 2021; López et al. 2015; Neff et al. 2018, 2019; Pfattheicher et al. 2017). As mindfulness has been

cited as a way in which compassion can be achieved (Gilbert & Choden, 2013; Golden et al., 2021), it may serve as an important factor in the relationship between stressors and compassion toward the self and others. Importantly, as compassion has been demonstrated to be helpful in decreasing the effects of racism (Munjee & MacPherson, 2023), furthering knowledge of the relationship between mindfulness and compassion may contribute toward understanding more about the racism-related stress process as denoted by Harrell (2000). Based on the findings from this literature review, research is warranted to explore how mindfulness relates to the psychological outcomes of racism. Thus, the current study explored the relationships between racism, mindfulness, and psychological outcomes of anxiety, depression, stress, and hope.

CHAPTER 3

METHODOLOGY

Participants

For the current study, adults who identified as racially or ethnically diverse within the United States were recruited online using the data source Prolific (Prolific, 2024) and completed a survey via Qualtrics (Qualtrics, 2024). Prolific is a widely used online participant recruitment platform for research (Douglas et al., 2023). Prolific participants have been found to better follow instructions, answer meaningfully, answer more honestly and work slowly to read all survey items compared to other online data sources (e.g., Amazon Mechanical Turk; Douglas et al., 2023; Peer et al., 2017). Research also demonstrated that Prolific participants were more likely to pass attention checks, have unique IP addresses and geolocations, and have lower disengagement compared to MTurk participants (Albert & Smilek 2023; Douglas et al., 2023). Prolific recruits diverse participants for research purposes and participants are paid based on task completion (Prolific, 2024). Researchers are also able to prescreen criteria to filter participants on Prolific (Prolific, 2024). Data responses of Prolific have been demonstrated as higher than other crowdsourcing platforms and comparable with data quality (e.g., Prolific; Peer et al., 2017).

Data from 294 individuals was used for the study. A summary of the demographic composition of the sample can be found on Table 1. Participant ages ranged from 18 to 71 years old, with a mean age of 37.91 (*SD* = 11.21, median = 36.00). The majority of participants self-identified as African American/Black, followed by, Asian/Asian American, Hispanic/Latine/x, Other or multi-racial, American Indian/Native American/Indigenous, Afro-Caribbean, Middle half of participants were women, followed by men, gender nonbinary individuals, and

individuals who preferred to self-describe their gender, were gender nonconforming or did not respond. Regarding sexual orientation, most participants reported as heterosexual, followed by bisexual, gay/lesbian, or preferred to self-describe.

Treatment of missing data. Three-hundred and thirty initial responses were collected. Twenty responses were removed due to duplicate IP addresses (n = 310, 6.10%). Two responses were removed due to incomplete data greater than ten percent (n = 308, 0.01%; Newman, 2014). Nine responses were removed because they did not meet survey criteria (e.g., completing the survey and identifying their race or ethnicity as White; n = 299, 2.72%). Finally, five responses were removed due to failure of attention checks. (n = 294, 1.52%). The complete dataset, consisting of 294 participants, were included in all analyses, and screened before conducting statistical analyses. It should be noted that 1.0% of participants did not self-report their age, 0.3% of participants did not self-report their gender, and 1.0% of participants did not fully complete item responses. Because this number of missing data was somewhat small (Wolf et al., 2012), maximum likelihood estimation was used (Farhangfar, et al., 2007). Doing so allowed the total sample size to remain the same (N = 294); however, a limitation of this process includes a possibility of decreased model performance.

Data Screening

Although data collection via Prolific provides research design flexibility and a diverse participant pool, limitations persist (Newman et al., 2021). According to Newman and colleagues (2021), several threats to validity can occur when using online platforms for data collection. These threats to validity include a) inattention, b) participant self-misrepresentation and sampling relevant participants, d) unethical incentives, and e) researcher procedural transparency (Newman et al., 2021).

Data were collected via a Qualtrics survey disseminated through Prolific. To address the impact of sampling relevant participants, specific pre-screen criteria were applied to filter Prolific participants (Prolific, 2024). To participate in the current study, participants consented to participate, were 18 years of age or older, resided within the United States, and identified as a member of one of the following groups: African American/Black, Afro-Caribbean, Afro-Latine/x, Arab American Asian/Asian American (e.g., Chinese American, Asian Indian), Hispanic/Latine/x, or American Indian/Native American. Data requested did not include any identifying information for individual participants. Information that may identify participants were excluded. When gathering data, Qualtrics includes respondents' IP addresses and location data (Qualtrics, 2024). This information was collected to ensure that participants are located within the United States; however, no specific data regarding location or IP address will be reported or included in the study. Any responses with missing data greater than ten percent of responses were excluded from the current study (Dong & Peng, 2013).

Consistent with the acknowledgments made by Martinez and colleagues (2022), the current author acknowledges the importance of researching the experiences of populations from various racial and ethnic groups. Subsequent research on this topic is encouraged to examine salient identities and roles of interest, including relationships among racial or ethnic populations, gender, and ability status. This study focused on people of color to deepen understanding of the shared experiences of racism and mindfulness, compassion, and psychological health outcomes.

Procedure

The study and consent procedures complied with American Psychological Association (APA) ethical standards in the treatment of participants. Upon approval from the Lehigh University Institutional Review Board, participants were recruited through Prolific. Participants

affirmed their consent after reading the consent form (see Appendix A). They then completed a Qualtrics survey that consisted of the measures in the subsequent section. The proposed survey took approximately 14 minutes to complete and contained responses to 18 items from the General Ethnic Discrimination Scale (Appendix B; Landrine et al., 2006), 39 items from the short form Five Facets Mindfulness Questionnaire (Appendix C; Baer et al., 2006), 12 items from the Self-Compassion Scale-Short Form (Appendix D; Raes et al., 2011), 21 items from the Depression, Anxiety, and Stress Scale (Appendix E; Norton, 2007), 12 items from the Hope Scale (also called "The Future Scale", see Appendix F; Snyder et al., 1991), 4 items from a demographic questionnaire (Appendix G), and four truthfulness/attention check questions (Appendix H). In addition to truthfulness/attention items, the majority of Likert scales in the survey had all of their scale points labeled (as opposed to only labeling the "end" points of the scale) to decrease participant inattention (Aguinas et al., 2020; Goodman et al., 2013; Hamby & Taylor, 2016).

As specified by Prolific, participants were paid in the form of U.S. dollars (Prolific, 2024). Prolific describes its payment principles as "ethical rewards" to pay its online workers with a minimum payment of the legal minimum hourly wage required by researchers (Prolific, 2024). By creating a structure of ethical pricing, Prolific payment for participants attempts to adequately compensate participants. As such, participants were compensated a rate of $2.20 per completed task to complete the survey, as is structured by Prolific (Prolific, 2024).

All data was stored on the primary researcher's private computer, which is password protected. The data file, which was on Lehigh University's Cloud (i.e., Google Drive), was also password protected. Two-factor authentication was used, and the data was stored on a secure

Lehigh drive. The data is only accessible to those approved by the principal investigator to access the data.

Measures

Perceived Racial and Ethnic Discrimination

The General Ethnic Discrimination Scale (GED; Landrine et al., 2006) is an 18-item measure created to provide a psychometrically valid measure of perceived ethnic discrimination for individuals who identify as American Indian and Alaska Native (Gonzales et al., 2015) and Asian, Black, Latino, and White (Landrine et al., 2006). Each item requests participants to respond three times to three factors or subscales, including recent discrimination (within the past year; 18 items), lifetime discrimination (18 items), and appraised discrimination (17 items; Landrine et al., 2006). Scores from the GED demonstrated high reliability (α = .94 to .95) and adequate construct and convergent validity. Previous meta-analytic evidence has demonstrated racism experienced over the past year to be of slightly greater significance on health outcomes than what occurs over an individual's lifetime (Carter et al., 2019); thus, the current study only used the recent discrimination subscale as an exogenous variable (Figure 1). The subscales in the GED are based on the Schedule of Racists Events measure of perceived ethnic discrimination for Black populations (Klonoff & Landrine, 1999). Like the Schedule of Racist Events measure, each of the three subscales of the GED are composed of items each rated on a 6-point Likert scale (1 "Never" to 6 "Almost all the time"). The GED is scored by finding the sum of all subscale items, with higher scores indicating greater frequency of ethnic discrimination (Landrine et al., 2006). Cronbach's alpha was calculated to analyze internal consistency among GED scale items. Internal consistency for the 18-item GED scale was .95, indicative of excellent internal consistency.

Mindfulness

The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) is a 39-item measure created to provide a psychometrically valid measure of mindfulness in daily life. FFMQ scores demonstrated adequate convergent reliability and subscale scores demonstrated internal consistency of the FFMQ (α = .78 to .88 pre-MBCT and α = .82 to .90 post-MBCT; Baer et al., 2006). Confirmatory factor analysis revealed five factors, or facets, among samples of primarily White participants (Baer et al., 2006; Gu et al., 2016) Black Americans (Okafor et al., 2023), and clinical samples of African Americans (Watson-Singleton et al., 2017), including acting with awareness (awareness; 8 items), describing (describe, 8 items), non-judging of experience (nonjudgment, 8 items), nonreactivity to inner experience (nonreactivity; 7 items) and observing (observe, 8 items). In addition to the United States, the FFMQ has been adapted and psychometrically validated in various countries, including China (Hou et al., 2014); India (Raman et al., 2021), and Vietnam (Nguyen et al., 2022). The FFMQ has also been psychometrically validated amongst racial and ethnically diverse adults in Hawaii, which yielded a multidimensional construct; however, findings also suggested a six-factor model instead of five (e.g., dividing the "acting with awareness" subscale into two subscales: "non-distractibility" and "non-autopilot"; Spencer et al., 2022). The five subscales of the FFMQ include a sum of items each rated on a 5-point Likert scale (1 "never or very rarely true" to 5 "very often or always true"), with reverse scoring for three items in Describing, and reverse scoring for the Nonjudging of Experience and Acting with Awareness subscales. FFMQ subscale scores are determined by reverse-scoring the negative subscale items and finding the mean of each subscale (Baer et al., 2006). Higher scores indicating greater frequency of mindfulness (Landrine et al., 2006). The

current study used the five individual subscales to contribute toward the *Mindfulness* latent construct.

For this study, subscales from the FFMQ were found to range from good to excellent, including the Acting with Awareness subscale that consisted of 8 items (α = .92), the Describing subscale that consisted of 8 items (α = .87), the Non-judging of Experience subscale that consisted of 8 items (α = .90), the Nonreactivity to Inner Experience subscale that consisted of 7 items (α = .81) and the Observing subscale that consisted of 8 items (α = .82).

Self-compassion

The Self-Compassion Scale-Short Form (SCS-SF; Raes et al., 2011) is a 12-item questionnaire created to provide a psychometrically valid measure of self-compassion. The SCS-SF was psychometrically validated with two Dutch-speaking samples and an English-speaking sample (Raes et al., 2011). The SCS-SF has also been psychometrically validated in Chinese (Meng et al., 2019), Spanish (Garcia-Campayo et al., 2014), Brazilian-speaking populations (Rocha et al., 2022); however, a lack of research exists on psychometric validation of the SCS-SF among marginalized groups within the United States. Specifically, the SCS-SF is a short form of the 26-item measure (SCS; Neff, 2003). Total scores from the English SCS-SF demonstrated high internal consistency (α = .86) and a strong correlation (r = .98) with the SCS total scores (Raes et al., 2011). Confirmatory factor analyses for the SCS-SF revealed the same six factors or subscales as the SCS, identified as a) self-kindness (2 items); b) self-judgment (2 items), c) common humanity (2 items), d) isolation (2 items), e) mindfulness (2 items), and f) over-identification (2 items; Raes et al., 2011). As these factors have fewer than three items, they may be less stable than factors with three or more items (Costello & Osborne, 2019). English SCS-SF subscale scores demonstrated variable internal consistency (α = .54 to .75) and strong

correlations (r = 0.91 for Common Humanity, r = 0.93 for Isolation, r = 0.89 for Mindfulness, r = 0.89 for Over-Identification, r = 0.89 for Self-Kindness, r = 0.90 for Self- Judgement; Raes et al., 2011). As the total SCS-SF has good correlation, internal consistency, and the same factor structure as the SCS, scale developers indicate use of the total score of the SCS-SF as opposed to individual subscales (Raes et al., 2011). Thus, the total self-compassion score will use the total score to contribute to the *Self-Compassion* observed variable. The six subscales of the SCS-SF include items each rated on a 5-point Likert scale (1 "almost never" to 5 "almost always"), with subscales Self-Judgment, Isolation, and Over-Identification reverse-scored. The total self-compassion score is determined by reverse-scoring the negative subscale items, determining the mean of each subscale, and finding the mean of the six subscale means (Raes et al., 2011). Higher mean self-compassion scores indicate greater frequency of self-compassion (Raes et al., 2011). Cronbach's alpha for the 12 SCS-SF was found to be .87, indicative of good internal consistency.

Depression, Anxiety, and Stress

The Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995; Norton, 2007) is a 21-item psychometrically validated measure of a) depression, or dysphoric mood states (7 items), b) anxiety, or arousal states (7 items), and c) stress, or negative emotional reactions or general tension toward stress (7 items; Lovibond & Lovibond, 1995; Norton, 2007). The DASS-21 has been validated in adult American African American, Asian, Caucasian, and Hispanic populations, as well as British populations (Crawford et al., 2009; Norton, 2007). The DASS-21 demonstrated adequate internal consistency for each subscale across the entire sample (anxiety, α = .78; depression, α = .83; stress, α = .87) and individual racial groups (African American: anxiety, α = .81; depression, α = .84; stress, α = .88; Asian: anxiety, α = .74;

depression, α = .84; stress, α = .87; Caucasian: anxiety, α = .77; depression, α = .82; stress, α = .88; and Hispanic: anxiety, α = .79; depression, α = .83; stress, α = .87; Norton, 2007). The three subscales of the DASS-21 include items each rated on a 4-point Likert scale (0 = "Did not apply to me at all", 1 = "Applied to me to some degree, or some of the time", 2 = "Applied to me to a considerable degree or a good part of time", to 3 = "Applied to me very much or most of the time") with higher scores indicating greater frequency of depression, anxiety, and stress (Lovibond & Lovibond, 1995). All three subscales were included in the current study as endogenous variables ("Psychological Distress"). Among Asian populations in Malaysia, Indonesia, Singapore, Sri Lanka, Taiwan, and Thailand, psychometric properties of the DASS-21 yielded a three-factor structure (Oei et al., 2013). These discrepancies among measures are important considerations as the current study requests participants who reside in the United States; however, participants may be international citizens from countries outside of the U.S. The subscale from the DASS-21 indicated good to excellent internal consistency, including Depression (α = .92), Anxiety (α = .85), and Stress (α = .90).

Hope

Total scores from The Adult Hope Scale were also included in the current study as an endogenous variable. The Hope Scale (HS; Snyder et al., 1991) is an 8-item scale plus four filler items psychometrically validated to measure hope. The Hope Scale consists of two subscales including 1) agency (4 items), in which one experiences a "sense of successful determination in meeting goals in the past, present, and future," (p. 570), and 2) pathways (4 items), in which an individual successfully perceives the availability to pursue paths to one's goals (Snyder et al., 1991). The HS demonstrated adequate internal consistency (α = .74 to .84), adequate test-retest reliability, concurrent validity, and discriminant validity (Snyder et al., 1991). The Hope Scale

has been validated in adult White and minority samples in the United States (Roesch & Vaughn, 2006) as well as psychometrically validated in additional countries worldwide (e.g., Australia (Creamer et al., 2009; Gomez et al., 2015; Steed, 2002), Portugal (Marques et al., 2014), France (Gana et al., 2013), Spain (Galiana et al., 2015), China (Sun et al., 2012); Redlich-Amirav et al., 2018). The two subscales of the HS include items each rated on a 4-point Likert scale (1 = "Definitely False", 2 = "Mostly False", 3 = "Mostly True", 4 = "Definitely True") with higher scores indicating greater frequency of hope (Snyder et al., 1991). The HS total score is determined by finding the sums of the individual subscale scores (Snyder, 1991). Higher scores indicate greater hope (Landrine et al., 2006). The current study used the total score from the HS to contribute toward the *Hope* endogenous variable. Internal consistency for the Hope Scale was found to be excellent (α = .90).

Demographic information

Demographic information from participants were collected as part of the current study (see Appendix G). Demographic information included age, race, ethnicity, gender identity, and sexual orientation.

Attention/Truthfulness Checks

A minimum of two attention checks is recommended to address the threat of inattention among Prolific responses (Newman et al., 2021; Ramsey et al., 2016), with one attention check designed as an open-ended question to decrease participant inattention and vulnerability to bots (Dennis et al., 2019). As such, the current study used four items to address attention and truthfulness checks (Appendix H).

Data Analysis

Structural equation modeling (SEM) utilizes statistical techniques to examine relationships among continuous or discrete independent and dependent variables (Ullman, 2006; Ullman & Bentler, 2013). Through this approach, hypotheses are tested to observe and convey relationships of *observed variables*, or variables that are measured, and *latent variables*, variables that are not directly observed, or constructed. SEM uses regression, path, and confirmatory factor models to observe the relationships among variables. Rooted in previous theory and research, relationships among variables are hypothesized a priori and tested with sample data (Weston & Gore, 2006). By using SEM, multiple variables can be observed and tested while also taking measurement error into consideration (Schumacker & Lomax, 2015; Weston & Gore, 2006).

Research Questions

This study sought to answer the following research questions:

RQ1: Are there any relationships between recent racism experiences, mindfulness, and psychological outcomes (e.g., psychological distress, hope)?

RQ2: Is the relationship of recent racism experiences to negative psychological outcomes (e.g., anxiety, depression, stress) moderated by mindfulness?

RQ3: Is the relationship of recent racism experiences to positive psychological outcomes (e.g., hope) moderated by mindfulness?

Analytic Plan

Evaluation of the data

SPSS Statistics 29 (IBM Corp., 2020) was used to calculate correlation, mean, and standard deviation of the key variables in the study (i.e., recent perceived racial and ethnic discrimination, anxiety, depression, stress, hope, acting with awareness, describing, non-

judgment, nonreactivity, observing, self-compassion). Descriptive statistics were run based on continuous variables (i.e., age) and categorical variables (i.e., racial or ethnic group, gender, sexual orientation).

Evaluation of the sample size

There are 36 estimated parameters in the hypothesized model and 36 estimated parameters in the alternative model; thus, the recommended sample size for the current study was 400 participants (Nunnally, 1967). The final sample size was 294 which was fewer than 10 participants per parameter for statistical power as recommended by Nunally (1967). Although this number is fewer than the recommended sample size, it did meet the recommended minimum of 200 by Wolf and colleagues (2012) within SEM to adequately proceed with analyses.

Prior to analyses of the structural equation models, the data were evaluated to meet the statistical assumptions of the procedure. The assumption of multivariate normality can be supported by examination of univariate and bivariate normality. Skewness, kurtosis, and normality probability plots were examined to assess univariate normality. As was recommended by Curran and colleagues (1996) skewness values were found to be between -2 and +2 and kurtosis values were found to be between -7 and +7 for univariate normality to be assumed. Normal probability plots were examined to evaluate any substantial departures from normality (Pituch & Stevens, 2016). To assess bivariate normality, scatter plots that represent possible pairs of the dependent variables were examined. Bivariate normality of the data was assumed since these scatter plots were observed to be in relatively elliptical shapes (Pituch & Stevens, 2016). As there was evidence for both univariate and bivariate normality, the assumption of multivariate normality was supported, and analysis could proceed (Pituch & Stevens, 2016). Based on these

findings, these tests reflected normality (Pituch & Stevens, 2016); as such, it was appropriate to proceed with analysis.

Structural Equation Model Specification

Hypothesized Model. A total of 36 estimated parameters were observed for the hypothesized model. The hypothesized model tested (Figure 1) has one independent, exogenous variable denoted as recent perceived racial and ethnic discrimination. The dependent variables were a) the psychological health outcomes, including negative psychological outcomes (i.e., anxiety, depression, stress) and b) positive psychological health outcomes (i.e., hope). The moderator variable was mindfulness (i.e., acting with awareness, describing, non-judgment, nonreactivity, observing, self-compassion). All key variables are measured as continuous data.

For the hypothesized model, structural equation modeling was utilized to test four hypotheses proposed in this study regarding the relationship of four key variables. These hypotheses are (1) mindfulness will affect the relationship between recent racism experiences and negative psychological outcomes such that the relationship between recent racism experiences and negative psychological outcomes will be stronger and negative for those with lower levels of mindfulness, (2) mindfulness will affect the relationship between recent racism experiences and positive psychological outcomes such that the relationship between recent racism experiences and hope will be stronger and positive for those with higher levels of mindfulness, (3) recent racism experiences will be positively associated with outcomes of anxiety, depression, and stress; and inversely associated with hope for people of color, and (4) recent racism experiences will be positively associated with outcomes of anxiety, depression, and stress; and inversely associated with hope for people of color.

Alternative Model. The alternative model tested (Figure 2) has one independent, exogenous variable denoted as recent perceived racial and ethnic discrimination. The mediator variable studied was mindfulness (i.e., acting with awareness, describing, non-judgment, nonreactivity, observing, self-compassion). The dependent variables reviewed were 1) psychological health outcomes, including negative psychological outcomes (i.e., anxiety, depression, stress) and 2) positive psychological health outcomes (i.e., hope). All key variables were measured as continuous data.

Model Identification

Hypothesized Model Identification. To determine model identification for the hypothesized model, the order condition was met with degrees of freedom greater than zero (df = 66 - 36 > 0). This meeting of the order condition was necessary but not sufficient to establish model identification; therefore, additional conditions needed to be checked. As indicated by Bollen (1989), the 3-indicator rule was used to establish model identification for the exogenous measurement model. Firstly, the number of latent variables was equal to one. Secondly, every latent variable in the measurement model has at least three indicators. Thirdly, each row of LX has one and only one nonzero element, and $\theta\delta$ is diagonal.

Further, the 3-indicator rule was used to establish model identification for the endogenous measurement model (Bollen, 1989). Firstly, the number of latent variables was equal to one. Secondly, every latent variable in the measurement model has at least three indicators. Finally, each row of LY has one and only one nonzero element, and $\theta\varepsilon$ is diagonal. Based on these findings, the hypothesized model is over-identified.

Alternative Model Identification. To determine model identification for the alternative model, the order condition was met with degrees of freedom greater than zero (df = 66 - 36 > 0).

The 3-indicator rule was used to establish model identification for the exogenous measurement model and for the endogenous measurement model (Bollen, 1989). Based on these findings, the alternative model is over-identified.

Model estimation

Parameters of the structural equation models were estimated using maximum likelihood estimation in the Mplus software (Muthén & Muthén, (1998-2017).

Model testing

Structural equation modeling was used to test the hypothesized and alternative models proposed in this study (Figures 1 and 2). Because a latent interaction was included in the hypothesized model, model comparison was used (Cavanaugh & Neath, 2019; Neath & Cavanaugh, 2012). The hypothesized model with main effects only was compared with the hypothesized model with main effects and the interaction. Similarly, the hypothesized model was compared with the alternative model (Figure 2). Relative fit of the models was compared with each other using the second-order Akaike Information Criterion, which is recommended for smaller sample sizes (AIC_c; Burnham & Anderson, 2002; Cavanaugh & Neath, 2019) and Bayesian Information Criterion (BIC; Neath & Cavanaugh, 2012). Such tests provided an assessment that the model with lower AIC_c and BIC values indicated better model fit (Cavanaugh & Neath, 2019; Neath & Cavanaugh, 2012). Finally, significance of the interaction slope was observed.

CHAPTER 4

RESULTS

Preliminary Analyses

Descriptive statistics and Pearson correlations were reviewed to assess normality, as recommended by best practices for structural equation modeling (Table 2). With regards to univariate normality, skewness values and kurtosis values were within the recommended values of -2 and +2 for skewness and -7 and +7 for kurtosis for variables used in structural equation modeling (Table 2; Curran et al., 1996; Pituch & Stevens, 2016; Schumacker & Lomax, 2015). Normal probability plots showed relatively normal distributions, as evidenced by little deviation of the observed probabilities of the data from the expected value shown on the line. With regards to bivariate normality, a matrix scatterplot of each of the variables was examined and appeared elliptical in shape, which supports bivariate normality (Pituch & Stevens, 2016). Thus, the univariate and bivariate normality evidence support the conclusion that multivariate normality assumption was met for this analysis.

Review of CFA and Internal Consistency

Because the current study used mean and total scores for all measures, internal consistency and confirmatory factor analyses from previous psychometric validation studies were reviewed for the current study's latent variable measures. For the mindfulness latent variable, FFMQ subscale scores demonstrated adequate internal consistency (all alpha values > .81) and confirmatory factor analysis revealed five facets for Black Americans (Okafor et al., 2023). FFMQ facets or subscales included acting with awareness (awareness; 8 items), describing (describe, 8 items), non-judging of experience (nonjudgment, 8 items), nonreactivity to inner experience (nonreactivity; 7 items) and observing (observe, 8 items; Okafor et al., 2023).

Additionally, confirmatory factor analysis by Raes and colleagues (2011) for the SCS-SF yielded one total subscale score for self-compassion among racially diverse participants (e.g., African American, American Indian, Asian American, Caucasian, Foreign, Hispanic, Mixed Ethnicity, and Other) with moderate to good internal consistency (α = .54 to .75). Confirmatory factory analysis yielded the same six facets of self-compassion in the SCS-SF as the original Self-Compassion Scale (Raes et al., 2011). Based on these findings, the total score of the SCS-SF was used to contribute to the *Self-Compassion* facet in the mindfulness latent variable rather than using individual subscales.

For the psychological distress latent variable, internal consistency and confirmatory factor analysis were reviewed for the DASS-21 (Broda et al., 2025). DASS-21 subscale scores demonstrated good internal consistency for depression (α = .92), anxiety (α = .89), and stress (α = .90; Broda et al., 2025). Confirmatory factor analysis revealed three facets for racially diverse participants (e.g., Asian/Asian American, Black/African American, Latine, White; Broda et al., 2025). DASS-21 facets or subscales included depression (7 items), anxiety (7 items), and stress (7 items; Zanon et al., 2020). These facets align with previous confirmatory factor analyses with racially divese participants (Norton, 2007).

Model Comparison

Model comparison was conducted between the hypothesized model and the alternative model (Cavanaugh & Neath, 2019; Neath & Cavanaugh, 2012). AIC_c and BIC values were calculated for the hypothesized model (AIC_c = 48.69; *BIC* = 10,363.73) as well as the alternative model (AIC_c = 50.22; *BIC* = 10,374.91). As the BIC and AIC_c were smaller in value for the hypothesized model, the hypothesized model was considered to be a better fit compared to the alternative model (Burnham & Anderson, 2002; Cavanaugh & Neath, 2019; Neath &

Cavanaugh, 2012). Next, model comparison was conducted between the hypothesized model with main effects and the interaction term and the hypothesized model with main effects only (AIC_c = 50.24; *BIC* = 10,374.08). AIC_c and BIC values for the hypothesized model with main effects and the interaction were found to be smaller than the hypothesized model with main effects and the interaction. As such, the hypothesized model with main effects and the interaction was considered to be a slightly better model fit compared to the hypothesized model with main effects only (Cavanaugh & Neath, 2019; Neath & Cavanaugh, 2012). As this study was exploratory in nature to explore various dimensions of mindfulness and its relationship with recent racism experiences, psychological distress, and hope, the hypothesized model was used to proceed with main analyses.

Main Analyses

Data from the participants were subjected to structural equation modeling (Tables 3 and 4). Within the hypothesized model (Figures 3 through 5), mindfulness was the moderating latent variable. The independent variable was recent racism experiences, conceptualized by the Recent Discrimination subscale from the General Ethnic Discrimination Scale. Predictors for the mindfulness latent construct included the five subscales of the FFMQ (e.g., Acting with Awareness, Describing, Non-judging of Experience, Nonreactivity to Inner Experience, Observing) and the Self-Compassion Scale. Dependent variables in the hypothesized model included 1) psychological distress and 2) hope. Predictors for the latent construct of psychological distress was conceptualized by the three subscales in the DASS-21 (e.g., Depression, Anxiety, and Stress). Hope was conceptualized by the Hope Scale.

For the mindfulness latent variable, indicator variables included Observing, Describing, Acting with Awareness, Non-judging of Experiences, Nonreactivity to Inner Experience, and

Self-compassion. The squared multiple correlations for the Describing, Acting with Awareness, Non-judgment of Experiences, Nonreactivity to Inner Experience, and Self-compassion indicators on the mindfulness latent variable were statistically significant (Describing, $R^2 = .305$, $p \leq .001$; Acting with Awareness, $R^2 = .537$, $p < .001$; Non-judgment of Experiences, $R^2 = .560$, $p \leq .001$, Nonreactivity to Inner Experience, $R^2 = .082$, $p = .018$; Self-compassion, $R^2 = .748$, $p \leq .001$). The squared multiple correlation for Observing on the mindfulness latent variable was not statistically significant ($R^2 = .001$, $p = .782$). These findings suggest that self-compassion, non-judgment of experiences, and acting with awareness had the strongest associations in defining mindfulness, describing had a moderate association in defining mindfulness, and non-reactivity to inner experience and observing had weak and non-significant associations in defining mindfulness. These findings will be expanded upon in Chapter 5.

Hypothesis 1. The first aim of this study sought out to determine if recent racism experiences would be associated with both negative and positive psychological outcomes. Specifically, it was hypothesized that recent racism experiences would be positively associated with outcomes of anxiety, depression, and stress. Results from the current study indicated that the third hypothesis was supported. Results of the regression analysis revealed a significant and positive main effect between recent racism experiences and psychological distress. Specifically, the path loading for recent racism experiences was statistically significant and positive ($b = 2.72$, $\beta = 0.28$, $p \leq .001$). This finding suggests that people of color who reported more recent experiences of racism exhibited higher levels of psychological distress. These findings underscore the adverse impact of recent racism experiences on the mental health of individuals of color.

Secondly, it was hypothesized that recent racism experiences would be negatively associated with outcomes of hope. Results from the current study indicate that this hypothesis was partially supported. Results from the regression analysis revealed a significant and positive main effect between recent racism experiences and hope. Specifically, the path loading for recent racism experiences was statistically significant and positive ($b = 0.14$, $\beta = 0.17$, $p = .007$). This finding suggests that people of color who reported more recent racism experiences exhibited higher levels of hope. These findings highlight surprising findings regarding the relationship between recent racism experiences and hope among people of color.

Hypothesis 2. The second aim of this study sought out to determine if the relationship between recent racism experiences and negative psychological outcomes (e.g., anxiety, depression, stress) were moderated by mindfulness. It was hypothesized that mindfulness would affect the relationship between recent racism experiences and negative psychological outcomes such that the relationship between recent racism experiences and negative psychological outcomes will be stronger and negative for those with lower levels of mindfulness. Results from the current study indicated that the first hypothesis was supported.

For the second hypothesis, recent racism experiences was included as a predictor, mindfulness as the moderator, and psychological distress was the outcome. The model included mean-centered recent racism experiences, mindfulness, and the interaction term created by multiplying the previous variables. The squared multiple correlation was .795 for Psychological Distress, which showed that 79.5% variance in Psychological Distress was accounted by the full model. This suggests that the model had strong explanatory power for the outcome variable. Psychological distress as a latent variable was well-represented by its indicator variables. The estimated weights for the indicators on the psychological distress latent variable were all

statistically significant (Anxiety, $b = 0.75$, $\beta = 0.79$, $p \leq .001$; Depression, $b = 1.00$, $\beta = 0.83$, $p \leq .001$; Stress, $b = 0.98$, $\beta = 0.87$, $p \leq .001$). These findings suggest that higher scores of the psychological distress latent variable represented worse psychological distress.

Results showed that the path coefficients and factor loadings were statistically significant for recent racism experiences ($b = 2.72$, $\beta = 0.28$, $p \leq .001$), as well as for mindfulness ($b = -4.11$, $\beta = -0.49$, $p \leq .001$) on psychological distress. The interaction term between recent racism experiences and mindfulness was statistically significant ($b = -1.49$, $\beta = -0.15$, $p = .001$). This suggests that mindfulness moderates the relationship between recent racism experiences and psychological distress. The negative coefficient of the interaction term indicates that mindfulness may buffer the negative impact of recent racism experiences on psychological distress for people of color. Stated differently, people of color with higher levels of mindfulness may experience less psychological distress in response to recent racism experiences compared with people of color with lower levels of mindfulness.

Hypothesis 3. The final aim of this study sought out to determine if the relationship between recent racism experiences and positive psychological outcomes (e.g., hope) was impacted by varying levels of mindfulness. It was hypothesized that mindfulness would affect the relationship between recent racism experiences and positive psychological outcomes, such that the relationship between recent racism experiences and positive psychological outcomes would be stronger and positive for those with higher levels of mindfulness. Results from the current study indicated that the second hypothesis was supported.

For the third hypothesis, recent racism experiences was included as a predictor, mindfulness as the moderator, and hope was the outcome. The squared multiple correlation was .061 for hope, this shows that 6.1% variance in hope is accounted for by the full model. While

this finding was statistically significant, variance for hope was relatively small, which suggests that other factors may impact the prediction of hope that were not included in the model. Results showed that the path coefficients and factor loadings were statistically significant for recent racism experiences ($b = 0.14$, $\beta = 0.17$, $p = .007$) and for mindfulness ($b = 0.32$, $\beta = 0.44$, $p \leq .01$) on hope. The interaction between recent racism experiences and mindfulness on hope was statistically significant ($b = -0.13$, $\beta = -0.16$, $p = .008$). The negative coefficient of the interaction term indicates that mindfulness moderates the relationship between recent racism experiences and hope. These findings suggest that the relationship between recent racism experiences and hope is weaker for individuals with higher levels of mindfulness. As such, people of color with higher mindfulness may maintain relatively stable levels of hope regardless of their recent experiences with racism. Conversely, people of color with lower levels of mindfulness may show more inconsistency in hope related to recent racism experiences.

Summary

A significant, positive main effect was revealed between recent racism experiences and psychological distress. Surprisingly, there was a weak and positive correlation between recent racism experiences and hope. As predicted in the second hypothesis, mindfulness was found to negatively significantly moderate recent racism experiences and psychological distress. In other words, mindfulness was found to buffer the effects of recent racism experiences on negative psychological health among people of color. In the third hypothesis, mindfulness was found to significantly moderate recent racism experiences and hope. As such, mindfulness was found to help hope to remain more stable among people of color after experiencing recent experiences of racism. Utilizing the results described in the current chapter, interpretations and discussion of the

study results will be provided in Chapter 5. These findings offer novel information about how people of color may utilize mindfulness as a means to mitigate the symptoms of racism.

CHAPTER 5

DISCUSSION

The current study sought to explore the psychological and physiological effects of racism and protective factors through the associations between recent racism experiences, mindfulness, and mental health outcomes. Through the exploration of varying levels of mindfulness, this study contributed to the research on racial and ethnic discrimination, racism, and mindfulness among people of color. Relationships between recent racism experiences and psychological outcomes were also analyzed. These results contribute to the stress and coping literature regarding the use of mindfulness with an emphasis of compassion as a factor in the relationship between racism and psychological health outcomes.

The current study utilized a definition of mindfulness that incorporated the concept of self-compassion as a component of mindfulness. This conceptualization of mindfulness was done with the intention of better aligning with the concept of mindfulness as it is described within Buddhist philosophy (Anālayo, 2020; Anālayo & Dhammadinnā, 2021); however, there are multiple ways to define and engage with mindfulness. Notably, while this study sought to expand the literature's conceptualization of "mindfulness", it was still limited in defining and aligning with indigenous conceptualizations of mindfulness. For instance, the concept of compassion was limited in the study as "self-compassion" and did not include compassion for others. This limited definition posits a more individualistic, Westernized approach to defining mindfulness which may omit key variables that contribute towards diverse, multicultural understandings of mindfulness. Additional research is warranted to refine how mindfulness can be defined and conceptualized in scientific literature to be more culturally responsive and inclusive. Qualitative research may be one research method that can be applied to investigate how mindfulness is

defined across cultures and how it relates to racism-related stressors. Moreover, it is important to emphasize that mindfulness has been and can continue to be practiced and applied in a multitude of ways. Clinicians may reflect upon and explore how they may utilize mindfulness in "formal" interventions (e.g., leading a client through a guided mindfulness practice) as well as "informally" (e.g., modeling how to be present in session). Clinicians may also explore how clients themselves already practice mindfulness in their own lives and communities to build upon clients' existing mindfulness strengths.

It is vital to underscore the impacts that racism-related discrimination can have on the mental health of individuals of color. As these findings suggest, symptoms of depression, anxiety, and stress can be present when people of color recently experience racism. These findings support Harrell's (2000) conceptualization of racism-related stress that emphasize the unique experiences of racism-related stressors and the compounding effects of racism-related stress on people of color. As clinicians work with clients of color, one suggestion may include assessing or inquiring clients about experiences of racism-related discrimination over the past year. Such information may provide supplemental insight into client conceptualization of their presenting concerns and symptomology. Additionally, by asking questions regarding race and ethnic-related discrimination, clinicians may model or provide more multicultural opportunities for clients to reflect upon, explore, and develop insight for themselves within the clinical space.

Results of the current study highlight the deleterious impact of recent experiences of racism on psychological well-being of people of color. Specifically, relationships in the present study indicate that people of color who reported more recent experiences of racism exhibited higher levels of psychological distress. The interaction term between recent racism experiences and mindfulness was statistically significant; this suggests that mindfulness moderated the

relationship between recent racism experiences and psychological distress. Stated differently, mindfulness may buffer the negative impact of recent racism experiences on psychological distress for people of color. Thus, the relationship between recent racism experiences and psychological distress changes depending on the level of mindfulness. When individuals of color experience lower levels of mindfulness, there is a stronger relationship between recent racism experiences and psychological distress. Comparatively, there is a weaker relationship between recent racism experiences and psychological distress when there are higher levels of mindfulness. These findings contribute to the growing and notable literature about the adverse effects of racism and racism-related stressors on mental health (Alvarez et al., 2016; Benner et al., 2022; De Leon et al., 2023; Johnson et al., 2024; Polanco-Roman et al., 2024; Rastogi et al., 2024; Sun et al., 2021). Results emphasize the unique impact that recent racism experiences can have on the psychological health for people of color. This is important to note, as results suggest there is an association between recent racism experiences and one's psychological well-being. More research is warranted to expand upon additional racism-related stressors and their relationships with mental health among people of color.

Notably, the current study only focused on recent racism experiences as it relates to psychological health among people of color. Future research in this area may explore different dimensions of racism, including but not limited to racism-related life events, vicarious racism experiences, daily racism microstressors, chronic-contextual stress, collective experiences of racism, and the transgenerational transmission of group traumas (Cano et al., 2023; Chae et al., 2021; Harrell, 2000; LaVeist et al., 2014; Pieterse, 2012). Such research could offer new insights into the multidimensional aspects of racism and its impacts on mental health and psychological

well-being. Additional consideration about differences among diverse racial and ethnic groups and other intersecting identities is expanded upon in the Limitations section of this chapter.

Mindfulness

Study results indicate that the latent mindfulness variable significantly, negatively moderated the relationship between recent racism experiences and the latent psychological distress variable. As such, mindfulness may serve as a buffer or protective factor for people of color between recent racism experiences and psychological distress. Notably, self-compassion, non-judgment of experiences, and acting with awareness were the strongest significant indicators that contributed toward mindfulness among participants. Items in the self-compassion indicator included statements that offer kindness toward oneself, as well as "the ability to hold one's feelings of suffering with a sense of warmth, connection and concern," (Raes et al., 2011, p. 250). Similarly, items in the non-judgment indicator included statements that take "a nonevaluative stance" toward one's internal experiences (de Bruin et al., 2012, p. 189). Taken together, these findings suggest that self-compassion without judgment may act as a protective factor against the negative psychological effects of recent experiences of racism among people of color. These findings support the current literature that suggests self-compassion acts as a means to buffer against the effects of racism-related stress (Browne et al., 2022; Hwang & Chan, 2019; Liu et al., 2020; Munjee et al., 2023; Roca et al., 2020; Watson-Singleton et al., 2021; Watson-Singleton et al., 2022; Zheng et al., 2023; Zhang et al., 2021).

Results suggest that acting with awareness was a significant dimension of mindfulness in buffering the association between recent racism experiences and psychological distress. Items in the acting with awareness indicator included the ability for participants to bring their "full awareness and undivided attention" to an experience in the present moment (de Bruin et al.,

2012, p. 189). In conjunction with self-compassion and non-judgment, the current study's results suggest that being able to fully pay attention to a given experience is an important dimension among people of color when navigating the impact of recent racism experiences. For instance, being able to pay attention to the present may provide further insight and better understanding of one's social experiences for individuals of color when they encounter racism-related stressors. By being able to pay attention after a racism-related stressor, individuals may be able to better utilize self-compassion and non-judgment in a protective manner. Thus, clinicians may support clients with mindfulness interventions that help promote fostering awareness of the present moment.

Taken all together, these findings suggest that it may be particularly beneficial to utilize mindfulness interventions of self-compassion, non-judgment, and awareness of the present moment to support one's psychological health against recently experienced racism among people of color. As such, clinicians may pay particular attention to using interventions that place emphasis on self-compassion for clients of color who have recently experienced racism to alleviate psychological distress. For example, clinicians may utilize mindfulness interventions that emphasize self-compassion and non-judgment with clients who report on symptoms of racism-related stress. Clinicians and clients may collaborate on what types of self-compassion mindfulness interventions may feel most useful to foster racial healing. For instance, in an experimental pilot study by Hargons and colleagues (2022), participants were guided through a 17-minute Black Lives Matter Meditation for Healing Racial Trauma after being exposed to a vicarious racial harassment stimulus. The Black Lives Matter Meditation for Healing Racial Trauma, created as a free resource for Back people in response to racism-based stress and racial trauma, included elements of mindfulness, racial affirmations, and loving-kindness (Hargons et

al., 2022). Results indicated that participants who practiced the meditation experienced significantly decreased heart rate before and after the meditation (Hargons et al., 2022). Results also indicated no significant differences between the study's control groups (e.g., sitting in silence) and the meditation group (Hargons et al., 2022). As clinicians and clients practice self-compassion and non-judgement through mindfulness, they may also expand upon what aspects of self-compassion or non-judgment feel easeful or more difficult. Exploring clients' self-compassion and non-judgement may offer additional insight for clinicians and clients alike into what types of skills are needed to support clients through recent racism experiences. Results from the current study also suggest that non-judgment is an important dimension of mindfulness associated with recent racism experiences. Clinicians may co-explore clients' thoughts and emotions related to self-compassion, as well as curiosity about whether judgment arises when utilizing self-compassion. Exploration of the barriers to non-judgment around self-compassion may support clients' use of self-compassion related to recent experiences of racism.

Future research may expand upon the interconnectedness of self-compassion and non-judgment as they relate to racism-related stressors. For instance, Munjee and MacPherson (2023) utilized critical phenomenology to understand Indigenous, Black, South Asian, and East/South East Asian, participants' encounters with racism and application of mindfulness and compassion, with White as a contrasting participant group. Results suggested that participants found mindfulness and self-compassion as supportive factors as part of their recovery from racism-based stress and trauma (Munjee & MacPherson, 2023). Some participants described learning about loving kindness meditation (e.g., *metta*) that offered a "deeper" understanding of what "mindfulness could be" as it connected to compassion as a means to recover from racism-based stress and trauma (Munjee & MacPherson, 2023, p. 13). Participants noted that self-compassion

as well as being treated with compassion were helpful aspects in their racism-based recovery (Munjee & MacPherson, 2023). As such, clinicians may pay particular attention to what types of mindfulness interventions they explore with their clients of color. Additionally, results from Munjee and MacPherson's (2023) research suggested limitations in current mindfulness spaces for people of color, including a dissatisfaction of White bias and secularization in some mindfulness spaces due to disproportionate availability of mindfulness to those with privileged identities. Findings from the current study may offer new insight about ways that clinicians can decrease dissatisfaction of White bias and secularization in mindfulness by expanding upon mindfulness interventions to support specific racism-related stressors for people of color. Creating and amplifying environments and opportunities for people of color to practice mindfulness interventions in non-judgmental spaces may provide additional opportunities to explore compassion and support against racism-based stress.

Results indicated that the "describing" indicator had a small but significant association as a dimension of mindfulness. Items in the describe indicator included the "tendency to describe and label" their experiences "with words" (de Bruin et al., 2012, p. 189). Results suggest that using words to describe their experiences may be somewhat helpful for people of color; however, alternative dimensions of mindfulness may be more helpful. For example, as indicated by the "describing" indicator, exploring clients' words, feelings, and thoughts related to recent experiences of racism may be a first step in being able to describe their experiences. As describing skills are practiced, additional higher-order dimensions of mindfulness, such as self-compassion, non-judgment, and acting with awareness, may be additionally helpful in clients' intrapersonal experiences of recent racism experiences. Therefore, although describing skills

may not be as impactful as other mindfulness skills, they may be foundational in supporting supplemental mindfulness dimensions that combat the effects of recent racism experiences.

The non-reactivity to inner experience indicator had a weak association in defining mindfulness among participants. Item responses for the non-reactivity to inner experience included the allowance of one's "thoughts and feelings to come and go, without getting caught up in them or carried away by them," (de Bruin et al., 2012, p. 189). Racial-related stressors, including recent racism experiences, are irrevocably connected with one's racial identity. If a mindfulness intervention suggests that a client of color ought to "not-react" to one's inner racism-related experiences, this may feel dismissive of their unique racialized identity and experiences. This finding has important implications for clinical practice. Less is known, empirically, regarding the aspect of non-reactivity or "letting go" in mindfulness. In a controlled trial of a brief *Leaves on a Stream* mindfulness intervention, the treatment group did not indicate less frequency or ease in letting go of anxious self-statements compared with the control group (Hartnett & Carr, 2013). Clinicians may consider refraining from the use of mindfulness interventions that encourage clients to "let go" of their thoughts and feelings related to recent racism experiences. Alternatively, clinicians may explore the idea of non-reaction to inner experiences as an intervention with clients of color to acquire more insight and exploration of clients' racism-related experiences and coping strategies. For example, a clinician may explore what thoughts, emotions, or behaviors are elicited when a client is asked to "let go" of a recent racism experience (as well as the context of the racism-related stressor); or, explore past experiences of "letting go" of racism-related stressors. By validating and exploring clients' experiences, clinicians and clients alike may be able to develop further insight around what clients may find helpful and unhelpful about "letting go" of certain aspects of racism-related

stressors. This intervention work could serve as a starting point for clinicians to understand the interpersonal, sociocultural, institutional, and systems-based challenges clients of color encounter regarding racism-related stressors, and how mindfulness may (or may not) be applied to help navigate such complexities.

Lastly, the observing indicator did not contribute to defining mindfulness. Item responses for the observing indicator included "the tendency to notice or attend to internal and external experiences, such as sensations, emotions, cognitions, sounds, sights, and smells," (de Bruin et al., 2012, p. 189). Unlike the other indicators, the observing indicator described observation of physiological and external sensations. Based on the findings of the present study, noting one's physiological and external sensations was not found to have any significant relationship between experiencing recent racism and psychological health. In the literature, racism-related stress negatively impacts the physical and mental health for people of color (Benner et al., 2022; De Leon et al., 2023; Johnson et al., 2024; Polanco-Roman et al., 2024; Rastogi et al., 2024; Sun et al., 2021). Often, noting one's physiological and external sensations are utilized as grounding skills to help people feel safe in their present self and environment. As people of color live in a society in which they experience systemic oppression, their perspective may be that the world in which they live is unsafe or built in favor of others with privileged identities; as such, the environment in which they occupy may not feel safe. Perhaps paying attention to physiological and external sensations may not contribute to the relationship between racism-related stress and psychological outcomes because people of color may realize that they are living in a society not built for individuals who look like them and draw attention to feelings of "otherness." More research is needed to explore and expand upon this finding. For example, perhaps items within the observing indicator were limited because they solely focused on one's physical environment,

rather than one's social environment. As experiencing racism is often in relationship with other individuals, examination of the observation dimension of mindfulness as it relates to one's *social* environment may offer new insight between racism-related stress, mindfulness, and psychological health. For example, exploring one's experience of mindfulness, racism-related stress, and psychological health may vary when individuals are in social environments where they may feel less safe (e.g., in certain public spaces or within specific social interactions where one's race or ethnicity feels more marginalized) compared to other social environments where one feels less marginalized (e.g., in community spaces). Alternatively, an area future researchers may look to include is that of body compassion with trans individuals and the need to be cautious when doing body-focused or experiential clinical work (Watson et al., 2024; Ye et al., 2024).

Collectively, these are important findings to note for practitioners who explore racism-related stress with clients of color. Clinicians ought to consider the nuances of racism-related stressors, including the different ways in which these stressors may occur, as well as the psychological impact they may have on clients of color. Clinicians may think about these implications as they relate to recently perceived discrimination in their clients' experiences outside of clinical spaces (e.g., professional life, personal life, in education, seeking healthcare), as well as interpersonally between therapist and client. Future research may expand upon how recent racism experiences in different contexts and settings may impact the psychological health for people of color.

The current study contributes to the current research on mindfulness and racism-related stress (Martinez et al., 2022; Munjee & MacPherson, 2023). Limited but growing research on racism-related stress and mindfulness suggest that mindfulness interventions ought to be uniquely adapted to effectively mitigate the complex racism-related stressors that are

experienced by people of color (Martinez et al., 2022). The results of the current study emphasize the dimensionality and complexity of mindfulness and how these factors can be impactful for people of color. Further exploration, insight, and co-creation of mindfulness interventions with clients may expand clinicians' understanding of how mindfulness can be used as an intervention for racism-related stressors and negative psychological health. Clinicians may explore what aspects of mindfulness clients find helpful and unhelpful as it relates to their own unique experiences of racism-related stress. Similarly, clinicians may explore meeting clients where they are at in their mindfulness development and explore what mindfulness factors may be supportive steps to explore other dimensions of mindfulness. Notably, self-compassion was emphasized as an important aspect in this finding's conceptualization of mindfulness. Clinicians may also choose to explore mindfulness interventions that emphasize compassion, (e.g., loving-kindness meditation) with clients of color as a means to support the adverse impacts of racism-related stressors. Future mindfulness research ought to expand upon how compassion can be utilized to combat the adverse psychological effects of racism-related stress.

Hope

Results of the current study highlight a more complex, nuanced understanding of the relationships between recent racism experiences, mindfulness, and hope among people of color. Surprisingly, relationships in the present study indicate that people of color who reported more recent experiences of racism exhibited higher levels of hope. These results differed from the study's initial hypothesis, which originally stated the relationship between recent racism experiences and positive psychological outcomes would be stronger and positive for those with higher levels of mindfulness. These results align with research on racial and ethnic self-identity and hope among adolescents conducted by Zlotnick and colleagues (2019). Research by Zlotnick

and colleagues (2019) indicated a significant, positive association between racism and ethnicity among Ethiopian adolescents that did not occur for adolescents who self-identified as Russian immigrant or Israeli-born youth. Moreover, results demonstrated that Ethiopian-identified adolescents who perceived racism experienced higher overall hope, as well as hope-agency and hope-pathway (Zlotnick et al., 2019).

Findings from the current study suggested that various levels of mindfulness have a noticeable impact on hope among people of color. These findings contribute to the overall literature on mindfulness and hope (Allen et al., 2021; Anvari et al., 2024; Wang et al., 2024; Munoz et al., 2018; Strohmaier et al., 2021; Thornton et al., 2014) as well as hope and racism (McDermott et al., 2020; Mitchell et al., 2020). Results of the current study indicate that people of color with higher mindfulness may maintain relatively stable hope regardless of their recent experiences with racism. These results contribute to the current research that suggests hope may serve as a protective factor against racism-related stress (McDermott et al., 2020; Mitchell et al., 2020). As a reminder, self-compassion, non-judgment of experiences, and acting with awareness were the strongest significant indicators within the current model that contributed toward mindfulness among participants. Perhaps one reason why mindfulness influenced the relationship between recent racism experiences and hope was due to mindfulness' ability to decrease the racism-related stressor as a "blockage" toward one's pursuit of their goals (Snyder, 1994). As noted by Harrell (2000), effects of racism contribute to a person's "transactions" between their individual self and the external environment. Upon experiencing recent racism experiences, individuals of color may utilize mindfulness as a coping resource that allows for increased hope. Various dimensions of mindfulness, such as an emphasis on self-compassion, non-judgment of experiences, and/or acting with awareness, may serve as helpful resources or

coping options that individuals of color could use after experiencing racism-related stress. Item responses for the hope indicator included an individual's "sense of successful determination in meeting goals in the past, present, and future" as well as the perception that achieving one's goals is available and accomplishable (Snyder et al., 1991, p. 570). Hope as an outcome may feel more attainable or accessible for individuals of color who have experienced recent racism experiences by generating mindfulness coping mechanisms that emphasize present awareness, compassion, and non-judgment; especially as it relates to one's racial or ethnic identity within their social and physical environment.

The study's current findings indicate that people of color with lower levels of mindfulness may encounter more inconsistency in hope related to their recent racism experiences. Results of the current study contribute to the literature on racism-related stress and coping strategies (Wang et al., 2024; Watson-Singleton et al., 2019). Mindfulness may provide additional support to people of color as a means of building resilience against the instability that occurs after experiencing racism-related stress. As an intervention, mindfulness may serve as an emotion-regulation strategy that individuals of color can access as an additional strategy to mitigate the effects of racism-related stress. As noted in Chapter 2, there are a variety of racism-related strategies individuals of color use in response to racism-related stressors. Mindfulness may act as one type of coping strategy to decrease the inconsistency of hope; however, more research is warranted to understand what additional coping strategies may be utilized. Based on these findings, clinicians working with clients of color may consider exploring aspects of mindfulness as a means to generate hope after recent racism experiences. These findings suggest that mindfulness may buffer the impact of recent racism experiences on hope among people of

color; however, more research is warranted to explore what additional factors may explain the relationship between recent racism experiences and hope.

In conjunction with the current study, these results suggest that racial or ethnic differences may exist related to hope. As individuals of color encounter racism-related stressors, more awareness may be generated of one's racial or ethnic identity. With this self-awareness, perhaps there is greater connection to one's identity, which aligns with a greater sense of self-determination, who one is, and what one would like to accomplish in this world. As people of color experience unique racism-related stressors (Harrell, 2000), perhaps hope acts as a unique racism-related coping strategy to facilitate resilience. Overall, these results contribute to the current research regarding mindfulness and hope among people of color. Future research ought to explore the connections between racial or ethnic self-identity, awareness, and hope related to racism-related stressors. Such research may provide further insight into similarities and differences between mindfulness and hope among individuals who align with diverse cultural identities to further contribute to culturally responsive mindfulness interventions.

Limitations

Several limitations persist in the current study. Firstly, a limitation of the current study is that it lacked analysis of differences among diverse racial and ethnic groups and other intersecting identities. Individuals from various racial and ethnic groups may have unique experiences with mindfulness based on their own individual identities and intersectionalities (Crenshaw, 1991; Proulx et al., 2018). As the current study analyzed participant responses regarding recent racism experiences, mindfulness, and psychological mental health outcomes among people of color, it may have been limited in capturing distinctions within racial and ethnic subgroups. Future research is warranted and encouraged to expand upon racial and ethnic

differences as well as intersecting identities and how psychological health may be impacted by mindfulness and perceived racial and ethnic discrimination (Proulx et al., 2018).

Secondly, although the FFMQ measures mindfulness use in daily life, it should be noted that this is one definition and interpretation of "mindfulness" and that mindfulness can be defined, interpreted, and practiced differently within the scientific literature and within varying cultural contexts. For example, within a qualitative study of a mindfulness-based intervention among older African Americans participants shared how they tailored their mindfulness practices to align with their Christian values (Proulx et al., 2020). Others may practice or embody mindfulness in ways that align with their own cultural or spiritual interpretation of mindfulness (Anālayo, 2019; Le & Gobert, 2015; Le & Shim, 2014; Proulx et al., 2018; Proulx et al., 2020), which may not align with the way mindfulness is captured in the current study. Moreover, while measures in the current study have been psychometrically validated with some populations of American minority groups and communities, these measures were not all psychometrically validated with all of the racial and ethnic identities of participants in the current study. Future research may utilize additional inclusive mindfulness measures and methodological approaches (e.g., qualitative research) to expand on culturally responsive definitions of mindfulness and ways in which people may embody mindfulness. Similarly, the GED Scale measures perceived discrimination that individuals personally experience, but does not include vicarious experiences of racism, transgenerational racism, or collective experiences of racism that also contribute to racism-related stress. Additional research is warranted for the measures used in the current study to expand psychometric validation with American minority groups and communities.

Thirdly, as previously stated, the use of Prolific as a data recruitment platform may have served as a limitation to data validity (Newman et al., 2021). Applications were utilized to

increase data validity based on best practices of using online data collection (e.g., use of pre-screen criteria, transparency of survey procedure, ethical pricing, review of duplicate IP addresses, timeliness of completion, attention/truthfulness checks for fraud detection; Newman et al., 2021); however, this did not eliminate all threats to validity and is a limitation of the study. Additional research with participants from different recruitment strategies and crowdsourcing platforms may provide additional insight around mindfulness, perceived racial and ethnic discrimination, and psychological health outcomes.

Fourthly, smaller sample size and model comparison criteria may have served as limitations. Although the sample size was greater than 200 as recommended by Wolf and colleagues (2012) to proceed with analyses, it was under statistical power based on parameter estimation. The current study indicated significant effects; however, future research with greater sample size may provide additional support to this study's findings. Similarly, the use of model comparison rather than model fit criteria for analyses may be viewed as a limitation. Future research may continue to test and refine the hypothesized model to better determine model fit. Such future analyses will contribute toward better understanding of the relationships between recent racism experiences, mindfulness, and psychological health outcomes. Fifthly, this study was cross-sectional, which does not establish causality among variables (Burbridge, 1999). Moreover, there is a lack of temporal analysis within this study as a cross-sectional design, which limits its generalizability and ability to track change over time (Burbridge, 1999). Future research may expand upon different research methods and designs (e.g., grounded theory, thematic analysis, case-control design, cohort design, mixed methods research) and may amplify knowledge and understanding of the relationships between recent racism experiences, mindfulness, and psychological health outcomes.

Lastly some additional threats to validity within the proposed study included history and attrition. Survey measures were selected due to their psychometric properties, as well as length of survey items to decrease the threat of attrition. Thus, a sample size of 400 was recruited to account for participant attrition (Aguinas et al., 2020; Sprouse, 2011). Timeliness of survey distribution was considered when asking survey questions to account for history. For example, various instances of violence toward certain racial groups have occurred over recent years, such as increases in anti-Black (e.g., uprisings related to murder of George Floyd) and anti-Asian violence (e.g., violence attributed to Covid-19 pandemic). As such, the researcher paid attention to current historical events that may have impacted participants' experiences of racism. Of note, the Israel-Hamas war was ongoing at the time of data collection, including the recent invasion of Rafah in the Gaza Strip.

Practice and Research Implications

There are several practical and empirical implications of this study. From a clinical perspective, this research emphasizes the deleterious psychological health effects of racism-related stress among people of color. Growing evidence for the impacts of racism and racism-related stress continues to support these findings (Allen et al., 2021; Anvari et al., 2024; Munoz et al., 2018; Strohmaier et al., 2021; Thornton et al., 2014; Wang et al., 2024). Supporting clients of color through the adverse effects of racism-related stress is important for the psychological health and well-being of the client; and clinicians' work is limited if they solely focus on harm-reduction of symptoms without consideration of the institutionalized systems that perpetuate harm. It is essential that clinicians continue to reflect upon how racism-related stressors may impact the psychological health for clients of color. Similarly, clinicians ought to consider their

own positionality within the scope of their work and continuously expand upon their own multicultural and social justice praxis and advocacy (Ratts et al., 2016).

Further, results of the current study indicate that clinicians may use mindfulness with clients of color as a coping strategy or resource to mitigate the effects of recent racism experiences on negative psychological health. It is imperative that clinicians continuously reflect upon and refine what elements and dimensions of mindfulness are applied with their clients. Notably, clinicians ought to take into consideration the diverse impacts of systemic oppression, power differentials, intersectionality, and multicultural factors among their clients, the intrapersonal experiences and self-awareness of the clinician, as well as the interpersonal experiences between clients and practitioners (Crenshaw; Ratts et al., 2016) when utilizing mindfulness. For example, clinicians may reflect upon their own similar and differing identities as the clients they work with when exploring and implementing mindfulness interventions. Clinicians may choose to name these salient identities with their clients and the context in which live, and co-explore, create, process, and refine how they will explore and practice mindfulness interventions. Clinicians may strive to create clinical spaces with clients where clients feel empowered and autonomous in their mindfulness practice. For instance, a White clinician working with a client of color may provide psychoeducation about mindfulness from a culturally-responsive approach, acknowledging the historical context of mindfulness rooted in Buddhist philosophy and connected to other cultural traditions worldwide. The clinician may also explore with the client how it might feel to explore this topic with a White clinician, and explore any challenges, concerns, hesitancies, or possible ruptures that may arise. Clinicians may also explore with clients' ways in which clients already practice mindfulness in their own lives.

As clinicians introduce a mindfulness intervention to clients, they may tell clients that everything in the practice is the client's choice, and that clients can choose to engage in ways that feel safe and accessible to them (versus solely listening to everything instructed by the clinician). Clinicians may also practice and model mindfulness themselves, utilizing mindfulness as a reflective practice to better understand how they may contribute toward covert and overt racism-related stressors within their scope of work.

Working with clients of color who have experienced racism-related stressors, clinicians ought to explore and collaborate with their clients regarding the different dimensions of mindfulness and co-create mindfulness interventions that will be supportive of clients' psychological health. For instance, future research may seek to distinguish the effects of mindfulness for individuals who experience covert acts of racism, microaggressions, and those who experience overt acts of racism. Similarly, the current study focused on recent racism experiences in general for people of color; however various acts of overt and covert racism can differ based on individuals' diverse environments. Future research may also explore how racism-related stressors impact the psychological health of people of color based on different social environments (e.g., professional spaces, public spaces, personal spaces). As explored throughout this study, mindfulness can include a variety of dimensions; therefore, co-exploration of mindfulness may be a helpful practice that clinicians can apply with their clients of color when exploring racism-related stress. Mindfulness that incorporates self-compassion, non-judgment, and acting with awareness may be of particular support as coping strategies for recent racism experiences, adverse psychological health, and hope among clients of color. Understanding of

how clients are able to describe their experiences may also provide additional insight into how mindfulness may be used as a resource.

Moreover, this study attempted to expand the definition of "mindfulness" within the scientific literature to incorporate a more expansive definition of mindfulness. Clinicians may continue to explore, challenge, and expand upon their definitions of mindfulness and how they apply multicultural considerations to their mindfulness interventions. Graduate and clinical training opportunities can incorporate discussions about culturally responsive mindfulness practices and how clients may use or apply mindfulness in multicultural dimensions. Future research may also expand upon culturally diverse definitions of mindfulness, and how this may relate to psychological health and racism-related stress among diverse populations. For example, self-compassion and compassion for others are often explored in distinct terms within the literature, but is one concept within Buddhist philosophy (Neff, 2003b). Future research may expand upon the concept of compassion and how it relates to racism related stressors and psychological health among people of color.

In addition to clinical application, future research is warranted to understand the relationships between racism-related stressors and psychological health among people of color. As noted in the limitations, it is critical that future research ought to expand upon the relationships between racism-related stress, mindfulness, and psychological health among diverse populations. For instance, research has demonstrated that mindfulness-based interventions yielded moderate to large effect sizes among Hispanic and Latino populations health outcomes, large effect sizes in physical outcomes, and small to medium effect sizes in

social outcomes (Cotter & Jones, 2020). Additional research can provide new insight into the relationships among mindfulness, racism-related stress, and diverse racial and ethnic identities.

Moreover, individuals of color experience various types of racism-related stress (Harrell, 2000). The current study focused on recent racism experiences; however, future research may explore other dimensions of perceived racial or ethnic discrimination (e.g., lifetime discrimination) and other forms of overt and covert racism-related stressors. For example, research has demonstrated that rumination mediates and moderates racism and wellbeing (Borders & Liang, 2011; Borders et al., 2020; Pichardo et al. 2021; Otto et al., 2022, Wilson et al., 2024). Research is warranted to explore how different racism-related stressors impact psychological health and well-being among people of color. Finally, although mindfulness was found to significantly moderate the relationship between recent racism experiences and hope, these effect sizes were small; therefore, more research is needed to explore the relationship and possible variables contributing to recent racism experiences and hope. Future research on racism-related stress, mindfulness, and positive psychological health outcomes (e.g., joy) may provide novel insight into coping resources clients of color can access to combat the adverse effects of racism-related stressors.

Conclusion

This study contributes to the growing and important literature regarding racism-related stressors, mindfulness, and psychological health among people of color. Specifically, this study attempted to test a model that integrated a more culturally responsive definition and understanding of mindfulness than other secularized conceptualizations of mindfulness in the literature. In addition to examining main effects, this study tested moderating roles of

mindfulness on associations of recent racism experiences and psychological health outcomes. Though limited in sample size, results indicate that mindfulness may serve as a protective factor for people of color who have experienced recent racism experiences against adverse psychological health, as well as slightly support greater hope. Limitations exist regarding generalizability of the present study, as well as the lack of diversity of the study's sample, and limited definition of "mindfulness". Specifically, this research contributes to the limited research on mindfulness and psychological health for people of color. Future research ought to build upon these findings to further explore similarities and differences among diverse sample groups, as well as incorporation of more culturally responsive definitions of mindfulness.

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Tables

Table 1.

Participant Demographics (N = 294)

Variable	Counts (%)	Mean (SD)
Age (*n* = 291)	-	37.91 (11.21)
Race/ethnicity (*(n = 294)*		4.26 (3.33)
African American/Black	123 (41.8)	
Afro-Caribbean	4 (1.4)	
Afro-Latine/x	1 (0.3)	
Asian/Asian American (e.g., Chinese American, Asian Indian, etc.)	56 (19.0)	
American Indian/Native American/ Indigenous	8 (2.7)	
Hispanic/Latine/x	56 (19.0)	
Middle Eastern/North African	2 (0.7)	
Pacific Islander	1 (0.3)	
Other and/or Multiracial	43 (14.6)	
Gender (*n* = 293)		1.62 (0.79)
Man	138 (46.9)	
Woman	147 (50.0)	
Gender Nonconforming	1 (0.3)	
Gender Nonbinary	4 (1.4)	
Prefer to self-describe	3 (1.0)	
Sexual Orientation (*n* = 294)		2.81 (0.58)
Gay/Lesbian	16 (5.4)	
Bisexual	35 (11.9)	
Heterosexual	233 (79.3)	
Prefer to self-describe	10 (3.4)	

Table 2

Descriptive Statistics of Correlations for Study Variables (N = 294).

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Observe	1.00										
2. Describe	**.33*****	1.00									
3. Awareness	.02	**0.43*****	1.00								
4. Nonjudge	**-.21*****	**.37*****	**.60*****	1.00							
5. Non Reaction	**.50*****	**.33*****	.10	.06	1.00						
6. Self Compassion	**.13***	**.46*****	**.50*****	**.58*****	**.41*****	1.00					
7. Depression	.04	**-.37*****	**-.54*****	**-.56*****	**-.16****	**-.60*****	1.00				
8. Anxiety	.07	**-.32*****	**-.48*****	**-.50*****	-.01	**-.40*****	**.66*****	1.00			
9. Stress	.10	**-.36*****	**-.61*****	**-.59*****	**-.14***	**-.56*****	**.74*****	**.72*****	1.00		
10. Perceived Ethnic Discrimination	.11	-.01	**-.19*****	**-.23*****	.01	-.09	**.35*****	**.46*****	**.34*****	1.00	
11. Hope	**.30*****	**.15***	-.04	-.11	**.28*****	**.16****	**-.13***	.09	.04	**.19*****	1.00
M	3.33	3.51	3.60	3.42	3.06	3.19	9.88	7.44	11.16	1.92	5.24
SD	0.73	0.78	0.92	0.89	0.71	0.77	10.35	8.18	9.79	0.86	0.72
Alpha	.83	.87	.92	.90	.81	.87	.92	.85	.90	.95	.90

Note. Bolded values indicate significance, $^{***}p \leq .001$, $^{**}p \leq .01$, $^{*}p \leq .05$.

Table 3.

Unstandardized Structural Equation Model Results

		Estimate	*S.E.*	*Est. S.E.*	*Two-Tailed P-Value*
Psychological Distress by:					
	Depression	1.000	0.000	999.000	999.000
	Anxiety	**0.751*****	0.047	15.838	0.000
	Stress	**0.979*****	0.054	17.978	0.000
Mindfulness by:					
	Observing	0.027	0.048	0.554	0.580
	Describing	**0.431*****	0.045	9.513	0.000
	Awareness	**0.673*****	0.049	13.594	0.000
	Non-judgment	**0.667*****	0.048	13.945	0.000
	Non-reactivity	**0.203*****	0.045	4.486	0.000
	Self-compassion	**0.596*****	0.041	14.593	0.000
Psychological Distress on:					
	Mindfulness	**-4.110*****	0.895	-4.590	0.000
	Interaction	**-1.489****	0.452	-3.292	0.001
Psychological Distress on:					
	Recent racism	**2.718*****	0.465	5.842	0.000
Hope on:					
	Mindfulness	**0.317****	0.101	3.128	0.002
	Interaction	**-0.130****	0.049	-2.650	0.008
Hope on:					
	Recent racism	**0.139****	0.051	2.715	0.007
Hope with:					
	Psychological Distress	-0.188	0.254	-0.739	0.460

Note. Bolded values indicate significance, $^{***}p \leq .001$, $^{**}p \leq .01$, $^{*}p \leq .05$.
Note: For the Two-Tailed *P*-Value, "0.000" in the table indicates that *p*-value is less than 0.0001.

Table 4.

Standardized Structural Equation Model Results

	Estimate	*S.E.*	*Est. S.E.*	*Two-Tailed P-Value*
Psychological Distress by:				
Depression	**0.830*****	0.023	36.812	0.000
Anxiety	**0.790*****	0.026	30.640	0.000
Stress	**0.865*****	0.020	42.310	0.000
Mindfulness by:				
Observing	0.036	0.065	0.554	0.580
Describing	**0.553*****	0.046	11.980	0.000
Awareness	**0.733*****	0.034	21.727	0.000
Non-judgment	**0.748*****	0.033	22.767	0.000
Non-reactivity	**0.286*****	0.061	4.722	0.000
Self-compassion	**0.774*****	0.031	24.873	0.000
Psychological Distress on:				
Mindfulness	**-0.491*****	0.105	-4.702	0.000
Interaction	**-0.152****	0.045	-3.388	0.001
Psychological Distress on:				
Recent racism	**0.278*****	0.048	5.756	0.000
Hope on:				
Mindfulness	**0.443****	0.140	3.176	0.001
Interaction	**-0.155****	0.059	-2.654	0.008
Hope on:				
Recent racism	**0.166****	0.060	2.750	0.006
Hope with:				
Psychological Distress	-0.072	0.096	-0.746	0.456

Note. Bolded values indicate significance, $^{***}p \leq .001$, $^{**}p \leq .01$, $^{*}p \leq .05$.
Note: For the Two-Tailed *P*-Value, "0.000" in the table indicates that *p*-value is less than 0.0001.

Figures

Figure 1.

Diagram of Hypothesized Model

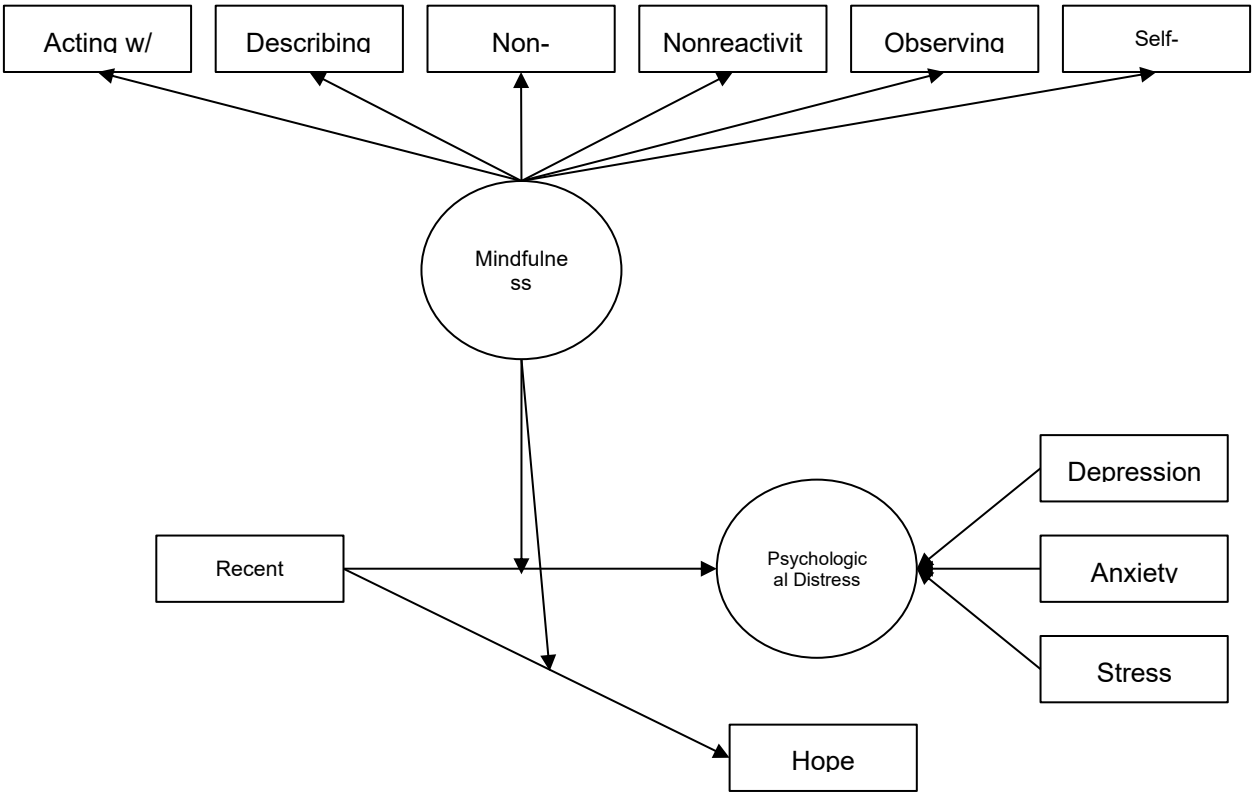


Figure 2.

Diagram of Alternative Model

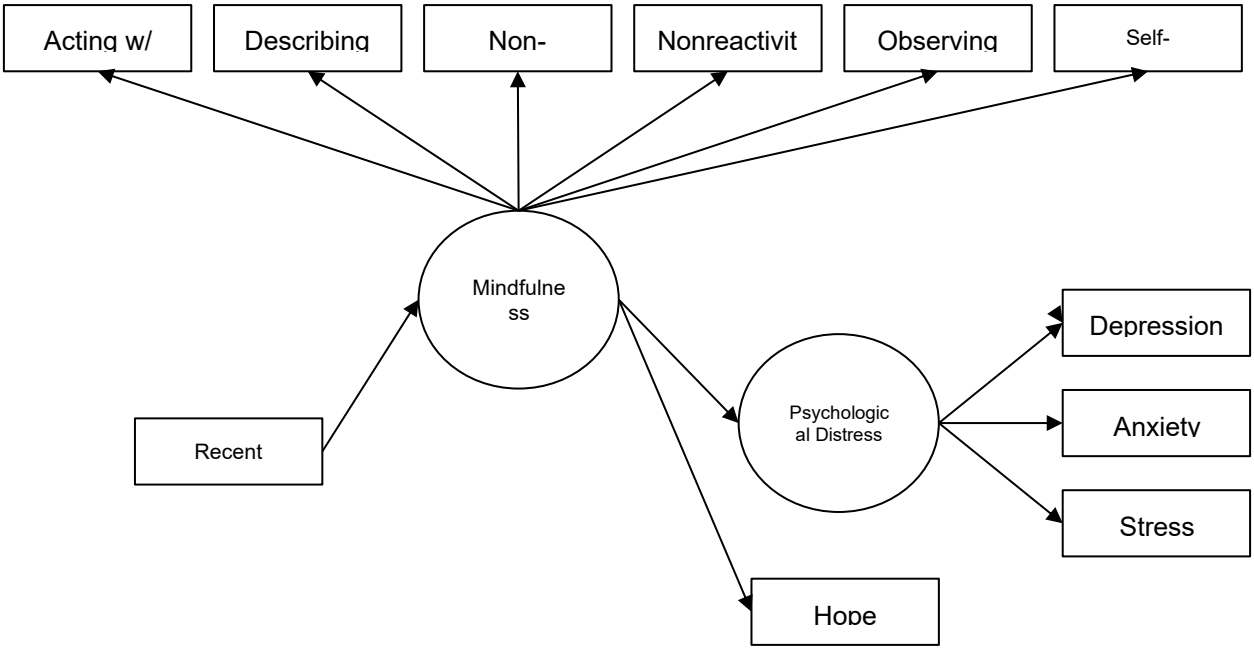
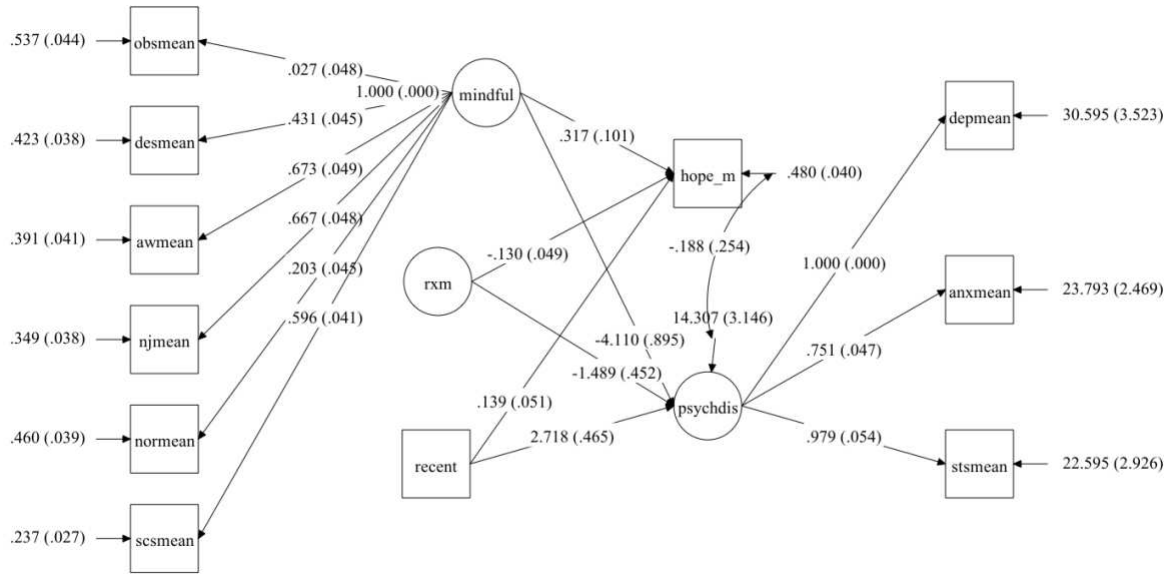


Figure 3.

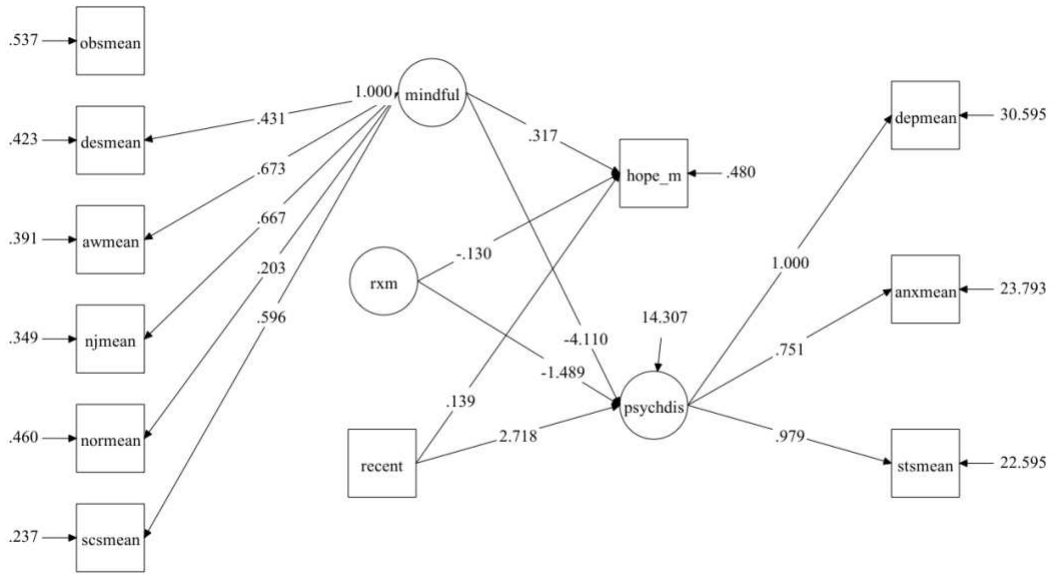
Model Parameter Estimates (S.E.).



Note. The notation in the figure above is as following:
obsmean = Observing;
desmean = Describing;
awmean = Acting with Awareness;
njmean = Non-judging of Experiences;
normean = Non-reactivity to Inner Experience;
scsmean = Self-Compassion;
mindful = Mindfulness;
rxm = Interaction term;
recent = Recent Racism Experiences;
hope_m = Hope;
psychdis = Psychological Distress;
depmean = Depression;
anxmean = Anxiety;
stsmean = Stress;
rxm = Recent Racism Experiences by Mindfulness Interaction

Figure 4.

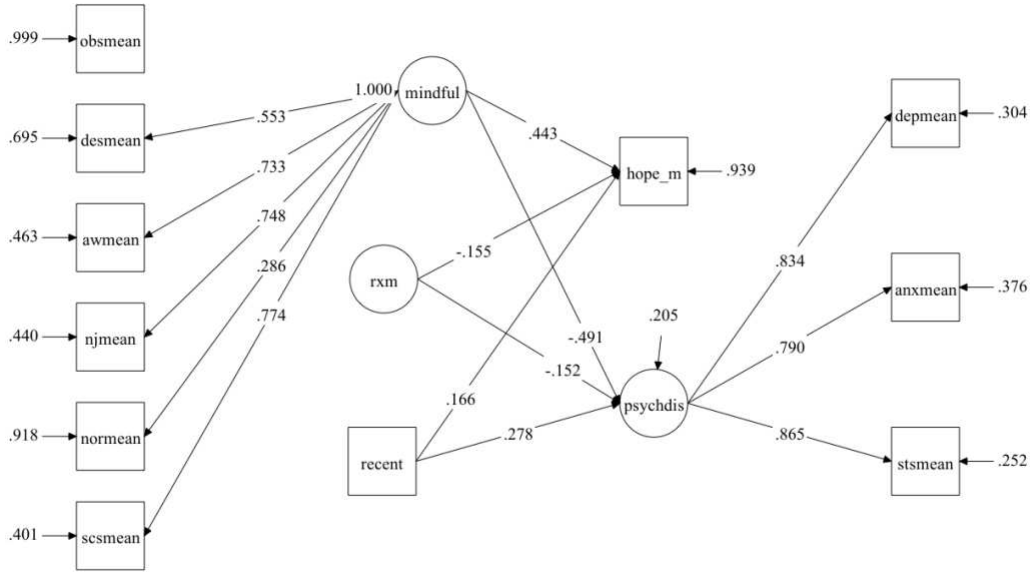
Significant Parameter Estimates



Note. The notation in the figure above is as following:
obsmean = Observing;
desmean = Describing;
awmean = Acting with Awareness;
njmean = Non-judging of Experiences;
normean = Non-reactivity to Inner Experience;
scsmean = Self-Compassion;
mindful = Mindfulness;
rxm = Interaction term;
recent = Recent Racism Experiences;
hope_m = Hope;
psychdis = Psychological Distress;
depmean = Depression;
anxmean = Anxiety;
stsmean = Stress;
rxm = Recent Racism Experiences by Mindfulness Interaction

Figure 5.

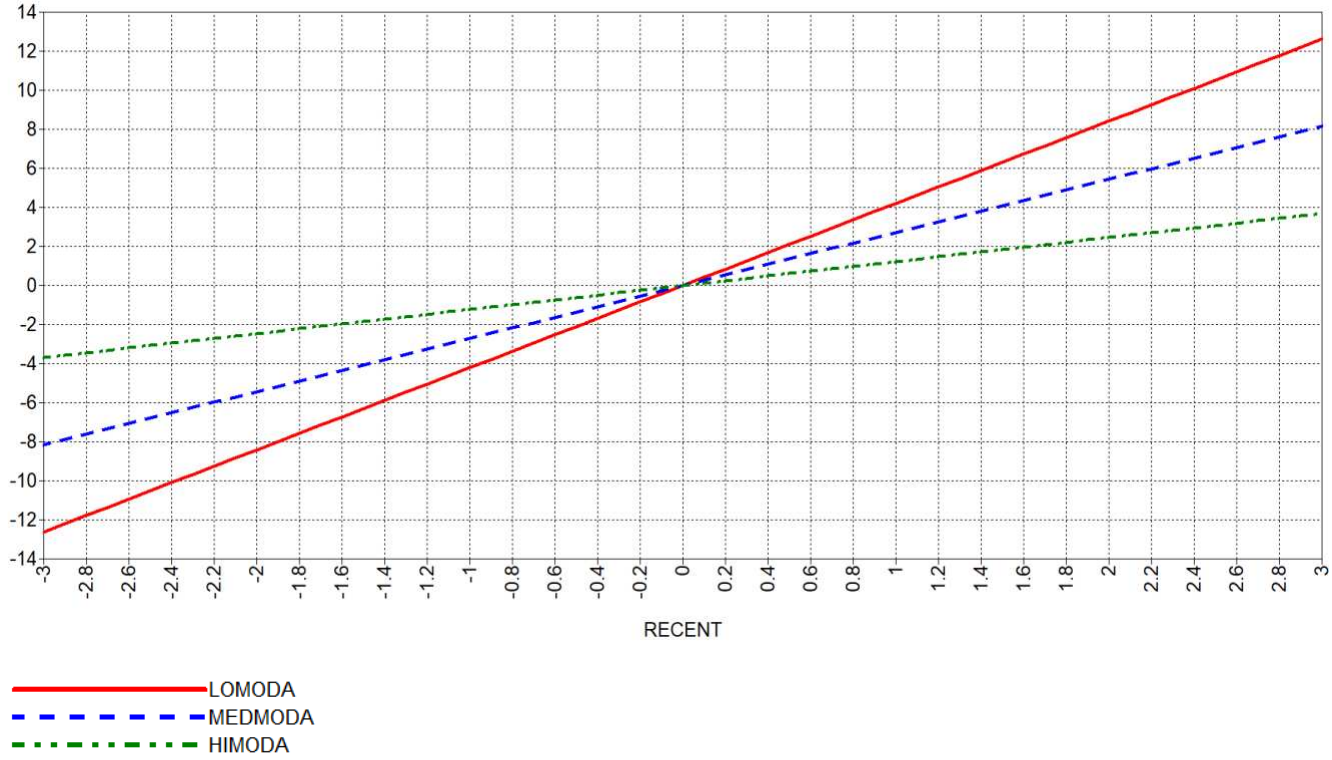
Significant Standardized Estimates



Note. The notation in the figure above is as following:
obsmean = Observing;
desmean = Describing;
awmean = Acting with Awareness;
njmean = Non-judging of Experiences;
normean = Non-reactivity to Inner Experience;
scsmean = Self-Compassion;
mindful = Mindfulness;
rxm = Interaction term;
recent = Recent Racism Experiences;
hope_m = Hope;
psychdis = Psychological Distress;
depmean = Depression;
anxmean = Anxiety;
stsmean = Stress;
rxm = Recent Racism Experiences by Mindfulness Interaction

Figure 6.

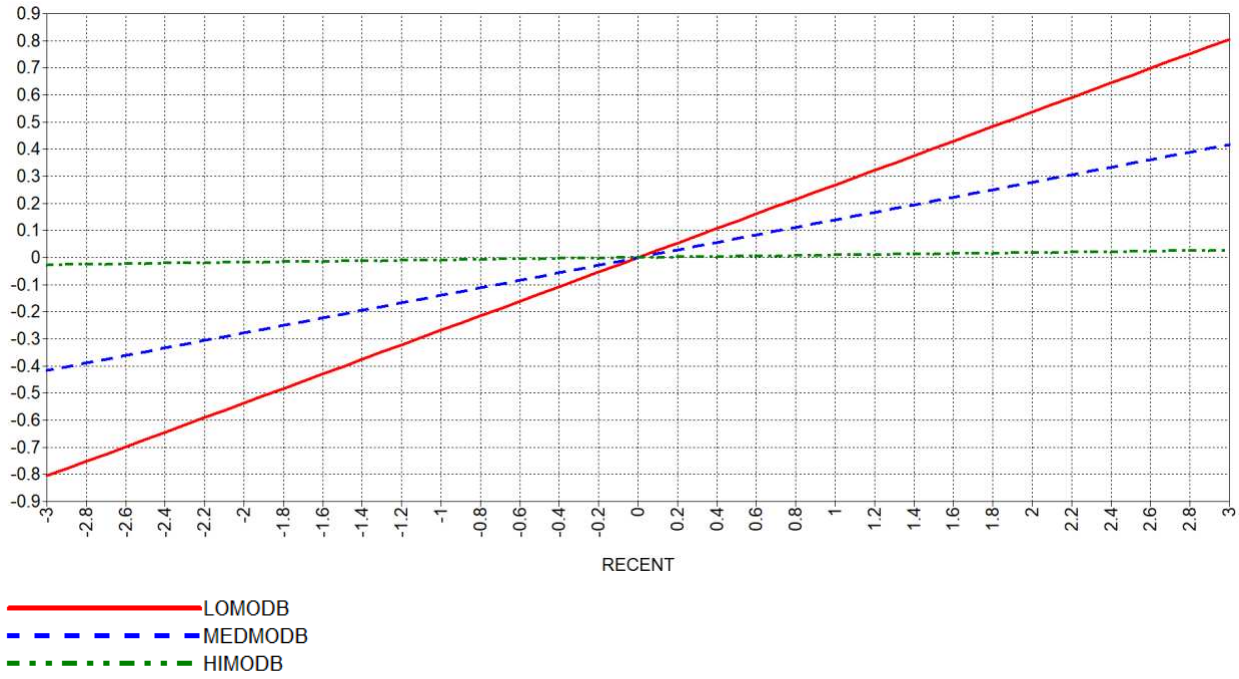
Latent interaction (latent moderation) plot for conditional effects of the latent moderator Mindfulness for the relation of Recent Racism Experiences on Psychological Distress



Note. Controlling for the moderator main effects and other effects in structural equation model.

Figure 7.

Latent interaction (latent moderation) plot for conditional effects of the latent moderator Mindfulness for the relation of Recent Racism Experiences on Hope



Note. Controlling for the moderator main effects and other effects in structural equation model.

Appendix A

Informed Consent

Consent Form
Explorations of Perceived Discrimination, Racism-related Stress, and Mindfulness

You are invited to be in a research study that focuses on racism and mindfulness. You are invited to take part in this study because you reside in the United States, are over the age of 18, and identify as a member of one of the following groups: African American/Black, Afro-Caribbean, Afro-Latine/x, Arab American Asian/Asian American (e.g., Chinese American, Asian Indian, etc.), Hispanic/Latine/x, or American Indian/Native American. Before you agree to be in the study, please read this form and ask any questions you have. **Your participation is completely voluntary. This means that whether you take part in this research is completely up to you.**

This study is being conducted by Brooke Kohler, MEd, Department of Education and Human Services, College of Education, Lehigh University, under the direction of Christopher Liang, PhD, Department of Education and Human Services, College of Education, Lehigh University.

Background Information

The purpose of this study is:
The purpose of this study is to examine how people respond to racism. The results will provide psychologists with a better understanding of racism.

Procedures
This study involves completing a survey. You will answer questions about experiences of racism over the past year and mental health.

If you agree to be in this study, this is we will ask you to do:

- Answer survey questions.
- Estimated survey time is approximately 11 minutes total.

Risks and Benefits of being in the Study

The study involves the following foreseeable risks:
Given the nature of racism, some participants may feel some psychological discomfort reflecting on experiences of racism. Further, there may be risks in taking part in this study that we do not know about. You have the right to stop the survey at any time to collect your thoughts and/or to withdraw from the study at any time. You may also skip any question(s) you find to be too uncomfortable. Participation in the survey itself presents little risk, as the items reflect questions regarding your attitudes, thoughts, beliefs, and skills.
We will do our best to protect your data during storage. However, there remains a possibility that someone could identify you. There is also the possibility that unauthorized people might access your data. In either case, we cannot reduce the risk to zero.

The benefits to participation are:
The hope is that this research can inform future mental health efforts related to the effects of racism.

Possible benefits may include deeper reflection on personal experiences related to racism, mindfulness, and mental health. Participation in this study is completely voluntary. As a participant, you have the right to withdraw at any time. You will not be penalized in any relevant relationships or standing with Lehigh University or within the educational institution with which you are affiliated or employed.

Duration

Your participation in the study involves the following time commitment:
Completion of the survey is estimated to take 11 minutes total.

Compensation

You will receive:
Participants will be compensated a rate of $2.20 per completed task, as structured by Prolific. As specified by Prolific, participants will be automatically paid upon submission approval in the form of U.S. dollars to participants via PayPal.

Confidentiality

We will do our best to protect your data during storage. However, there remains a possibility that someone could identify you. There is also the possibility that unauthorized people might access your data. In either case, we cannot reduce the risk to zero.

We will not reveal your identity in any publications, presentations, or reports about this research study. However, it may be possible for someone to recognize your response.

We will collect your information through Qualtrics. This information will be stored on the primary investigator's private computer, which is password protected. The data file, which will be on Lehigh University's Cloud (i.e., Google Drive), will also be password protected. Two-factor authentication will be used, and the data will be stored on a secure Lehigh drive. The data will only be accessible to those approved to access the data.

The research team does their best to keep your information confidential to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could access your online responses. However, this risk is similar to a person's everyday use of the internet.

This informed consent form will be kept for 3 years after the study is complete, and then it will be destroyed.

Information Sharing

The information you provide will be de-identified. This means that any information that could identify you will be removed.

If you agree to take part in this study, data will be collected from you. We would like to make your data available for other research studies that may be done in the future. Before your data are shared for other research studies, any information that could identify you will be removed. Researchers cannot easily link your identifying information to the data. Future research may be about topics similar to this study. However, research could also be about unrelated topics. These studies may be done by researchers at Lehigh University or other institutions, including commercial entities. Our goal is to make more research possible. We plan to keep your data for 3 years after the study is complete.

It is unlikely, but possible, that others (such as Lehigh University, or state or federal officials) may require us to share the information you give us to ensure the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

Contacts and Questions

The Institutional Review Board (IRB) for the protection of human research participants at Lehigh University has reviewed and approved this study. If you have questions about the research study itself, please contact Brooke Kohler (bak313@lehigh.edu) or Christopher Liang (ctl212@lehigh.edu). If you have questions about your rights or would simply like to speak with someone other than the research team about the questions or concerns, please contact the IRB at (610) 758-2871 or inirb@lehigh.edu. All reports or correspondence will be kept confidential.

You can download a copy of this information to keep for your records.

Statement of Consent

I have read the above information. I have had the opportunity to ask questions and have my questions answered. By proceeding with this study, I am providing my consent for my responses to surveys to be used in the study described.

Appendix B

General Ethnic Discrimination Scale (Landrine et al., 2006)

Instructions: We are interested in your experiences with racism. As you answer the questions below, please think about the PAST YEAR, from when you were a child to the present. For each question, please choose the number that best captures the things that have happened to you.

1= Never 2= Once in a while 3= Sometimes 4 = A lot 5 = Most of the time 6 = Almost all the time

1. How often have you been treated unfairly by **teachers and professors** because of your race/ethnic group? ____
2. How often have you been treated unfairly by your **employees, bosses and supervisors** because of your race/ethnic group? ____
3. How often have you been treated unfairly by your c**o-workers, fellow students and colleagues** because of your race/ethnic group? ____
4. How often have you been treated unfairly by **people in service jobs (by store clerks, waiters, bartenders, bank tellers and others)** because of your race/ethnic group? ____
5. How often have you been treated unfairly by strangers because of your race/ethnic group? ____
6. How often have you been treated unfairly by **people in helping jobs (by doctors, nurses, psychiatrists, case workers, dentists, school counselors, therapists, social workers and others)** because of your race/ethnic group? ____
7. How often have you been treated unfairly by **neighbors** because of your race/ethnic group? ____
8. How often have you been treated unfairly by **institutions (schools, universities, law firms, the police, the courts, the Department of Social Services, the Unemployment Office and others)** because of your race/ethnic group? ____

9. How often have you been treated unfairly by **people you thought were your friends** because of your race/ethnic group? ____
10. How often have you been **accused of or suspected of doing something wrong (such as stealing, cheating, not doing your share of the work, or breaking the law)** because of your race/ethnic group? ____
11. How often have people **misunderstood your intentions and motives** because of your race/ethnic group? ____
12. How often did you **want to tell someone off for being racist towards you but didn't say anything?** ____
13. How often have you been **really angry about something racist that was done to you?** ____
14. How often have you been **forced to take drastic steps** (such as **filing a grievance, filing a lawsuit, quitting your job, moving away, and other actions)** to deal with some racist thing that was done to you? ____
15. How often have you **been called a racist name**? ____
16. How often have you **gotten into an argument or a fight about something racist that was done to you or done to another member of your race/ethnic group?** ____
17. How often have you been **made fun of, picked on, pushed, shoved, hit, or threatened with harm** because of your race/ethnic group? ____
18. How ***different*** would your life be now if you ***HAD NOT BEEN*** treated in a racist or unfair way ____

Appendix C

Five Facet Mindfulness Questionnaire (Baer et al., 2006)

Five Facet Mindfulness Questionnaire (FFMQ; Baer, et al., 2006).

Please rate each of the following statements with the number that best describes *your own opinion* of what is *generally true for you*.

	Never or very rarely true	**Rarely true**	**Sometimes true**	**Often true**	**Very often or always true**
1. When I'm walking, I deliberately notice the sensations of my body moving.	1	2	3	4	5
2. I'm good at finding words to describe my feelings.	1	2	3	4	5
3. I criticize myself for having irrational or inappropriate emotions.	1	2	3	4	5
4. I perceive my feelings and emotions without having to react to them.	1	2	3	4	5
5. When I do things, my mind wanders off and I'm easily distracted.	1	2	3	4	5
6. When I take a shower or bath, I stay alert to the sensations of water on my body.	1	2	3	4	5
7. I can easily put my beliefs, opinions, and expectations into words.	1	2	3	4	5

8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.	1	2	3	4	5
9. I watch my feelings without getting lost in them.	1	2	3	4	5
10. I tell myself I shouldn't be feeling the way I'm feeling.	1	2	3	4	5
11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.	1	2	3	4	5
12. It's hard for me to find the words to describe what I'm thinking.	1	2	3	4	5
13. I am easily distracted.	1	2	3	4	5
14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.	1	2	3	4	5
15. I pay attention to sensations, such as the wind in my hair or sun on my face.	1	2	3	4	5
16. I have trouble thinking of the right words to express how I feel about things.	1	2	3	4	5
17. I make judgments about whether my thoughts are good or bad.	1	2	3	4	5
18. I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5

19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.	1	2	3	4	5
20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.	1	2	3	4	5
21. In difficult situations, I can pause without immediately reacting.	1	2	3	4	5
22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.	1	2	3	4	5
23. It seems I am "running on automatic" without much awareness of what I'm doing.	1	2	3	4	5
24. When I have distressing thoughts or images, I feel calm soon after.	1	2	3	4	5
25. I tell myself that I shouldn't be thinking the way I'm thinking.	1	2	3	4	5
26. I notice the smells and aromas of things.	1	2	3	4	5
27. Even when I'm terribly upset, I can find a way to put it into words.	1	2	3	4	5
28. I rush through activities without being really attentive to them.	1	2	3	4	5
29. When I have distressing thoughts or images, I am able just to notice them without reacting.	1	2	3	4	5

30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.	1	2	3	4	5
31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.	1	2	3	4	5
32. My natural tendency is to put my experiences into words.	1	2	3	4	5
33. When I have distressing thoughts or images, I just notice them and let them go.	1	2	3	4	5
34. I do jobs or tasks automatically without being aware of what I'm doing.	1	2	3	4	5
35. When I have distressing thoughts or images, I judge myself as good or bad depending what the thought or image is about.	1	2	3	4	5
36. I pay attention to how my emotions affect my thoughts and behavior.	1	2	3	4	5
37. I can usually describe how I feel at the moment in considerable detail.	1	2	3	4	5
38. I find myself doing things without paying attention.	1	2	3	4	5
39. I disapprove of myself when I have irrational ideas.	1	2	3	4	5

Appendix D

Self-Compassion Scale-Short Form (SCS-SF; Raes et al., 2011)

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. Indicate how often you behave in the stated manner, using the following scale:

Almost Never = 1 2 3 4 Almost Always = 5

1. When I fail at something important to me I become consumed by feelings of inadequacy.
2. I try to be understanding and patient towards those aspects of my personality I don't like.
3. When something painful happens I try to take a balanced view of the situation.
4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
5. I try to see my failings as part of the human condition.
6. When I'm going through a very hard time, I give myself the caring and tenderness I need.
7. When something upsets me I try to keep my emotions in balance.
8. When I fail at something that's important to me, I tend to feel alone in my failure
9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm disapproving and judgmental about my own flaws and inadequacies.
12. I'm intolerant and impatient towards those aspects of my personality I don't like.

Appendix E

Depression, Anxiety and Stress Scale - 21 Items (DASS-21; Lovibond & Lovibond, 1995)

Instructions: 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

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

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

3 Applied to me very much or most of the time

_____1 (s) I found it hard to wind down

_____2 (a) I was aware of dryness of my mouth

_____3 (d) I couldn't seem to experience any positive feeling at all

_____4 (a) I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)

_____5 (d) I found it difficult to work up the initiative to do things

_____6 (s) I tended to over-react to situations

_____7 (a) I experienced trembling (e.g. in the hands)

_____8 (s) I felt that I was using a lot of nervous energy

_____9 (a) I was worried about situations in which I might panic and make a fool of myself

_____10 (d) I felt that I had nothing to look forward to

_____11 (s) I found myself getting agitated

_____12 (s) I found it difficult to relax

_____13 (d) I felt down-hearted and blue

_____14 (s) I was intolerant of anything that kept me from getting on with what I was doing

_____15 (a) I felt I was close to panic

_____16 (d) I was unable to become enthusiastic about anything

_____17 (d) I felt I wasn't worth much as a person

_____18 (s) I felt that I was rather touchy

_____19 (a) I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)

_____20 (a) I felt scared without any good reason

_____21 (d) I felt that life was meaningless

Appendix F

The Future Scale (Hope Scale; Snyder et al., 1991)

Note: The Future Scale (Hope Scale; Snyder et al., 1991) is copyrighted and therefore available upon request.

Appendix G

Demographic Questions

What is your age? (Please fill in)	Age_____
What is your racial or ethnic background? (check all that apply)	African American/Black Afro-Caribbean Afro-Latine/x Asian/Asian American (e.g., Chinese American, Asian Indian, etc.) Arab/Arab American American Indian/Native American/ Indigenous Hispanic/Latine/x Middle Eastern/North African Pacific Islander Other (please fill in):____
With which gender do you most identify? (check all that apply)	Man Woman Genderqueer Gender Nonconforming Gender Nonbinary Prefer to self describe (please fill in): _____
With which sexual orientation do you most identify? (check all that apply)	Gay/Lesbian Bisexual Heterosexual Prefer to self describe (please fill in): _____

Appendix H

Attention/Truthfulness Checks

1. We want to test your attention, so please select item 4. 1 2 3 4
2. We want to test your attention, so please select item 2. 1 2 3 4
3. We want to test your attention. What are three things you see right now? (open-ended)
4. We want to test your attention. What was the name of your first pet? (open-ended)

Vita

Brooke A. Kohler, M.Ed., M.A.
College of Education
Lehigh University
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EDUCATION

2019 – present Lehigh University, Bethlehem, PA
Doctoral candidate, Counseling Psychology
Dissertation: Explorations of Perceived Discrimination, Racism, and Mindfulness

2019 – 2022 Lehigh University, Bethlehem, PA
MEd, Human Development, January 2022
Master's Thesis: Explorations of Anti-racist Frameworks in Mindfulness Interventions

2014 – 2015 Lehigh University, Bethlehem, PA
MA, Environmental Policy Design, May 2015
Award: Lehigh University Community Fellowship

2009 – 2013 Lafayette College, Easton, PA
Bachelor of Arts with Honors, Anthropology & Sociology, May 2013
Magna cum laude
Awards: Phi Beta Kappa National Honors Society, 2013
Mellon Fellow Scholarship: Spring 2011 - Fall 2011
Dean's List; Student Scholar-Athlete

CLINICAL EXPERIENCE

July 2024 – present University of Delaware Center for Counseling and Student Development, Newark, DE
Doctoral Internship in Health Service Psychology
Supervisor: Katie Bekkeli, PsyD, LP, ABPP

- Conduct triage/intake interviews, risk assessment, brief individual psychotherapy, group psychotherapy, outreach, consultation, and crisis postvention response with diverse population of undergraduate and graduate students.
- Conduct group screenings, treatment planning, on-call duties, and assessment of

Counseling Center Assessment of Psychological Symptoms (CCAPS).
- Present case conceptualizations and receive robust individual supervision, group supervision, group supervision of group psychotherapy, multicultural training, and didactic training.
- Participate in departmental meetings, staff meetings and training seminars, and engagement with multidisciplinary staff.

2022 – 2024 Counseling & Psychological Services, Lehigh University, Bethlehem, PA
Advanced practicum trainee

Supervisor: Amanda Peterson, PhD
- Conducted brief individual psychotherapy, group psychotherapy, outreach, and teletherapy with undergraduate and graduate students.
- Conducted sports psychology interventions, consultations, and observations at the team and individual levels, as well as interventions and consultation with coaching staff and athletic administration.
- Co-facilitated Knit2gether, an in-person outreach group that supports student learning and exploration through learning how to knit.
- Conducted intake sessions, group screens, safety/risk assessments, and assessment of Counseling Center Assessment of Psychological Symptoms (CCAPS), VQ/Cognitive and Affective Mindfulness Scale/Flourishing Scale, and Minnesota Multiphasic Personality Inventory (MMPI).
- Presented case conceptualizations and treatment plans, consulted with colleagues, and
- Received robust individual supervision, group supervision, group supervision of group psychotherapy, sports psychology supervision, as well as didactic training.

2020 – 2022 Counseling & Psychological Services, Kutztown University, Kutztown PA
Practicum trainee

Supervisor: Aimee Adams, PhD
- Conducted short-term individual psychotherapy and teletherapy with undergraduate students.
- Served as a group co-leader for mindfulness-based group psychotherapy, including leading groups through a trauma-informed yoga practice.
- Developed and co-led trauma-informed yoga group, pilot study
- Conducted intake sessions, group screens, safety/risk assessments, and assessment of Counseling Center Assessment of Psychological Symptoms (CCAPS).
- Presented case conceptualizations and treatment plans.
- Received robust weekly individual and group supervision, as well as didactic training • Training and application of tele-mental health services in response to the COVID-19 pandemic.

SUPERVISION EXPERIENCE

Fall 2021 – Spring 2022 College of Education, Lehigh University, Bethlehem, PA

Supervisor trainee

Supervisor: Bethany Detwiler, PhD

- Conducted weekly individual supervision with graduate students in the Counseling and Human Services program and the International School Counseling program.
- Presented supervisee case presentations.
- Developed and implemented supervision theoretical orientation.
- Received vigorous weekly group supervision to enhance supervisory skills.

RESEARCH EXPERIENCE

2019 – 2024 Gender, Race, Inclusion, and Trauma Lab, Lehigh University
Graduate research assistant

Supervisor: Christopher Liang, PhD

- Facilitated the implementation of trauma-responsive core leadership teams in elementary and secondary schools, including consultation, coaching services and multi-tiered intervention support with school leadership and staff, leading of monthly professional development and training meetings, and provision of curated resources to school personnel about trauma-responsive care.
- Developed and implemented psychoeducational trainings for elementary and secondary school educators to increase emotional awareness, increase knowledge about trauma and adverse childhood experiences, strengthen implementation of multi-tiered trauma-informed and self-care practices, cultivate awareness around personal and social identity development, and for educators to practice mindfulness and stress reduction.
- Developed multiple collaborative community-driven virtual platforms to provide mental health, social emotional learning, and mindfulness resources and lesson plans to elementary and secondary students, teachers and educators, and parents and caregivers throughout the COVID-19 pandemic.
- Conducted qualitative and quantitative research on trauma-informed interventions in school settings, including consensual qualitative research, focus groups, and walk-through audits.
- Proficient in AMOS, PROCESS, SAS, SPSS

Spr. 2011 – Fall 2011 Lafayette College, Easton PA
Mellon Fellow Scholarship student researcher

Supervisor: Crystal Fortwangler, PhD

- Studied the *iguana iguana* (green iguana) through formal and informal interviews, literature review, and population census tracking.
- Researched the account of the *iguana iguana* among the Caribbean islands and whether it was delegated a “native, non-native, or invasive species,” based on historical records, legislative status, and social attitudes of local populations.

- Obtained insight into how complex human thoughts and opinions based on historical facts and social mores influence human behavior and policy design.

2013 Buy Fresh Buy Local of the Greater Lehigh Valley, Easton, PA
Co-principal investigator

- Conducted sixteen formal interviews, documented research and survey analysis for a grant-awarded report funded by The Reinvestment Fund to assess the market potential of over forty institutional wholesale buyers across the Greater Lehigh Valley region.

2013 Nurture Nature Center, Easton, PA
Researcher

- Conducted extensive literature review for a grant-awarded report funded by U.S. Department of Housing and Urban Development and the Farmers' Market Promotion Program (FMPP) Grant Program, Agricultural Marketing Service, USDA to evaluate local community gardens within the Lehigh Valley region.

08/2012 – 2013 Lafayette College Anthropology & Sociology Department, Easton, PA
Department Assistant

- Assisted twelve faculty members daily with research and curricular activities, ranging from editing, exploratory research, and daily departmental operations.

TEACHING EXPERIENCE

Summer 2024	Instructor, Lehigh University, College of Education Summer Institute, Bangkok, Thailand Course (Graduate Level): CPSY 438: School-based Small-Group Counseling *Supervision support*: Christopher Liang, PhD
Summer 2023	Instructor, Lehigh University, College of Education Summer Institute, Athens, Greece Course (Graduate Level): CPSY 438: School-based Small-Group Counseling *Supervision support*: Christopher Liang, PhD
Summer 2023	Teaching Apprenticeship, Lehigh University, College of Education Summer Institute, Athens Greece Course (Graduate Level): CPSY 452: Helping Skills in International Settings *Supervision support*: Christopher Liang, PhD
Summer 2022	Co-Instructor, Lehigh University, College of Education Bethlehem, PA

Course (Graduate Level): CPSY 438: School-based Small-Group Counseling
Co-instructor: Teresa Rosenberger, MEd, MAT
Supervision support: Christopher Liang, PhD

Fall 2021 Teaching Apprenticeship, Lehigh University, College of Education Bethlehem, PA
Course (Graduate Level): CPSY 455: Counseling Issues & Skills: Advanced Techniques in Counseling
Supervisor: Nicole Johnson, PhD

FULL EMPLOYMENT HISTORY/PROFESSIONAL EXPERIENCE

2016 – 2019 Shanthi Project, Easton, PA
Director of Mindfulness Programs and Lead Teacher

- Managed trauma-informed mindfulness programming and classroom teacher in-service training throughout the Easton, Bethlehem, Allentown, Phillipsburg, and Pocono Mountain School Districts, and Colonial Intermediate Unit 20, to provide programming to 120+ classrooms for at-risk student youth.
- Taught trauma-informed mindfulness and yoga to hundreds of students and teachers to build self-awareness and enhance self-regulation, resilience, and empathy.
- Led teacher in-service and professional development trainings on trauma-informed best practices, integration of mindfulness practices into classroom settings, mindfulness-based trauma-informed de-escalation techniques, and self-care strategies for teachers.
- Developed two 8-week trauma-informed mindfulness curricula for mindfulness instructors, as well as Pre-K & kindergarten and middle-school teachers to implement sustainable mindfulness initiatives and self-care strategies in the classroom.
- Wrote annual and mid-year reports as primary contact for United Way GLV grant, evaluating program outcome measures for school year 2018-2019.
- Collaborated as a community partner with Dr. Mark Sciutto of Muhlenberg College's psychology department, providing insight for "Mindfulness Intervention Research Seminar" course, working to evaluate outcomes for a range of ongoing mindfulness-based interventions in schools, correctional facilities, and residential treatment facilities.

05/2018 – 2019 ArtSmart, Banana Factory, Bethlehem, PA
Teaching Artist

- Taught 8-week trauma-informed yoga, mindfulness, and art after-school program to local middle-school students to enhance self-awareness, emotional regulation, physical movement, and artistic expression.
- Led professional development training on trauma-informed best practices, mindfulness, and self-care as part of the Any Given Child Bethlehem program, facilitated through The Kennedy Center, to best prepare Teaching Artists for work in classroom settings throughout the Bethlehem Area School District.

05/2018 – 2022 Brooke Kohler LLC, Easton, PA
Self-employed

- Independent contractor teaching hundreds of hours of yoga, mindfulness, and stand-up paddleboard for adults and children at various yoga studios, community organizations, and small businesses throughout the Lehigh Valley region and eastern NJ.

2015 – 2016 The Seed Farm, Allentown, PA
Development Director

- Planned and managed major fundraising events, raising money to support the Seed Farm's new farmer training and agricultural business incubator.
- Researched and wrote grants to obtain potential income sources, including foundation, corporate, and major donor prospects.
- Communicated with various stakeholders, including donors and sponsors, program participants, alumni, volunteers, and the surrounding community to grow the next generation of local farmers.

06/2013 – 2015 Nurture Nature Center, Easton, PA
Program Coordinator

- Assisted senior staff with grant-writing, editing and project implementation of four community-based social science research projects, including works awarded by National Oceanic and Atmospheric Administration (NOAA), NOAA Sea Grant, Institute of Museum and Library Services, and Department of Environmental Protection.
- Collaborated in planning and coordinating over 460 environmental programs and events that engaged over 11,000 visitors.
- Created and executed twenty-six adult programs and children's programs that engaged over five hundred visitors.
- Managed over thirty-five volunteers and interns that developed and created four interdisciplinary environmental programs.
- Fostered community partner relationships from all levels of city government, civic organizations, school districts, and community residents to increase partnership and community resiliency within the city of Easton and Lehigh Valley region.

05/2013 – 08/2013 LaFarm, Lafayette College Community Garden & Working Farm, Easton, PA
Assistant Farmer

- Assisted in the cultivation of fresh and healthful local foods for Lafayette College's sustainable food system model, performing outdoor and indoor farming tasks to maintain an organic farm and garden.

01/2013 – 05/2013 Landis Community Outreach Center, Lafayette College, Easton, PA
Student Coordinator

- Managed volunteer program that generated student volunteer opportunities, such as environmental program development, community outreach and community need assessment research at the Nurture Nature Center.

2010 – 2013 Academic Tutoring & Training Information Center, Lafayette College, Easton, PA
Student-Athlete Peer Mentor

- Selected and trained to work with first-year student-athletes to adjust to college life.
- Counseled twelve first-year student athletes weekly on personal and academic issues.
- Collaborated with supervisor and fellow peer mentors in weekly supervision meetings.
- Assisted in interview selection process for additional student-athlete peer mentors.

2012 John's Folly Learning Center, St. John, U.S. Virgin Islands
Educator

- Taught two daily classes on water conservation to fifteen local students 5-15 years old.
- Researched and developed curriculum to appeal to students of a wide range of ages.

PEER-REVIEWED PUBLICATIONS

Liang, C. T. H., Gutekunst, M. H. C., Liu, L., Rosenberger, T., & **Kohler**, B. A. (2023). Formative evaluation of peace spaces in a middle school: Teacher perceptions and student usage *Psychology in the Schools*.

Liang, C. T. H., Gutekunst, M. H. C., **Kohler**, B. A., Rosenberger, T., Mui, V. W., Williams, K., Safi, J. M. (2023). The formation and functions of school-based Trauma Leadership Teams: A preliminary qualitative study. *Psychology in the Schools*.

Liang, C. T. H., Liu, L., Rocchino, G. H., **Kohler**, B. A., & Rosenberger, T. (2020). Trauma-informed care training for educators: Some preliminary evidence. *Journal of Prevention and Health Promotion.*

BOOKS

C. T. H. Liang, S. P. Harrell, & B. A. **Kohler** (eds.; in press), *Radical mindfulness: Promoting racial healing and systems-level change*. Washington DC: American Psychological Association Publishing.

CHAPTERS IN BOOKS

Liang, C. T. H., **Kohler**, B. A., Williams, K., Wojtowicz, O. H., & Sosa, R. (under review). Radical mindfulness for healing. In C. T. H. Liang, S. P. Harrell, & B. A. Kohler (eds.), *Radical mindfulness: Promoting racial healing and systems-level change*. Washington DC: American Psychological Association Publishing.

Kohler, B. A., & Luppino, B. (in progress). Radical mindfulness in a White American context. In C. T. H. Liang, S. P. Harrell, & B. A. Kohler (eds.), *Radical mindfulness: Promoting racial healing and systems-level change*. Washington DC: American Psychological Association Publishing.

Liang, C. T. H., **Kohler**, B. A., Williams, K., Rosenberger, T., Safi, J. M., & Gutekunst, M. (in press). Building race-centered trauma-responsive schools: One path toward justice in education. In S. Hage (Ed.), *An Ounce of Prevention*. Cambridge University Press.

OTHER PUBLICATIONS

Kohler, B. A. (2013). *Wise About Water: Views and Perceptions of Water Use and Consciousness in St. John, U.S. Virgin Islands*. (Honors thesis). Lafayette College, Easton, PA.

Prior, L., & **Kohler**, B. (2013) *Institutional Wholesale Markets for Local Produce in the Greater Lehigh Valley*. Greater Lehigh Valley Chapter of Buy Fresh Buy Local, Easton, PA.

Schmidt, L., & **Kohler**, B. (2013). Community Gardens. *Assessment Report: Lehigh Valley Local Food Economy*. Nurture Nature Center, Easton, PA.

PROFESSIONAL PRESENTATIONS

Refereed Presentations:

Kohler, B. A., & Liang, C. T. H. (August 2023). Explorations of anti-racist frameworks in mindfulness interventions: A qualitative study of doctoral student and psychologists' perceptions. Paper presented at Annual Convention of the American Psychological Association. Washington DC.

Liang, C. T. H., **Kohler, B.**, Rosenberger, T., Williams, K., & Safi, J. (March 2022). Systems of Liberation: Building culturally relevant trauma responsive symptoms. Symposium presentation at 19th Hawai`i International Summit on Preventing, Assessing, & Treating Trauma Across the Lifespan. Honolulu, Hawai`i.

Kohler, B. A., Liang, C.T.H., Rosenberger, T., Williams, K. (January 2022). Preliminary Findings: Exploration of mindfulness-based interventions and anti-racist frameworks in counseling. Poster session presented at National Multicultural Virtual Conference and Summit.

Liang, C. T. H., Gutekunst, M. Lian, L., **Kohler, B.**, Rosenberger, T., Rocchino, G., & Mui,

V. (January 2022). Trauma-Responsive Schools: A Path Toward Addressing Inequities in Schools. Symposium presented at National Multicultural Virtual Conference and Summit.

Invited Presentations and Workshops:

Liang, C. T. H., **Kohler**, B. A., & Sandilos, L. (August 2023). Building a Trauma-Leadership Team. Presentation to school staff. Raub Middle School. Allentown, PA.

Liang, C. T. H., **Kohler**, B. A., & Sandilos, L. (May 2023). Educators to the Center: Intentional School Wellness. Presentation to school staff. Raub Middle School. Allentown, PA.

Kohler, B. A., and Williams, K. (September 2021 – May 2022). Mindfulness for Educators: Self-Care and Mindfulness Application in the Classroom. Series of ten monthly experiential workshops for school personnel. Easton Area Middle School, Easton, PA.

Kohler, B. A., & Smith, M. (January – March 2021). Mindfulness for Educators Self-Care Series. Series of ten weekly virtual experiential workshops for school personnel. Easton Area School District, Easton, PA.

Workshop Topics:

- Breath Awareness/Grounding
- Stress Signature/Body Scan
- Triangle of Awareness/S.T.O.P. Practice
- Guided Imagery, Mountain Mindfulness Practice
- Loving-Kindness
- Five Senses Check/Mindful Movement & Walking
- Soften, Soothe, Allow, or R.A.I.N./Self-Compassion
- Awareness of Sound Practice/Mindful Communication/Silence
- Gratitude/Web of Life Interconnectedness
- Self-Care Practice/G.R.A.C.E.

Kohler, B. A. (December 2020 - January 2021). Mindfulness for Educators. Virtual presentation to school staff. Easton Area Middle School, Easton, PA.

Liang, C. T. H., & **Kohler**, B. (November 2020). Trauma Responsive Schools for Diversity, Equity, and Inclusion. Virtual presentation to school staff. Easton Area Middle School, Easton, PA.

Liu, L., **Kohler**, B. A., & Rosenberger, T. (August 2020). IU20 Trauma-Informed Care, Self-Care, and COVID Training. Virtual presentation to school and intermediate unit staff. Intermediate Unit 20, Bethlehem, PA.

Liang, C. T. H., **Kohler**, B., Rosenberger, T. (August 2020). Diversity and Equity in Schools through an inclusive Trauma-Informed Approach. Online seminar presentation to school staff, Resilient Lehigh Valley partners. Resilient Lehigh Valley, Allentown, PA.

Liang C. T. H., **Kohler**, B., Elam-Snowden, T., Rosenberger, T., Lipp, N., & Beachy, S. (August 2020). School Counseling in 2020: A Tale of Twin Crises, Getting Ready for the New Normal. Virtual presentation to school counselors. Easton Area School District, Easton, PA.

Liang, C. T. H., Bomgardner, G., Rocchino, G., Liu, L., Rosenberger, T., **Kohler**, B. A**.**, Lipp, N., Mui, V., & Gaier, K. (May-July 2020). Training of Trauma Educators: Introductions and Expectations. Series of six virtual presentations to school personnel. Resilient Lehigh Valley, Bethlehem, PA.

Presentation Topics:

- Training of Trauma Trainers, Introduction and Expectations
- Moving the Needle through In-Service and Team-Based Work
- Centering Teacher Well-Being and Teacher-Student Relationships
- Strategies of Trauma-Informed Care
- Training of Trauma Trainers, Action Plans and Workshops
- Training of Trauma Trainers, Wrap Up and Reflections

Kohler, B. (January 2020). Trauma-Informed Training Workshop. Presentation to mindfulness teachers at non-profit organization. Shanthi Project, Allentown, PA.

Kohler, B. (2015). *Nurture Nature Center*. Poster session presented at "Community Fellows Poster Session," Lehigh University, Bethlehem, PA.

Kohler, B. (2015). *Growing the Greenway: Urban Environmental Policy Workshop*. Lehigh University.

Kohler, B. (2015). *Presentations on The Management and Resolution of Resource-Based Environmental Conflicts*. Poster session presented at Lehigh University, Bethlehem, PA.

Edmonds, S., **Kohler**, B. A., & Ingrao, J. (2014). *The Lafayette Sustainable Food Loop: LaFarm, Community and Undergraduate Sustainability*. Poster session presented at Lehigh Valley Association of Independent Colleges Campus Sustainability Conference, Lehigh University, Bethlehem, PA.

PUBLICATIONS IN PROGRESS

Kohler, B. A., & Liang, C. T. H. (in preparation). Explorations of Anti-racist Frameworks in Mindfulness-based Interventions.

PRODUCTS

Consultant *Creating Calm, Together*, Resilient Lehigh Valley April-July 2020

- Collaborated with community partners to create a Google Site entitled "Creating Calm, Together" that provided social-emotional learning and mindfulness-based curricula to support K-12 educators and caregivers in response to the COVID-19 pandemic.
- Researched and reviewed resources for educators, students, and caregivers.
  Supervisor: Dr. Chris Liang, Ph.D.
- *Site:* https://sites.google.com/lehigh.edu/resilientlehighvalley

Consultant *Resources for Parents and Educators*, Resilient Lehigh Valley April-July 2020

- Co-led the planning and development of two Trello boards that provided COVID-19 mental health and virtual learning resources to K-12 educators and caregivers.
- Researched and reviewed resources for educators and caregivers.
  Supervisor: Dr. Chris Liang, Ph.D.
  Site: https://trello.com/b/rmBdDTYo/resources-for-caregivers-and-educators
  Site: https://trello.com/b/MM16xTrV/resilientlv-recursos

MEDIA PRESENCE

https://ed.lehigh.edu/news-events/news/gender-race-inclusion-and-trauma-lab-regional-partners-provide covid-19-resources

PROFESSIONAL AFFILIATIONS

American Psychological Association
Member, *2019* – Present

Division 17 - Society of Counseling Psychology
Member, 2019 – Present
Student affiliate, SAS 2019 – 2021

Division 45 – Society for the Psychological Study of Culture, Ethnicity and Race
Member, 2021- 2022

Pennsylvania Psychological Association
Member, 2022 – Present

ACTIVITIES AND LEADERSHIP

Counseling Psychology Department Faculty Search Committee, 2023-2024
Suicide Prevention Training, 2019
Multicultural and Diversity Training Workshops, 2010-2015, 2019
Emile Durkheim Society Member, Vice President, and President, 2010-2013
Division 1 Track and Field Team Varsity Athlete, 2009-2013
Selected as a Lafayette Leadership Education Committee Member, 2011
Selected and trained as a Kaleidoscope Social Justice Peer Educator, 2011
Track and Field Varsity Student Athlete, Lafayette College, 2009-2013

Yoga and Mindfulness Teaching Certifications

200-Hour In-Depth Yoga Study & Teacher Certification Program, 2016
ChildLight® Yoga Instructor, Basic Children's Yoga 2016
ChildLight® Yoga Instructor, Teens & Tweens Yoga, 2017
ChildLight® Yoga Instructor, Trauma-Informed, 2018
ChildLight® Yoga Instructor, Children & Teens with Special Needs, 2018
Mindful Schools, Mindfulness Fundamentals, 2016
Mindful Schools, Mindful Educator Essentials, 2017
Mindful Schools, Mindful Communication, 2019
14-Hour Trauma-Informed Yoga & Mindfulness Training, Shanthi Project, 2016
18-Hour Trauma-Informed Yoga Training, Solemarch, 2019
25-Hour Stand Up Paddleboard Yoga, 2016
PaddleFit Core, 2017