Graduate Doctoral Dissertations   Doctoral Dissertations and Masters Theses

8-2020

The Effectiveness of a Mindfulness, Acceptance, Valued Action, and Flexible Coping Intervention for Race-Based Stress on Momentary Coping and Distress Symptoms

Jennifer Honculada Martinez

THE EFFECTIVENESS OF A MINDFULNESS, ACCEPTANCE, VALUED ACTION,

AND FLEXIBLE COPING INTERVENTION FOR RACE-BASED STRESS ON

MOMENTARY COPING AND DISTRESS SYMPTOMS

A Dissertation Presented

by

JENNIFER HONCULADA MARTINEZ

Submitted to the Office of Graduate Studies,
University of Massachusetts Boston,
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2020

Clinical Psychology Program

THE EFFECTIVENESS OF A MINDFULNESS, ACCEPTANCE, VALUED ACTION,
AND FLEXIBLE COPING INTERVENTION FOR RACE-BASED STRESS ON
MOMENTARY COPING AND DISTRESS SYMPTOMS

A Dissertation Presented
by
JENNIFER HONCULADA MARTINEZ

Approved as to style and content by:

_____
Lizabeth Roemer, Professor
Chairperson of Committee

_____
Tahirah Abdullah, Associate Professor
Member

_____
Karen Suyemoto, Professor
Member

_____
Rhiana Wegner, Assistant Professor
Member

_____
Sarah Hayes-Skelton, Program Director
Clinical Psychology Program

_____
Lizabeth Roemer, Chair
Clinical Psychology Program

ABSTRACT

THE EFFECTIVENESS OF A MINDFULNESS, ACCEPTANCE, VALUED ACTION,

AND FLEXIBLE COPING INTERVENTION FOR RACE-BASED STRESS ON

MOMENTARY COPING AND DISTRESS SYMPTOMS

August 2020

Jennifer H. Martinez, B.S., Florida State University
M.A., University of Massachusetts Boston
Ph.D., University of Massachusetts Boston

Directed by Professor Lizabeth Roemer

Racism and racism-related stress has been shown to be associated with negative mental health outcomes among people of color (POC), such as increased depressive and anxious symptoms (e.g., Williams, Neighbors, & Jackson, 2003). Further, approximately up to 98% of all POC report experiencing a racist experience over the past year and in their lifetime, indicating that racism-related stress is a chronic experience. Most research on coping with racism has evaluated the cross-sectional impact of racism and mental health but has yet to identify which coping strategies may be most effective as buffers against the psychological impact of racism. Further, little research has evaluated intervention adaptations specifically targeting strategies to ameliorate the mental health sequelae of racial discrimination.

This dissertation examines the effectiveness of a brief mindfulness- and valued action-based health intervention adapted to target POC's emotional responses and coping in the face of discrimination. This dissertation consists of two monographs. The first monograph is entitled, "Mindfulness and Valued Living in the Face of Racism," and is composed of a synthesized literature review and provides considerations for mindfulness- and valued-living (MVL) approaches adapted to address racism-related stress.

The second monograph presents an empirical quantitative study, entitled, "The Effectiveness of a Mindfulness, Acceptance, Valued Action, and Flexible Coping Intervention for Race-based Stress on Momentary Coping and Distress Symptoms." The empirical study examined and interpreted data collected from a pilot intervention study using a waitlist-control design and momentary assessment methodology. The study evaluated the effectiveness of a brief MVL intervention for coping with racism, as well as the effectiveness of MVL strategies on negative affect during discriminatory incidences the moment they occur. Twenty-eight students of color were recruited from an urban, public, northeastern university, and were randomized into either an intervention condition or a waitlist control condition. Participants found the MVL intervention adapted to address racism-related distress to be helpful overall. Participants randomized into the MVL condition showed a medium effect of a decrease in depression and stress symptoms from pre- to post-assessment. However, our sample was underpowered to detect statistically significant differences. Implications and future directions are discussed.

ACKNOWLEDGMENTS

First, and foremost, I would like to thank my graduate advisor, mentor, fellow Hufflepuff, and work mom, Liz Roemer. Your unwavering support gave me the confidence to pursue ambitious projects, to apply for awards that I never thought I was worthy of, and to build a career in line with my values. Every individual I will teach, mentor, or supervise will be a living testament to your mentorship. I would also like to thank my committee members, Drs. Tahirah Abdullah, Karen Suyemoto, and Rhiana Wegner; your incredibly thoughtful and thorough feedback allowed me to think and learn deeply from every aspect of this study. Tahirah and Karen, I am indebted to you both for the support you have provided throughout my graduate career in navigating the academe as a student and researcher of color. I want to thank my mom, dad, and brother for your support and encouragement along the way. To my sweetheart, thank you for your love, care, and patience. I also could not have made it this far without my community of supportive and affirming friends, colleagues, and academic and recreational organizations. I owe my wellbeing to you.

Finally, it would be remiss of me if I did not to acknowledge the grandparents I have lost while in graduate school who have filled me with a passion for learning since childhood. To Papang, who was the first in his village to graduate High School, who instilled in me a love of learning, and made nerdy look cool. To Mama and Wella, both of whom were not allowed more than an 8th grade education yet were committed to supporting their future generations to get high school, college, and now, doctoral degrees. This is for you.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Racism and racism-related stress has been shown to be associated with negative

mental health outcomes among people of color (POC), such as increased depressive and

anxious symptoms (e.g., Williams, Neighbors, & Jackson, 2003). Further, approximately up

to 98% of all POC report experiencing a racist experience over the past year and in their

lifetime, indicating that racism-related stress is a chronic experience. Most research on

coping with racism has evaluated the cross-sectional impact of racism and mental health but

has yet to identify which coping strategies may be most effective as buffers against the

psychological impact of racism. Further, little research has evaluated intervention adaptations

specifically targeting strategies to ameliorate the mental health sequelae of racial

discrimination.

This dissertation examines the effectiveness of a brief mindfulness- and valued

action-based health intervention adapted to target POC's emotional responses and coping in

the face of discrimination. This dissertation consists of two monographs. The first

monograph is entitled, "Mindfulness and Valued Living in the Face of Racism," and is

1

composed of a synthesized literature review and provides considerations for mindfulness- and valued-living (MVL) approaches adapted to address racism-related stress.

The second monograph presents an empirical quantitative study, entitled, "The Effectiveness of a Mindfulness, Acceptance, Valued Action, and Flexible Coping Intervention for Race-based Stress on Momentary Coping and Distress Symptoms." The empirical study examined and interpreted data collected from a pilot intervention study using a waitlist-control design and momentary assessment methodology. The study evaluated the effectiveness of a brief MVL intervention for coping with racism, as well as the effectiveness of MVL strategies on negative affect during discriminatory incidences the moment they occur. Twenty-eight students of color were recruited from an urban, public, northeastern university, and were randomized into either an intervention condition or a waitlist control condition. Participants found the MVL intervention adapted to address racism-related distress to be helpful overall. Participants randomized into the MVL condition showed a medium effect of a decrease in depression and stress symptoms from pre- to post-assessment. However, our sample was underpowered to detect statistically significant differences. Implications and future directions are discussed.

CHAPTER 2

MINDFULNESS AND VALUED LIVING IN THE FACE OF RACISM

Background

Racism is associated with significant mental health costs (Paradies, 2006), necessitating the development of coping strategies to mitigate the negative sequelae of racism (Harrell, 2000; Brondolo, 2009). While people of color may employ a range of coping strategies (Brown et al., 2011), mindfulness and valued living-based strategies may be uniquely beneficial in addressing the negative effects of racism-based stress by helping to decrease internalized messages, while increasing self-compassion, coping flexibility, and engagement in values-based actions. Clinicians seeking to apply or recommend MVL strategies to people of color coping with racism need to understand the complex nature of racism and consider how MVL may need to be adapted to be an effective intervention. To provide guidance to clinicians seeking to use MVL strategies with clients of color to cope with racism, we provide a brief contextual literature review on the nature of racism, the mental health impacts of racism-related stress for people of color (POC) and selected existing models of coping with racism-related stress. We then focus on describing the existing

literature on the use of mindfulness in relation to coping with racism-based stress, and present considerations for adapting mindfulness- and valued living-based strategies specifically for coping with racism. We conclude by discussing future directions in this area of research.

The current paper aims to complement existing work that has studied the nuanced and diverse experiences unique to specific racial groups by examining the impact of discrimination among POC broadly. While there are specific types of discriminatory experiences that vary based on perceived race, making research on experiences of specific groups important, racial discrimination across people of color in all forms simultaneously functions similarly to send a message of inferiority and otherness from White individuals (Carter, 2007; Harrell, 2000). Further, research has demonstrated that racism-related mental health outcomes may be similar across marginalized racial groups (Brondolo et al., 2011; Carter & Forsyth, 2010; Carter & Sant-Barket, 2015), suggesting a shared psychological injury resulting from racial discrimination. Additionally, an estimated 7% of adults in the U.S. identify as multiracial, and the rates of multiracial births are on the rise (Pew Research Center, 2015); studying POC broadly allows for inclusion of racial discrimination experiences among individuals who may identity with multiple racial identities or as multiracial. Finally, identifying strategies that help buffer against racist incidences broadly amongst people of color generally would aid in the dissemination of intervention strategies to groups diverse in racial identities (U.S. Department of Health and Human Services, 2001). For these reasons, the following paper focuses on the experiences of race-based discrimination among POC in the U.S.

4

Race-Based Discrimination

Racism is defined as a system of oppression in which the attitudes and beliefs of group superiority and inferiority are based on phenotypic characteristics of race (Bulhan, 1985; Jones, 1996). Racism can be internalized, wherein individuals from marginalized groups believe and accept the negative stereotypes and assumptions about themselves and the group to which they belong. Racism may be interpersonal via direct or vicarious experiences of discrimination, or institutional/systemic, such as policies and practices within institutions that create and maintain unequal access to power and resources based on race. Racism can also be cultural, by presenting cultural values, practices, and beliefs from the dominant group as superior and centered, including prejudices and discrimination of marginalized groups (Jones, 2000; Speight, 2007; Williams & Williams-Morris, 2000). Racism can be collective events that impact an entire racial group, such as national race-related tragedies like the Japanese American incarceration during WWII, or the police violence against Black Americans. Racism can also occur at a sociopolitical level, in which racism is enacted in policies, legislation, and public discussions (e.g., Muslim travel ban, family separations and detentions at the Mexican-American border). Further, racial discrimination can be explicit and intentional (macroaggressions), or implicit , subtle, and often unintentional, denigrating everyday experiences that suggest inferiority and otherness (microaggressions; Dovidio, Gaertner, Kawakami, & Hodson, 2002; Dovidio, Gluszek, John, Ditlmann, & Lagunes, 2010; Sue, Bucceri, Lin, Nadal, & Torino, 2007; Sue et al., 2007).

People of color report frequent occurrence of interpersonal experiences of racism. When past year discrimination was assessed, 96% of African Americans reported

experiencing an interpersonal racist event (Klonoff and Landrine, 1999), 98% of Asian American students reported experiencing racial microaggressions (Alvarez, Juang, & Liang, 2006), 53% of Latinx individuals reported experiencing discrimination (Pew Hispanic Center, 2018), and 39% of Native Americans reported interpersonal experiences of discrimination (NPR et al., 2007). Although not a census-defined racial group, Arab Americans have experienced increased targeted violence and discrimination following 9/11 (Ibish, 2003), and approximately 53% have reported experiencing interpersonal discrimination from a stranger within the past year (Moradi & Talal Hasan, 2004).

Understanding Racism's Impact on Mental Health

Given the persistent and chronic impact of racism, Clark, Anderson, Clark, and Williams (1999) provided a theoretical biopsychosocial model of the impact of racism as a type of stressor, defined as the psychological and physiological stress response to racism that is shaped by an individual's biology, sociodemographics, psychology, behavioral, and coping response. Further, given that past experiences influence one's response to and appraisals of new stressors, an experience of racism may also be considered a racism-related stressor whether or not an event is explicitly intended to be race-based. For example, a person of color may be asked, "Where are you from?" and assume, based on previous experiences, that the questioner is suggesting they were not born in the U.S. Clark and colleagues argued that racism-related stress and the energy to cope with stress might account, in part, for existing mental and physical health disparities.

Building upon the theoretical biopsychosocial model of racism, Harrell (2000) argued that, given this multifaceted and chronic experience of racism, racism-related experiences

6

could best be described as racism-related stress. Based on this model, experiences of racism include not only single instances of discrimination, but also the ongoing stress of being doubted, invalidated, or questioned. As a result, Harrell (2000) defined racism-related stress as racism's toll on the physical and psychological resources of an individual or group, and asserted that racism is not only defined by the experience, but also by the impact of the events on the individual or group. Carter (2007) also argues that experiences of discrimination can be recurrent and have a cumulative effect on individuals. Therefore, the severity of a single instance of racism may not adequately predict the effect on the individual; the effect may also be contingent upon prior experiences of racism. Further, Brave Heart (1998) asserts that historical trauma, or traumas resulting from horrific historical experiences (e.g., genocide, boarding schools for American Indians, lynching, racialized incarceration), is also a form of racism-related stress, and that the collective and intergenerational transmission of these racism-based traumatic experiences are associated with negative mental health outcomes (Whitbeck, 2004).

Meta-analyses and reviews have provided overwhelming empirical support for the negative, long-term psychological effects of racism. A systematic review of quantitative studies examining racism-related stress and mental health demonstrated that 72% of all studies reported statistically significant associations between discrimination and negative mental health outcomes, such that greater exposure to discrimination was correlated with increased psychological distress, depressive and anxious symptoms, stress, and negative affect (Paradies, 2006). Another meta-analysis found that discrimination was associated with decreased well-being and self-esteem, and increased psychological distress, and these

7

associations were not different across marginalized racial groups (Schmitt, Branscombe, Postmes, & Garcia, 2014). Studies have also found a consistent pattern of a positive association between discrimination and a range of mental health outcomes in studies conducted within specific racial groups (e.g., Banks, Kohn-Wood, & Spencer, 2006; Chou, Asnaani, & Hofmann., 2012; Gee, Ryan, Laflamme, & Holt, 2006; Gee, Spencer, Chen, Yip, & Takeuchi, 2007; Pieterse, Carter, Evans, & Walter, 2010; Liu & Suyemoto, 2016; Whitbeck et al., 2002).

In addition to the overwhelming cross-sectional research supporting the negative associations between mental health and racial discrimination, these findings are further supported by longitudinal research. In a 3-year longitudinal study of 136 Black, Latinx, and Asian American high school students, participants who experienced greater levels of discrimination had significantly higher reports of depressive symptoms and lower self-esteem, and experiences of discrimination were associated with an accelerated growth in depressive symptoms over time (Greene, Way, & Pahl, 2006). In a sample of 714 Black adolescents, participants reported experiencing increases in discrimination over the 5-year study period, and that discrimination was associated with depression at Time 2, and this score created a ceiling effect of depressive symptoms over the remainder of the study (Brody et al., 2006). Similar longitudinal trends were found for Navajo adolescents, wherein discrimination was associated with increased depression, lower social functioning, and increased substance use, and reports of discrimination predicted increased substance use over time (Galliher, Jones, & Dahl, 2011). Among Chinese Americans, reports of discrimination significantly increased over time, and these increases were associated with greater reports of depressive

8

symptoms (Juang & Cookston, 2009).Together these findings suggest that discrimination has a cumulative negative impact on individuals' mental health.

Together, the research consistently points to the psychological harm of racism-related stress on POC, and that these effects are generally consistent across marginalized racial groups. Further, the research demonstrates that discrimination is a chronic experience, and these experiences have a cumulative negative impact on mental health over time.

Models for Coping with Racism[1]

Recognizing the psychological toll of racism, researchers have adapted general coping models (Lazarus & Folkman, 1984) to better reflect the experiences of people of color. Harrell (2000) provided the first psychological model to explicitly incorporate culture, environment, social supports, race-related socialization, internalized racism, and historical trauma as factors that influence both coping and outcomes (see Figure 1). Harrell's model identifies antecedent variables and familial and socialization influences that impact one's experience of racism-related stress, and outlines the array of stressors one may experience, including racism-related stress. Within this model, Harrell also identifies factors that may moderate both the experience of, and ways of, coping with discrimination. The model suggests that strategies for coping can moderate the multifaceted outcomes of racism-based stress, such as physical and psychological health.

---

[1] A primary goal and an imperative to addressing the mental health costs of race-based stress is to dismantle the institutions and systems that maintain and perpetuate discrimination. In addition to this ongoing work, there remains a critical need to examine ways to mitigate the impact of discrimination, as this is an unjust burden placed on people of color.

Coping behaviors outlined in Harrell's model include strategies across four continua: problem-focused/emotion-focused, active-passive, inner-directed/outer-directed, and individual/collective coping. Consistent with the broader coping literature, coping may focus either on addressing the problem or addressing one's emotional response to the event. The strategy may be active (dealing with the problem and effect directly) or passive (avoiding or ignoring the problem or effect). The strategy may be inner-directed, or focusing on one's own values, or it can be outer-directed, such as thoughts or actions directed at external norms. Harrell's model adds to the coping literature by including individual/collective coping, meaning that coping may be focused on addressing the event inter- or intrapersonally, or engaging in coping at a community level, such as engaging in demonstrations, boycotts, or petitions. The model also identifies factors that may impact coping strategy choice, such as whether the discriminatory event is overt or covert, what response is considered effective within that moment's context, and the type of emotional response elicited from the event. The model provides a foundation for understanding ways of countering racism-related injuries and trauma, as it provides a framework for studying moderating factors that impact the complex decision-making process for coping with racism-based stress, and the array of psychological symptoms.

Brondolo and colleagues (2009) provide a methodological and theoretical review and critique of existing models and measurements for coping with racism-based stress. Based on their review, they argue that the three most studied factors proposed to ameliorate the negative mental health impact of racism-based stress (racial identity development, social support seeking, and confrontation/anger expression/suppression) have not consistently been

demonstrated to be effective strategies in quantitative studies. The review emphasizes the need for more studies to examine which coping strategies, in which contexts (e.g., chronic versus acute stress), are most effective in buffering against the negative mental health consequences of racism-based stress.

Brondolo and colleagues (2009) also provide important considerations for coping with racism research. First, they argue that models of coping with racism need to include temporal factors in utilizing coping strategies. They argue that differences might exist in choosing strategies based on whether an individual is anticipating an event, when an event is occurring, and when processing the emotional sequelae of a racism-related incident. For example, if a Black man was pulled over by a police officer, he may be problem-solving ways to minimize the time spent in the interaction, such as having his license and registration ready. While interacting with the officer, he may be suppressing his emotional response to minimize the likelihood of conflict. Afterwards, he may feel unfairly targeted for a traffic stop, and may engage in strategies to cope with the anger or hurt he may be experiencing. Additionally, throughout the process of identifying and utilizing coping strategies, individuals are likely evaluating the effectiveness of these coping strategies. As a result, both timing and flexible use of coping may be important determinants of the effectiveness of a coping strategy.

In an updated model, Brondolo and colleagues (2016) argued that racism-related injuries not only elicit negative affect, but they also activate race-based schemas (internalized beliefs), or schemas about social interactions. These race-based schemas create a cognitive demand that reduces one's flexibility to disentangle from ruminative thoughts about the

experience. This difficulty with cognitive flexibility maintains the ruminative thoughts, which then leads to negative mental health outcomes. Relatedly, these race-based schemas may decrease POC's cognitive flexibility, or ability to approach new situations as separate events and within the context in which the event is occurring. This model suggests that the repeated, chronic nature of experiences of racism may lead to automatic coping strategies that are narrowed in scope and applied rigidly, with narrowed attention towards threatening cues, and with automatic negative arousal (Brondolo, et al., 2009). We believe these responses are reasonable and adaptive given the pervasiveness and ubiquity of this injury, but rigid responding may increase distress and decrease quality of life.

Although research has not tested Brondolo et al.'s models specifically, existent research provides some support. For instance, research has shown that Black Americans tend to use fewer strategies when coping with racism-related stress compared to coping with general stress (Brown, Philips, Abdullah, & Robertson, 2011), indicating a narrowed use of strategies. Additionally, research shows that even during habituation phases of experimental studies, POC have a significantly heightened physiological response compared to White counterparts (for a review, see Harrell, Hall, & Taliaferro, 2003), indicating an automatic negative arousal to potentially and historically discriminatory environments. One study also found that, compared to participants who were not manipulated to believe their White partner was racist, Latinx participants who were interacting with a racist partner showed increased physiological arousal and reported increased psychological stress before and after the interaction, but there were no differences during the interaction (Sawyer, Major, Casad, Townsend, & Mendes, 2012). This study suggests that something different is occurring in

anticipation of, during, and after a racist event, supporting Brondolo et al's emphasis on the importance of temporal factors. An individual may be using different coping strategies across these events based on the goal of the moment (e.g., emotion-focused in anticipation, suppression in the moment, and emotion-focused after the event). Alternatively, individuals may be using the same coping strategy over time, however the strategy was only effective at certain moments. These findings suggest that interventions that promote both cognitive and coping flexibility, or the use of many coping strategies in response to discrimination, may be beneficial and promote resiliency in the face of racial discrimination.

Taken together, the models point to several important considerations for providing interventions to cope with discrimination. First, the models highlight ways coping choices and effectiveness may be dependent on the type of discriminatory event (overt or covert; Harrell, 2000), the emotion that is elicited, and the context in which the event occurs (e.g., work, friends, strangers; Brondolo et al, 2009a). Therefore, interventions may be most effective if they not only expand individuals' coping repertoire, but also promote coping flexibility. Second, interventions need to attend to how the individual is attributing the event; in other words, whether they perceive themselves to be at fault or can externalize the event (Harrell, 2000). Additionally, interventions that target ruminating thoughts may help ameliorate distress around discrimination by decreasing the time and cognitive demand the target spends recollecting and reliving the event. Mindfulness and valued-living approaches, as described below, offer promising strategies for promoting awareness of one's emotional response, intentional behavioral responses based on one's values, and not personalizing the automatic, negative or self-critical thoughts that arise.

13

Mindfulness and Valued Living as Strategies for Stress-Related Symptoms in General

Mindfulness, defined as an awareness of the present moment, without judgment, and with compassion for one's internal experiences (Kabat-Zinn, 1994) and acceptance, or a willingness to experience an emotional response with an intention of engaging in meaningful experiences, rather than avoiding or judging the emotional response (Roemer & Orsillo, 2009), are evidence-based approaches for promoting psychological flexibility (Hayes, Villatte, Levin, & Hildebrandt, 2011). Mindfulness- and valued living-based (MVL) treatments focus on a.) changing the relationship with one's internal experience so it is less self-defining, judgmental, or narrowed, b.) cultivating acceptance and willingness to experience (rather than avoid) one's internal responses, and c.) engaging in valued activities (Roemer & Orsillo, 2009). Acceptance and commitment therapy (ACT), an intervention that falls within the MVL umbrella, also identifies psychological flexibility as an important mechanism in managing distressing internal experiences and promoting personally meaningful action, and as a central target of this group of interventions (Hayes, Strosahl, & Wilson, 2012). Psychological flexibility encapsulates components of cognitive and coping flexibility by emphasizing present moment awareness, defusion (reducing the automatic associations between words/thoughts and emotional reactions), accepting one's internal experiences compassionately, clarifying values, and engaging in valued action (Hayes, Strosahl, & Wilson, 2012).

MVL approaches have been shown to be effective interventions for difficulties related to both intrapsychic distress (e.g., depressive and anxiety disorders; Hofman, Sawyer, Witt, & Oh, 2010; A-Tjak, Davis, Morina, Powers, Smits, & Emmelkamp, 2015) and

14

external stressors (e.g., trauma; Thompson, Arnkoff, & Glass, 2011). Additionally, a brief

MVL workshop for a racially and ethnically diverse sample of undergraduate students

targeting general stress was significantly associated with lower general and social anxiety

symptoms at 1 and 4-week follow-up (Eustis et al., 2017), suggesting that even brief MVL

interventions can be effective for reducing mental health difficulties. However, MVL

research has generally been developed and conducted in predominantly White samples, with

little attention to the effectiveness of these interventions in addressing distressing experiences

unique to communities of color.

Mindfulness and Valued Living as an Effective Approach to Cope with Racism

Researchers have begun to draw theoretical links to ways that MVL approaches may

be effective in addressing distress related to experiences of oppression that can help consider

ways MVL can address distress resulting from race-based discrimination. We begin by

reviewing existing conceptualizations of MVL in the context of oppression.

A formative theoretical framework for understanding how contemplative practices

can be used to respond to experiences of systemic oppression is Harrell's (2017) model of

psychoecocultural flexibility (PECF). A psychoecocultural lens attends to the interaction

between psychological, socioecological (e.g., institutional, sociohistorical, geopolitical), and

cultural contexts. A PECF approach towards contemplative practices is defined as:

> *the ability to contact the contextualized present moment with full and open*
>
> *consciousness, and engage intentionally in actions informed by experience-*
>
> *in-culture-in-context in the service of guiding values and wisdom toward*

15

optimal functioning and transformation at individual, relational, and

collective levels of analysis.(Harrell, 2017, slide 8)

PECF expands upon the tenets of MVL practices, such as awareness of one's

experiences, to include awareness of larger systems of power and marginalization and their

impacts, and using that awareness to engage in actions in line with one's personal, cultural,

and social justice values. A PECF framework lends itself well to an MVL approach for

coping with racism given that the framework situates MVL constructs within the systems of

power and oppression in which discrimination is enacted.

Additionally, Li and colleagues (2019) developed a conceptual model of dispositional

mindfulness and minority stress within their qualitative study of Latinx sexual minorities.

Based on qualitative interviews, Li and colleagues (2019) identified ways the five facets of

mindfulness (Baer, 2006), observing sensory experiences, describing internal experiences,

acting with awareness and intention, not judging our internal experiences, and not reacting to

emotions or negative thoughts may help with addressing heterosexism and racism. The

following section will integrate both models of mindfulness-based approaches, and also

include ways these models can apply to coping with race-based discrimination.

Empirical Support for MVL Approaches for Coping with Racism

Emergent research has been evaluating ways MVL approaches within racism-based

contexts, albeit not necessarily racial discrimination. One quantitative study of African

American college students found that mindfulness was associated with racial socialization

practices that increase an individual's awareness and "alertness" of systemic racism

(Womack & Sloan, 2017). Womack and Sloan (2017) theorize that both mindfulness and

racial socialization promote engagement in metacognition and an awareness of surroundings. These findings suggest that mindfulness-based practices may be consistent with existing cultural practices for coping with racism-based stress even though the form may be different. Further, preliminary correlational research suggests that mindfulness may be an effective strategy to buffer against negative psychological outcomes in the face of different forms of discrimination, such as age and sexual discrimination (Lyons, 2016), sexual racism (racism within the LGBTQ+ community; Hidalgo, Layland, Kubicek, & Kipke, 2019), and racial discrimination (Brown-Iannuzzi, Adair, Payne, Richman, & Fredrickson, 2014; Graham, West, & Roemer, 2013; Shallcross & Spruill, 2018; Watson-Singleton, Hill, & Case, 2019; Zapolski, Faidley, & Beutlich, 2019). Additionally, there is preliminary support for valued living moderating the negative association between racial discrimination and anxiety (Graham, West, & Roemer, 2015). One experimental study of 14 Black American participants found a trend in lower negative affect when participants engaged in a values clarification exercise following a racism-related imaginal stimulus (West, Graham, & Roemer, 2013). However, the values clarification was not directly tied to actions in response to racism-related stress, and the study did not have sufficient power to detect statistical significance. Together, research points to the promise of MVL strategies as beneficial interventions for coping with racism, although more research is warranted.

Adapting MVL

In this section, we expand on ways MVL approaches can be used effectively to cope with race-based discrimination specifically. The recommended MVL adaptations are based on suggestions from racism-based trauma literature (e.g., Sue et al., 2019; Carlson et al.,

17

2018), cultural adaptions of MVL interventions (e.g., Harrell, 2017; Proulx et al., 2018; Watson-Singleton, Black, & Spivey, 2019), feedback received from conducting on-campus workshops on coping with racism-related stress with a racially diverse urban undergraduate and graduate student population (Suyemoto, Roemer, Ng, & Rollins, 2017), as well as reflections of my (JHM) own MVL practice as someone who experiences racial discrimination. The adaptations suggested are not an exhaustive account of all ways MVL can be adapted to address racism-based distress, nor will these adaptations be a "one-size-fits-all" approach, but are instead points of consideration when applying these strategies within the context of discrimination.

Awareness of Self in Context Using Mindfulness and Other Strategies

Mindfulness may help individuals to place interpersonal experiences of racism within systems of oppression instead of internalizing them (Harrell, 2017; Li et al., 2019). The PECF model places an emphasis on maintaining a present-moment awareness and a consciousness of one's wholeness in context (Harrell, 2017). Specifically, an awareness of one's identities, the positionality of those identities within a social system of power and oppression, and how identities influence one's interactions may help an individual understand their experiences within a broader sociocultural context (Li et al., 2019).

In line with this, when presenting mindfulness in the context of racism, psychoeducation should proactively clarify that mindfulness is not intended to make people feel better, and is also not intended to (nor could it) make racism or the pain of racism go away. Instead, mindfulness practice is intended to make individuals aware of how they are feeling, with compassion, and to help them to choose a response based on their values.

Additionally, when there is a threat to physical safety, mindfulness may not be the most helpful strategy in that moment. However, mindfulness may instead help individuals gain compassion for themselves after the event has ended.

Additionally, for Asian American clients, introduction of mindfulness strategies may elicit legitimate reactions related to Western medicines' secularization of the Buddhist practice of meditation. Clinicians may want to highlight the ways contemplative practices are not singularly tied to Buddhism, while also acknowledging a history of colonization with some meditative practices (Ditrich, 2016). Clinicians may also want to take time to frame ways that a Westernized approach to mindfulness may be similar and different from Buddhist practices of meditation within Asian culture (Hall, Hong, Zane, & Meyer, 2011). Clinicians may want to discuss with their clients whether they would prefer to instead use a term that describes the function rather than the form (Proulx et al., 2018; Watson-Singleton, Hunter, & Spivey, 2019), such as "stress management" or "compassionate awareness." At the same time, clinicians should respect whether clients would prefer to use the term "mindfulness." Either way, it is important to recognize the Buddhist influences on these approaches to treatment and consider the different reactions this unintentionally elicit from individuals.

Additionally, awareness includes transcending, or "defusing" oneself from oppressive labels and processes, which expands "cognitive defusion", or resisting becoming overidentified with thoughts (Roemer & Orsillo, 2009), to incorporate resisting internalized oppression. Similarly, cognitive defusion within this context may take the form of encouraging individuals to not let the experience be self-defining (e.g., "I'm too sensitive, "I'm not good enough") and recognizing that these types of thoughts are not facts and do not

have to be believed, although it is natural and human for these thoughts to arise. Further, when a discriminatory experience occurs, individuals may initially automatically see themselves as at fault for the event, or they may wonder what they could have done differently to prevent the event from occurring. Instead, a broadened awareness of one's social context may help individuals situate the experience within the larger societal context of oppression, rather than internalizing a negative message about oneself or one's identity (Li et al, 2019).

Acceptance

Another PECF strategy is the non-avoidance of unpleasant, uncontrollable, and unwanted internal experiences in the face of injustice, recognizing that rigid avoidance not only contributes to negative mental health outcomes, but also maintains systems of oppression by avoiding the realities of injustice (Harrell, 2017). After experiencing discrimination, individuals may be upset with themselves for allowing the event to impact them; they may also receive messages that they should not be surprised by these experiences and therefore should not have such strong emotional responses to the events. On the other hand, individuals may receive messages of invalidation or doubt, and suggestions that the individual is merely being oversensitive or paranoid (Harrell, 2000; Sue et al, 2007). An acceptance-based approach emphasizes the natural and human response of anger, hurt, frustration, or sadness in response to injustice. An acceptance-based approach in the face of discrimination also aims to change how the individual relates with their internal experiences. Not only are individuals encouraged to turn towards their emotional responses, they are encouraged to do so with self-compassion, rather than self-criticism. This approach may

20

counter the internalized racism and self-criticism that is often experienced in response to racist experiences (e.g., "I should have expected that to happen," "If only I dressed a certain way, this wouldn't have happened"). In these instances, mindfulness-based approaches may help POC cultivate self-compassion for and validation of their emotional responses to discrimination, while placing the experience within the context of racism (Sobczak & West, 2013).

When incorporating acceptance into interventions for coping with racism, acceptance must be explicitly and proactively defined for clients, including a statement that this is not suggesting that individuals accept or condone the experience of discrimination. Instead, acceptance is defined as a willingness to experience one's emotional response and recognizing the humanness of this emotional response. This practice encourages turning towards one's internal experiences rather than actively trying to avoid emotional experiences, with an understanding that efforts to avoid emotions can increase the intensity and duration of the experience (for a review, see Salters-Pedneault, Tull, & Roemer, 2004).

Within their qualitative study, Li and colleagues (2019) found that individuals who suppressed or avoided their emotional response to discriminatory events found that their avoidance negatively impacted important interpersonal relationships and an ability to "grow" over the long run. On the other hand, it may be important to acknowledge that there may be situations in which short-term emotional suppression may be an adaptive strategy. For example, if a Latinx individual is stopped and questioned by an Immigration and Customs Enforcement officer, the individual may be angry or frustrated for being targeted or mistreated. However, in this scenario, intentionally suppressing one's emotions in that

moment may help the individual leave the situation with fewer legal or safety repercussions. The flexible, rather than rigid and automatic, use of suppression can be highlighted to validate the ways individuals of color are not able to fully engage in emotional experiences in the moment. Relatedly, given the chronic and pervasive nature of racism, it may also be adaptive for individuals to not engage with the pain of discrimination all the time. Again, it is important to highlight that flexibility and intentionality of responses are the goal of the practice, instead of a rigid and automatic use of avoidance.

Values and Valued Action

Finally, an ability to observe one's emotional response may allow individuals to engage in intentional, rather than reactive, behaviors in line with their values (Wilson & Murrell, 2004). Values, defined as verbal constructions of desired life consequences (Hayes et al., 1999), are individualized and may therefore be adapted across different cultures. At the same time, many protocols for values clarification explicitly state that values should be based on what is important to the individual, not based on others' values. PECF expands on values identification and clarification to also include values based on cultural wisdom and context-informed values for individuals who value a collectivistic approach (Harrell, 2017). Valued actions work to disrupt an automatic cycle of responding, and instead choose actions that are consistent with how the person wants to be in the world, including in response to discriminatory events.

Individuals from collective or interdependent cultures may be more willing to connect with valued living-based practices when the practice can be tied to helping others in their community or helping them to advocate for their community (Watson-Singleton, Hunter, &

Spivey, 2019). Harrell (2017) expands on the scope of valued living by including actions and empowerment to create changes for the collective well-being. In other words, valued actions may not be exclusive to how individuals want to be in the world, but include actions that work towards creating a world they would want to be in. In these ways, valued actions may be empowering for POC in countering feelings of helplessness in the face of systemic racism (Sobczak & West, 2013; Watson-Singleton, Hunter, & Spivey, 2019). They may also offset the perceived loss of personal control that is associated with racism-related distress (Alvarez et al., 2016).

When discussing valued living, clinicians should also describe ways values may conflict in a moment. Within the context of injustice, there will also always be a conflict; not saying or doing something may be perceived as being complicit in the face of injustice, whereas saying or doing something may come at the cost of another value (e.g., a job, promotions, safety). Recognizing the reality of these conflicts may allow an individual to engage in self-compassion toward their experience and their choices. Emphasizing that this conflict is a part of the injustice may help an individual to not criticize themselves for how they responded to the incident.

Although values may be in conflict in the face of injustice, individuals may also engage in a different behavior that aligns with another value at any subsequent moment. The flexible engagement of valued actions also connects with Brondolo and colleagues' (2009) model of temporal and dynamic use of strategies, meaning that strategies may be differentially effective depending on where the individual is in the coping process. For example, if an individual valued having a job even if they were microaggressed against

23

during the interview, they may work to create company-wide policies or trainings, or even address the situation directly with the individual once they have the job because fighting injustice is also a value. Emphasizing that an individual can engage in a valued action at any time, no matter when the event occurred, may also allow them to cultivate self-compassion if they believed they did not "do enough" or "say the right thing" in the moment.

<div style="text-align: center;">Future Directions for Research on MVL Adaptations for Racism-Based Stress</div>

The emerging literature on MVL approaches appears to have promising benefits in addressing racism-based stress. However, given the recent emergence of this literature, considerably more research is needed. The final section of this paper will point to possible areas of further research and understanding.

First, the MVL literature has only recently addressed how MVL could be used to address distress from experiences of marginalization and oppression (Harrell, 2017; Li et al., 2019; Proulx, 2018; Fuchs, Lee, Roemer, & Orsillo, 2013). Additionally, preliminary correlational research has shown the promise of MVL strategies in minimizing the negative mental health sequelae of racism-based stress; however, more is needed to evaluate whether there is a causal link between MVL approaches and mental health outcomes within the context of racial discrimination. Intervention studies can evaluate whether MVL strategies targeting racism-based stress are associated with increased psychological well-being or decreased symptomatology. Relatedly, studies are needed to evaluate whether racism-specific adaptations, including the considerations described above, are helpful in buffering against negative outcomes, and whether the adaptations are more helpful than general MVL interventions. Research suggests that culturally adapted interventions have better outcomes

than non-adapted interventions (e.g., Hall et al, 2016); similarly, research should examine the effectiveness of adapted MVL interventions specifically for coping with race-based discrimination.

Further, quantitative research on mindfulness and racism-based stress has relied on general trait measures of mindfulness and valued living, as there is no established state measure of mindfulness or valued living within the context of discrimination. Although these preliminary studies were helpful in establishing whether MVL strategies would be associated with racism-based stress and its mental health outcomes, research needs to move towards examining whether MVL strategies used specifically within the context of discrimination are associated with positive mental health outcomes. In other words, studies are needed to examine whether mindfulness- and valued living-based strategies are used when coping with discrimination, and if so, what the short- and long-term impacts of these strategies are on mood and mental health outcomes. This may include adapting mindfulness and valued living measures to specifically ask how participants would respond after experiencing discrimination, as has been done with other coping measures (Brown et al., 2011). Additionally, Brown and colleagues (2011) found that general dispositional coping strategies were different from strategies that Black Americans used when coping with discrimination. Consequently, trait measures may not capture what may be utilized or helpful in the face of racism-based stress.

Given that coping strategies in response to discrimination may be differentially effective based on context and when coping is occurring (Brondolo, 2009; Harrell, 2000), momentary assessments (e.g., daily diaries) of the use of MVL skills would provide insight

25

into the immediate and longitudinal impact of coping with race-based discrimination on mood. Preliminary research has studied retrospective reports of discrimination on momentary mood (Brondolo, et al, 2008; Taylor, Kamarck, & Schiffman, 2004), momentary effects of discrimination on mood (Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013; Ong, Fuller-Rowell, & Burrow, 2009; Torres & Ong, 2010), blood pressure (Beatty Moody et al., 2016), or appraisal of future interpersonal interactions (Broudy et al., 2007), but little is known about the effectiveness of coping strategies in the moment. Results from these studies suggest that retrospective recall of discriminatory events is significantly associated with daily anger and physiological fluctuations and suggest that chronic experiences of discrimination may lead to individual differences in responses on a daily level. However, researchers and clinicians need to better understand which strategies are most effective in response to racism and the potentially beneficial role of flexible use of emotional regulation strategies rather than rigid use of "positive" strategies (Aldao & Nolen-Hoeksema, 2013; Bonanno & Burton, 2013). Further, research should examine whether strategies have differential effectiveness based on the context of discrimination (e.g., overt vs. covert; interpersonal vs. systemic; Harrell, 2000).

In summary, preliminary research suggests that mindfulness- and valued living-based strategies may be a potential buffer against the negative psychological effects of racism-related stress. This paper provided theoretical links between mindfulness and valued living-based strategies and how they may be utilized in addressing racism-related stress. Further research is needed to evaluate possible causal links between these approaches and decreased mental health difficulties, and additional intervention studies are needed to evaluate whether discrimination-specific adaptations are beneficial in reducing negative mental health impacts of racism-related stress.

References

A-tjak, J. G., Davis, M. L., Morina, N., Powers, M. B., Smits, J. A., & Emmelkamp, P. M. (2015). A meta-analysis of the efficacy of acceptance and commitment therapy for clinically relevant mental and physical health problems. *Psychotherapy and Psychosomatics*, *84*(1), 30-36.

Aldao, A., & Nolen-Hoeksema, S. (2013). One versus many: Capturing the use of multiple emotion regulation strategies in response to an emotion-eliciting stimulus. *Cognition & Emotion, 27*(4), 753-760.

Alvarez, A. N., Juang, L., & Liang, C. T. H. (2006). Asian Americans and racism: When bad things happen to "model minorities." *Cultural Diversity & Ethnic Minority Psychology, 12*(3), 477–92.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27-45.

Banks, K. H., Kohn-Wood, L. P., & Spencer, M. (2006). An examination of the African American experience of everyday discrimination and symptoms of psychological distress. *Community Mental Health Journal*, *42*(6), 555-570.

Beatty Moody, D. L., Waldstein, S. R., Tobin, J. N., Cassells, A., Schwartz, J. C., & Brondolo, E. (2016). Lifetime racial/ethnic discrimination and ambulatory blood pressure: The moderating effect of age. *Health Psychology*, *35*(4), 333-342.

Bonanno, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion regulation. *Perspectives on Psychological Science, 8*(6), 591-612.

Brave Heart, M. Y. H. (1998). The return to the sacred path: Healing the historical trauma

    and historical unresolved grief response among the Lakota through a

    psychoeducational group intervention. *Smith College Studies in Social Work*, *68*(3),

    287-305.

Brody, G. H., Chen, Y. F., Murry, V. M., Ge, X., Simons, R. L., Gibbons, F. X., ... &

    Cutrona, C. E. (2006). Perceived discrimination and the adjustment of African

    American youths: A five-year longitudinal analysis with contextual moderation

    effects. *Child Development, 77*(5), 1170-1189.

Brondolo, E., Brady, N., Thompson, S., Tobin, J. N., Cassells, A., Sweeney, M., ... &

    Contrada, R. J. (2008). Perceived racism and negative affect: Analyses of trait and

    state measures of affect in a community sample. *Journal of Social and Clinical

    Psychology, 27*(2), 150-173.

Brondolo, E., Hausmann, L. R., Jhalani, J., Pencille, M., Atencio-Bacayon, J., Kumar, A., ...

    & Crupi, R. (2011). Dimensions of perceived racism and self-reported health:

    Examination of racial/ethnic differences and potential mediators. *Annals of

    Behavioral Medicine*, *42*(1), 14-28.

Brondolo, E., Ng, W., Pierre, K.L.J., and Lange, R. (2016). Racism and mental health:

    Examining the link between racism and depression from a social cognitive

    perspective. In Alvarez, A., Liang C.T.H., & Neville, H.A. (Eds.), *The Cost of Racism

    for People of Color: Contextualizing Experiences of Discrimination* (pp. 109-132).

    Washington, DC: American Psychological Association.

Brondolo, E., Ver Halen, N. B., Pencille, M., Beatty, D., & Contrada, R. J. (2009). Coping

with racism: A selective review of the literature and a theoretical and methodological

critique. *Journal of Behavioral Medicine*, *32*(1), 64-88.

Broudy, R., Brondolo, E., Coakley, V., Brady, N., Cassells, A., Tobin, J. N., & Sweeney, M.

(2007). Perceived ethnic discrimination in relation to daily moods and negative social

interactions. *Journal of Behavioral Medicine*, *30*(1), 31-43.

Brown, T. L., Phillips, C. M., Abdullah, T., Vinson, E., & Robertson, J. (2011). Dispositional

versus situational coping: Are the coping strategies African Americans use different

for general versus racism-related stressors? *Journal of Black Psychology*, *37*(3), 311-

335.

Brown-Iannuzzi, J. L., Adair, K. C., Payne, B. K., Richman, L. S., & Fredrickson, B. L.

(2014). Discrimination hurts, but mindfulness may help: Trait mindfulness moderates

the relationship between perceived discrimination and depressive

symptoms. *Personality and Individual Differences*, *56*, 201-205.

Bulhan, H. A. (1985). Black Americans and psychopathology: An overview of research and

theory. *Psychotherapy: Theory, Research, Practice, Training*, *22*(2S), 370.

Carlson, M., Endlsey, M., Motley, D., Shawahin, L. N., & Williams, M. T. (2018).

Addressing the impact of racism on veterans of color: A race-based stress and trauma

intervention. *Psychology of violence*, *8*(6), 748.

Carter, R. T. (2007). Racism and psychological and emotional injury: Recognizing and

assessing race-based traumatic stress. *The Counseling Psychologist, 35*(1), 13-105.

Carter, R. T., & Forsyth, J. (2010). Reactions to racial discrimination: Emotional stress and

    help-seeking behaviors. *Psychological Trauma: Theory, Research, Practice, and*

    Policy, *2*(3), 183-191.

Carter, R. T., & Sant-Barket, S. M. (2015). Assessment of the impact of racial discrimination

    and racism: How to use the Race-Based Traumatic Stress Symptom Scale in

    practice. *Traumatology*, *21*(1), 32-39.

Chou, T., Asnaani, A., & Hofmann, S. G. (2012). Perception of racial discrimination and

    psychopathology across three US ethnic minority groups. *Cultural Diversity and*

    Ethnic Minority Psychology, *18*(1), 74-81.

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for

    African Americans: A biopsychosocial model. *American Psychologist*, *54*(10), 805-

    816.

Ditrich, T. (2016). Buddhism between Asia and Europe: The concept of mindfulness through

    a historical lens. *Asian Studies, 4*(1), 197-213.

Dovidio, J. F., Gaertner, S. E., Kawakami, K., & Hodson, G. (2002). Why can't we just get

    along? Interpersonal biases and interracial distrust. *Cultural Diversity and Ethnic*

    Minority Psychology, 8(2), 88-102.

Dovidio, J. F., Gluszek, A., John, M. S., Ditlmann, R., & Lagunes, P. (2010). Understanding

    bias toward Latinos: Discrimination, dimensions of difference, and experience of

    exclusion. *Journal of Social Issues, 66*(1), 59-78.

Eustis, E. H., Williston, S. K., Morgan, L. P., Graham, J. R., Hayes-Skelton, S. A., &
Roemer, L. (2017). Development, acceptability, and effectiveness of an acceptance-
based behavioral stress/anxiety management workshop for university
students. *Cognitive and Behavioral Practice*, *24*(2), 174-186.

Fuchs, C., Lee, J. K., Roemer, L., & Orsillo, S. M. (2013). Clinical considerations in using
acceptance-and mindfulness-based treatments with diverse populations. *Cognitive
and Behavioral Practice, 20*, 1-12.

Galliher, R. V., Jones, M. D., & Dahl, A. (2011). Concurrent and longitudinal effects of
ethnic identity and experiences of discrimination on psychosocial adjustment of
Navajo adolescents. *Developmental Psychology*, *47*(2), 509-526.

Gee, G. C., Ryan, A., Laflamme, D. J., & Holt, J. (2006). Self-reported discrimination and
mental health status among African descendants, Mexican Americans, and other
Latinos in the New Hampshire REACH 2010 Initiative: The added dimension of
immigration. *American Journal of Public Health*, *96*(10), 1821-1828.

Gee, G. C., Spencer, M., Chen, J., Yip, T., & Takeuchi, D. T. (2007). The association
between self-reported racial discrimination and 12-month DSM-IV mental disorders
among Asian Americans nationwide. *Social Science & Medicine*, *64*(10), 1984-1996.

Graham, J. R., West, L. M., & Roemer, L. (2013). The experience of racism and anxiety
symptoms in an African-American sample: Moderating effects of trait
mindfulness. *Mindfulness*, *4*(4), 332-341.

Greene, M. L., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer

discrimination among Black, Latino, and Asian American adolescents: Patterns and

psychological correlates. *Developmental Psychology*, *42*(2), 218-236.

Hall, G. C., Hong, J. J., Zane, N. W., & Meyer, O. L. (2011). Culturally competent

treatments for Asian Americans: The relevance of mindfulness and acceptance-based

psychotherapies. *Clinical Psychology: Science and Practice, 18*(3), 215-231.

Hall, G. C. N., Ibaraki, A. Y., Huang, E. R., Marti, C. N., & Stice, E. (2016). A meta-analysis

of cultural adaptations of psychological interventions. *Behavior Therapy*, *47*(6), 993-

1014.

Harrell, S. P. (2000). A multidimensional conceptualization of racism related stress:

Implications for the well-being of people of color. *American Journal of*

Orthopsychiatry, 70(1), 42-57.

Harrell, S.P (2017, November). *Psychoeducultural flexibility: A more explicit culture- and*

context- consciousness for Acceptance-based therapies. Paper presented at the annual

conference of the Association for Behavioral and Cognitive Therapies.

Harrell, J. P., Hall, S., & Taliaferro, J. (2003). Physiological responses to racism and

discrimination: An assessment of the evidence. *American Journal of Public*

Health, *93*(2), 243-248.

Hayes, S. C., Bissett, R. T., Korn, Z., Zettle, R. D., Rosenfarb, I. S., Cooper, L. D., & Grundt,

A. M. (1999). The impact of acceptance versus control rationales on pain

tolerance. *The Psychological Record*, *49*(1), 33-47.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy*.

New York, NY: Guilford Press.

Hayes, S. C., Villatte, M., Levin, M., & Hildebrandt, M. (2011). Open, aware, and active:

Contextual approaches as an emerging trend in the behavioral and cognitive therapies.

Annual Review of Clinical Psychology, 7, 141–168.

Hidalgo, M. A., Layland, E., Kubicek, K., & Kipke, M. (2019). Sexual Racism,

Psychological Symptoms, and Mindfulness Among Ethnically/Racially Diverse

Young Men Who Have Sex with Men: a Moderation Analysis. *Mindfulness*, 1-10.

https://doi.org/10.1007/s12671-019-01278-5.

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-

based therapy on anxiety and depression: A meta-analytic review. *Journal of

Consulting and Clinical Psychology, 78*(2), 169-183.

Ibish, H. (2003). *Report on hate crimes and discrimination against Arab Americans: The

post-September 11 backlash, September 11, 2001-October 11, 2002*. American-Arab

Anti-Discrimination Committee.

Jones, C. P. (2000). Levels of racism: a theoretic framework and a gardener's tale. American

journal of public health, 90(8), 1212.

Jones, J. M. (1996). *Prejudice and racism* (2nd ed). New York, NY: McGraw Hill.

Juang, L. P., & Cookston, J. T. (2009). Acculturation, discrimination, and depressive

symptoms among Chinese American adolescents: A longitudinal study. *The Journal

of Primary Prevention*, *30*(3-4), 475-496.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York, NY: Hyperion.

Klonoff, E. A., & Landrine, H. (1999). Cross-validation of the schedule of racist events. *Journal of Black Psychology, 25*, 231-254.

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York, NY: Springer Publishing.

Lee, D. L., & Ahn, S. (2012). Discrimination against Latina/os: A meta-analysis of individual-level resources and outcomes. *The Counseling Psychologist*, *40*(1), 28-65.

Li, M. J., DiStefano, A. S., Thing, J. P., Black, D. S., Simpson, K., Unger, J. B., ... & Bluthenthal, R. N. (2019). Seeking refuge in the present moment: A qualitatively refined model of dispositional mindfulness, minority stress, and psychosocial health among Latino/a sexual minorities and their families. *Psychology of Sexual Orientation and Gender Diversity, 6*(4), 408-419.

Liu, C. M., & Suyemoto, K. L. (2016). The effects of racism-related stress on Asian Americans: Anxiety and depression among different generational statuses. *Asian American Journal of Psychology*, *7*(2), 137-146.

Lyons, A. (2016). Mindfulness attenuates the impact of discrimination on the mental health of middle-aged and older gay men. *Psychology of Sexual Orientation and Gender Diversity*, *3*(2), 227-235.

Moradi, B., & Hasan, N. T. (2004). Arab American persons' reported experiences of discrimination and mental health: The mediating role of personal control. *Journal of Counseling Psychology*, *51*(4), 418.

National Public Ratio (NPR), The Robert Wood Johnson Foundation, and Harvard T.H. Chan

    School of Public Health (2017). Discrimination in America: Experiences and views of

    Native Americans. Retrieved from https://www.npr.org/documents/2017/nov/NPR-

    discrimination-native-americans-final.pdf.

Ong, A. D., Burrow, A. L., Fuller-Rowell, T. E., Ja, N. M., & Sue, D. W. (2013). Racial

    microaggressions and daily well-being among Asian Americans. *Journal of*

    Counseling Psychology, *60*(2), 188-199.

Ong, A. D., Fuller-Rowell, T., & Burrow, A. L. (2009). Racial discrimination and the stress

    process. *Journal of Personality and Social Psychology*, *96*(6), 1259-1271.

Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and

    health. *International Journal of Epidemiology*, *35*(4), 888-901.

Pew Research Center (2015). *Multiracial in America: Proud, Diverse and Growing in*

    Numbers. Retrieved from Pew Social Trends website:

    http://www.pewsocialtrends.org/2015/06/11/multiracial-in-america/.

Pew Research Center (2018). *More Latinos Have Serious Concerns About Their Place in*

    America Under Trump. Retrieved from Pew Research Center website:

    https://www.pewresearch.org/hispanic/dataset/2018-national-survey-of-latinos/

Pieterse, A. L., Carter, R. T., Evans, S. A., & Walter, R. A. (2010). An exploratory

    examination of the associations among racial and ethnic discrimination, racial

    climate, and trauma-related symptoms in a college student population. *Journal of*

    Counseling Psychology, *57*(3), 255-263.

Proulx, J., Croff, R., Oken, B., Aldwin, C. M., Fleming, C., Bergen-Cico, D., ... & Noorani,

    M. (2018). Considerations for research and development of culturally relevant

    mindfulness interventions in American minority communities. *Mindfulness*, *9*(2),

    361-370.

Roemer, L., & Orsillo, S.M. (2009). *Mindfulness- and acceptance-based behavioral*

    therapies in practice. New York, NY: Guilford Press.

Salters-Pedneault, K., Tull, M. T., & Roemer, L. (2004). The role of avoidance of emotional

    material in the anxiety disorders. *Applied and Preventive Psychology*, *11*(2), 95-114.

Sawyer, P. J., Major, B., Casad, B. J., Townsend, S. S., & Mendes, W. B. (2012).

    Discrimination and the stress response: Psychological and physiological

    consequences of anticipating prejudice in interethnic interactions. *American Journal*

    of Public Health, *102*(5), 1020-1026.

Schmitt, M. T., Branscombe, N. R., Postmes, T., & Garcia, A. (2014). The consequences of

    perceived discrimination for psychological well-being: a meta-analytic

    review. *Psychological Bulletin*, *140*(4), 921-948.

Shallcross, A. J., & Spruill, T. M. (2018). The protective role of mindfulness in the

    relationship between perceived discrimination and depression. *Mindfulness*, *9*(4),

    1100-1109.

Sobczak, L. R., & West, L. M. (2013). Clinical considerations in using mindfulness-and

    acceptance-based approaches with diverse populations: Addressing challenges in

    service delivery in diverse community settings. *Cognitive and Behavioral*

    Practice, *20*(1), 13-22.

Speight, S. L. (2007). Internalized racism: One more piece of the puzzle. *The Counseling Psychologist, 35*(1), 126-134.

Sue, D. W., Alsaidi, S., Awad, M. N., Glaeser, E., Calle, C. Z., & Mendez, N. (2019). Disarming racial microaggressions: Microintervention strategies for targets, White allies, and bystanders. *American Psychologist*, *74*(1), 128.

Sue, D. W., Bucceri, J., Lin, A. I., Nadal, K. L., & Torino, G. C. (2007). Racial microaggressions and the Asian American experience. *Cultural Diversity and Ethnic Minority Psychology, 13*(1), 72.

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist, 62*(4), 271-286.

Suyemoto, K.L, Roemer, L., Ng, F., & Rollins, L.G. (2017). *Coping with Post-Election Racism Related Stress*. Unpublished 3-4 hour health promotion program.

Taylor, T. R., Kamarck, T. W., & Shiffman, S. (2004). Validation of the Detroit Area Study Discrimination Scale in a community sample of older African American adults: the Pittsburgh healthy heart project. *International Journal of Behavioral Medicine*, *11*(2), 88-94.

Thompson, R. W., Arnkoff, D. B., & Glass, C. R. (2011). Conceptualizing mindfulness and acceptance as components of psychological resilience to trauma. *Trauma, Violence, & Abuse, 12*(4), 220-235.

Torres, L., & Ong, A. D. (2010). A daily diary investigation of Latino ethnic identity, discrimination, and depression. *Cultural Diversity and Ethnic Minority Psychology*, *16*(4), 561-568.

U.S. Department of Health and Human Services (2001). *Mental health: Culture, race, and ethnicity–A supplement to mental health: A report of the Surgeon General*. Rockville , MD: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General.

Watson-Singleton, N. N., Hill, L. K., & Case, A. D. (2019). Past discrimination, race-related vigilance, and depressive symptoms: The moderating role of mindfulness. *Mindfulness, 10*(9), 17868-1778.

West, L. M., Graham, J. R., & Roemer, L. (2013). Functioning in the face of racism: Preliminary findings on the buffering role of values clarification in a Black American sample. *Journal of Contextual Behavioral Science, 2*(1-2), 1-8.

Whitbeck, L. B., Adams, G. W., Hoyt, D. R., & Chen, X. (2004). Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology*, *33*(3-4), 119-130.

Whitbeck, L. B., McMorris, B. J., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2002). Perceived discrimination, traditional practices, and depressive symptoms among American Indians in the upper Midwest. *Journal of Health and Social Behavior, 43*(4) 400-418.

Williams, D., & Williams-Morris, R. (2000). Racism and mental health: The African American experience. *Ethnicity & Health, 5*(3-4), 243-268.

Wilson, K. G., & Murrell, A. R. (2004). Values work in acceptance and commitment therapy. *Mindfulness and Acceptance: Expanding the Cognitive-Behavioral Tradition*, 120-151.

Womack, V. Y., & Sloan, L. R. (2017). The association of mindfulness and racial socialization messages on approach-oriented coping strategies among African Americans. *Journal of Black Studies*, *48*(4), 408-426.

Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality*, *71*(6), 1197-1232.

Zapolski, T. C., Faidley, M. T., & Beutlich, M. R. (2019). The experience of racism on behavioral health outcomes: The moderating impact of mindfulness. *Mindfulness*, *10*(1), 168-178.

CHAPTER 2

THE EFFECTIVENESS OF A COMPASSIONATE AWARENESS, ACCEPTANCE,
VALUED ACTION, AND FLEXIBLE COPING INTERVENTION ON MOMENTARY
COPING AND DISTRESS SYMPTOMS

INTRODUCTION

Racism is defined as a system of oppression that designates individual or group

inferiority based on racialized phenotypic characteristics (Bulhan, 1985; Jones, 1996). Racial

groupings were used to legally and socially separate White and people of color, and provide

White individuals with power, wealth, and access to resources (Marger, 2003). Further,

racism can be conceptualized as composed of three levels: interpersonal (e.g., racial slurs),

institutional/systemic (e.g., educational inequality), and cultural (e.g., valuing Western

European philosophies) experiences. Racism can also include collective experiences that

impact an entire racial group as well as sociopolitical policies and public discussions that

affect experiences (Harrell, 2000). Discriminatory experiences are also often distinguished as

overt and intentional experiences of discrimination (macroaggressions), or implicit and subtle

denigrating slights that are often unintentional but suggest inferiority and otherness (aversive

racism or microaggressions; Dovidio, Gaertner, Kawakami, & Hodson, 2002; Dovidio,

Gluszek, John, Ditlmann, & Lagunes, 2010; Sue, Bucceri, Lin, Nadal, & Torino, 2007; Sue

et al., 2007). Racist experiences are reported as a frequent occurrence for people of color, with up to 98% of African American (Klonoff & Landrine, 1999), Asian American (Alvarez, Juang, & Liang, 2006), and Latinx individuals (Pew Research Center, 2016) reporting they have experienced racial discrimination within the past year.

Meta-analyses and reviews have provided overwhelming empirical support for the negative, long-term psychological effects of racism. A systematic review of quantitative studies examining racism-related stress and mental health demonstrated that 72% of all studies reported significant positive associations for the relation between discrimination and adverse effects on mental health (Paradies, 2006). Another meta-analysis found that discrimination was associated with decreased well-being and self-esteem and increased psychological distress (Schmitt, Branscombe, Postmes, & Garcia, 2014). These associations were not different across marginalized racial groups. Further, racial discrimination was associated with negative well-being whether the racist event targeted the individual or group and when instances of discrimination were pervasive, but not when they were isolated events (Schmitt, Branscome, Postmes, & Garcia, 2014). Similar patterns have emerged across studies with Black Americans[2] (e.g., Banks, Kohn-Wood, & Spencer, 2006; Chou, Asnaani, & Hofmann., 2012; Ong, Fuller-Rowell, Burrow, 2009; Pieterse, Carter, Evans, & Walter, 2010), Asian Americans (Gee, et al., 2007; Liu & Suyemoto, 2016; Lowe, Okubo, & Reilly, 2012; Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013), Latinx Americans (Lee & Ahn, 2012; Chou, Asnaani, & Hofmann, 2012; Gee et al., 2006), and Native American/American

---

[2] People from various African heritages may identify themselves by different ethnic group labels, such as African Americans, Afro-Caribbean, or Black American. We chose to use the term "Black Americans" to signify a shared racialized experience within the United States.

Indians[3] (Whitbeck et al., 2002; Whitbeck et al., 2004). Longitudinal research supports correlational findings regarding the negative psychological impact of racial discrimination among Black, Latinx, Asian American, and Navajo adolescents (Brody et al., 2006; Galliher, Jones, & Dahl, 2011; Greene, Way, & Pahl, 2006; Juang & Cookston, 2009; Wong, Eccles, & Sameroff, 2003). Further, research has identified the negative impact of retrospective reports of discrimination on momentary mood (Brondolo, Ver Halen, Pencille, Beatty, & Contrada, 2009; Taylor, Kamarck, & Schiffman, 2004), as well as momentary effects of discrimination on mood (Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013; Ong, Fuller-Rowell, & Burrow, 2009; Torres & Ong, 2010), or appraisal of future interpersonal interactions (Broudy et al., 2007).

These studies point to both the short- and long-term mental health consequences of race-based discrimination for people of color, and that these effects occur across marginalized racial groups. Discrimination experiences and their impact also vary by group, as well as in relation to intersectional identities, and this is worthy of study as well. Given the consistency of findings across groups, it is equally important to explore the general experience, and mitigating factors, of racism across groups. Further, the research demonstrates that discrimination is a chronic experience, and these experiences have a cumulative negative impact on mental health over time. Given the negative effects of racism,

---

[3] We want to highlight the difficulty of selecting a term to identify individuals who are Indigenous to North and South America given the controversies of the terms "American Indian," "Native American," and "Indian," as well as the regional differences in the use of these terms. Although the authors of the cited work use the term "American Indian," we chose to use the term "Native American" as this is a term most often used in this region and to use consistent terms throughout this paper.

creating effective interventions to support coping with racism is an important step in mitigating the impact of discrimination among people of color.

Coping with Racism[4]

Existing models for coping with racism point to theorized pathways for interventions to target when addressing racism-related stress. In recognizing the psychological toll of racism, early models for coping with race-based stress highlighted that racism is a stressor that has negative biopsychosocial outcomes (Clark, 1999), that developing effective coping strategies may be helpful in mitigating the negative consequences of discrimination (Harrell, 2000), and that the selection of coping strategy use may be dependent on when the strategy is used (Brondolo et al., 2009). More recently, Brondolo, Ng, Pierre, and Lane (2016) posited that race-related stressors not only elicit negative affect, but they also activate race-based schemas (internalized beliefs), schemas about social interactions, and create a cognitive demand that reduces one's flexibility to disentangle from ruminative thoughts about the experience. This model suggests that the repeated, chronic nature of racist experiences may naturally lead to automatic coping strategies that are narrowed in scope and applied rigidly, and with automatic negative arousal, even in ambiguous situations (Brondolo, et al., 2016). While these responses may be seen as reasonable and adaptive given the pervasiveness and ubiquity of this injury, rigid responding may increase distress and decrease quality of life

---

[4] A primary goal and an imperative to addressing the mental health costs of race-based stress is to dismantle the institutions and systems that maintain and perpetuate discrimination. In addition to this ongoing work, there remains a critical need to examine ways to mitigate the impact of discrimination, as this is an unjust burden placed on people of color (POC).

(Sobczak & West, 2013). Together, the coping with racism models identify possible targets for interventions to minimize the negative mental health outcomes associated with racism.

Research provides some support for the theorized cognitive and emotional factors that may exacerbate the negative mental health consequences of racism. For example, one study found that Black Americans tended to use fewer strategies when coping with racism compared to general stress (Brown, Philips, Abdullah, Vinson, & Robertson, 2010), or that even during habituation phases of experimental studies, people of color have a significantly heightened physiological response compared to White counterparts (for a review, see Harrell, Hall, & Taliaferro, 2003) indicating an automatic negative arousal to potentially and historically discriminatory environments. Additionally, in a study of Latinx college students, participants who were told that they would be interacting with a racist partner showed increased physiological arousal and reported increased psychological stress before and after the interaction compared to a control condition, but there were no differences in stress or arousal during the interaction (Sawyer, Major, Casad, Townsend, & Mendes, 2012). Although there is clear evidence that one's emotional response varies over time, researchers have yet to examine what coping may look like across different time points of the event.

Together, these theories and preliminary findings suggest that interventions that promote both cognitive and coping flexibility, or use of many coping strategies, in response to discrimination, may be beneficial and promote resiliency in the face of racial discrimination. Additionally, further research is needed to understand coping strategies in response to discrimination in the moment, and the implications of those strategies on mood.

45

Mindfulness and Valued Living

Mindfulness- (defined as an awareness of the present moment, without judgment, and with compassion for one's internal experiences; Kabat-Zinn, 1994) and valued living-based (MVL) approaches are evidence-based interventions for promoting psychological flexibility (Hayes, Villatte, Levin, & Hildebrandt, 2011). Interventions falling within the umbrella of MVL approaches, including acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 2012), broadly focus on a.) changing the relationship with one's internal experience so it is less self-defining, judgmental, or narrow, b.) cultivating acceptance and willingness to experience (rather than avoid) one's internal responses, and c.) engaging in activities that the individual values (Roemer & Orsillo, 2009). MVL approaches aim to increase cognitive and coping flexibility by emphasizing present moment awareness, defusion (reducing the automatic associations between words/thoughts and emotional reactions), accepting one's internal experiences, and choosing one's actions.

MVL approaches have been shown to be effective interventions for difficulties related to both intrapsychic distress (e.g., depressive and anxiety disorders; Hofman, Sawyer, Witt, & Oh, 2010) and external stressors (e.g., trauma; Thompson, Arnkoff, & Glass, 2011). Additionally, a single-session MVL workshop for a racially and ethnically diverse sample of undergraduate students targeting general stress was significantly associated with lower general and social anxiety symptoms at 1 and 4-week follow-up (Eustis et al., 2017), suggesting that even brief MVL interventions are effective for reducing mental health difficulties. However, MVL research has generally been developed and conducted in predominantly white samples, with little attention to the acceptability and effectiveness of

these interventions for people of color (POC) or their applicability to the context of race-based stress.

Mindfulness in the Context of Racism

Although the broader MVL research has not historically considered ways that interventions may be delivered to address racism-based stress, recently, researchers have begun to draw theoretical links that can help conceptualize how MVL approaches may be able to address racism-related stress. First, MVL interventions emphasize maintaining a present-moment awareness, which can expand to include a consciousness of one's wholeness and identities within a broader sociocultural context and within systems of power and oppression (Harrell, 2017; Li et al., 2019). Additionally, the awareness promoted by MVL may include "defusing" oneself from oppressive labels and processes, which expands "cognitive defusion," or resisting becoming overidentified with thoughts (Roemer & Orsillo, 2009). Similarly, cognitive defusion within the context of racism may include encouraging individuals to not let the experience be self-defining, and to situate a discriminatory experience within the larger societal context of oppression, rather than internalizing a negative message about oneself or one's identity (Li et al, 2019).

Acceptance/Non-Avoidance in the Context of Racism

MVL can also emphasize the non-avoidance of unpleasant, uncontrollable, and unwanted internal experiences in the face of injustice, recognizing that rigid avoidance not only contributes to negative mental health, but also maintains systems of oppression (Harrell, 2017). An acceptance-based approach emphasizes the natural and human response of anger, hurt, frustration, or sadness in response to injustice. In these instances, mindfulness-based

approaches may help POC cultivate self-compassion for and validation of their emotional

responses to discrimination (Sobczak & West, 2013).

Valued Actions in the Face of Racism

Finally, an ability to observe one's emotional response may allow individuals to

engage in intentional, rather than reactive, behaviors in line with their values (Wilson &

Murrell, 2004). Valued actions, or choosing to engage in personally meaningful actions, may

be empowering for POC in countering feelings of helplessness in the face of systemic racism

(Sobczak & West, 2013; Watson-Singleton, Black, & Spivey, 2019), and may buffer against

a loss of personal control that has been shown to be associated with race-related distress

(Alvarez et al., 2016). Further, valued living could be expanded to include actions and

empowerment to create changes for the collective well-being and for sociopolitical change

(Harrell, 2017; Roemer, Suyemoto, Rollins, & Abdullah, 2017).

MVL and Racism Research

Increasingly, researchers have been discussing the applicability and cultural

acceptability of MVL approaches for coping with racism theoretically (Graham-LoPresti,

Abdullah, Calloway, & West, 2016; La Roche & Lustig, 2013; Roemer, Suyemoto, Rollins,

& Abdullah, 2017; Sobczak & West, 2013) and qualitatively investigating this application

(Watson, Black, & Hunter, 2016; Watson-Singleton, Black, & Spivey, 2019; Woods-

Giscombé & Black, 2010; Spears et al., 2017; Woods-Giscombé & Gaylord, 2014). Findings

from the qualitative research show that POC found MVL to be easily integrated with existing

spiritual and cultural practices (Burnett-Zeigler, Schuette, Victorson, & Wisner, 2016;

Womack & Sloan, 2017; Woods-Giscombé & Gaylord, 2014) and that mindfulness may be

48

an effective strategy to buffer against negative psychological outcomes in the face of racism (Brown-Iannuzzi, Adair, Payne, Richman, & Fredrickson, 2014; Graham, West, & Roemer, 2013; Shallcross & Spruill, 2018; Watson-Singleton, Hill, & Case, 2019; Zapolski, Faidley, & Beutlich, 2019).

Additionally, there is evidence of a moderating effect (in a correlational study) of valued living (Graham, West, & Roemer, 2015) and an experimental causal effect of values writing on anxiety among Black Americans (West, Graham, & Roemer, 2013). However, research has yet to evaluate a causal relation between MVL and racism-related mental health outcomes. Together, research points to the promise of MVL strategies as beneficial interventions for coping with racism.

Current Study

The current study is the first known pilot study formally examining an MVL intervention focused on coping with race-based discrimination for people of color who were experiencing microaggression-related distress. This study adds to the coping with racism literature by quantitatively evaluating the effects of a brief MVL intervention using a randomized waitlist-control. Additionally, we aimed to expand upon existing research by evaluating the effectiveness of each component of an MVL intervention, specifically use of mindfulness, acceptance/non-avoidance, and valued action when individuals cope with racism in the moment. Given the research suggesting that flexible emotion regulation strategies may buffer against negative mental health outcomes strategies (Aldao & Nolen-Hoeksema, 2013; Bonanno & Burton, 2013), the MVL intervention explicitly promoted flexible use of coping strategies. In addition to an experimental design to investigate the

overall efficacy of the brief MVL intervention over a two-week time period, this study used

an ecological momentary assessment (EMA) design, which is a methodology that allows for

researchers to examine natural mood fluctuations and coping in response to a stimulus in the

moment in which the event occurred (Stone & Shiffman, 1994). EMA was integrated into the

MVL intervention study to evaluate emotional correlates of reported coping strategies

(specifically mindfulness, emotional acceptance, valued action, and coping flexibility) in the

moment and over time (i.e., two weeks).

Hypotheses

Objective 1. Evaluate the component and overall effectiveness of a 45-minute MVL

intervention targeting coping with racism compared to waitlist control on perceived

helpfulness and reducing depression and anxiety at two-week follow-up.

Hypothesis 1.1. We conducted exploratory descriptive analyses to examine which

elements of the MVL intervention were most helpful. We predicted that participants would

report high ratings of helpfulness for each intervention component.

Hypothesis 1.2. We tested the impact of the MVL intervention on distress symptoms

(i.e., depression and anxiety) compared to waitlist control. We predicted that participants in

the MVL condition would report lower anxiety and depression ratings at the two-week

follow-up (T2) compared to those in the waitlist control condition, controlling for Time 1

levels of symptoms.

Objective 2. Examine the impact of an MVL intervention on use of MVL strategies

and flexible coping and momentary affect in response to a discriminatory event.

50

Hypothesis 2.1. We tested the impact of the MVL intervention on average use of MVL strategies and coping flexibility compared to waitlist control among individuals who reported discrimination in the moment. We predicted that participants in the MVL condition would report more frequent use of MVL strategies during discriminatory events and would use a greater range of strategies compared to those in the waitlist control condition.

Hypothesis 2.2. We tested the impact of the MVL intervention on momentary affect compared to waitlist control. We predicted that participants in the MVL condition would report lower momentary ratings of negative affect (NA) after a racist discrimination event compared to those in the waitlist control condition.

Objective 3. Evaluate the impact of momentary use of MVL strategies in the relation between MVL intervention and concurrent emotion, as well as mental health outcomes (i.e., momentary affect and distress symptoms).

Hypothesis 3.1. We predicted that each MVL strategy (mindfulness, emotional acceptance, valued action, and coping flexibility) would be associated with momentary affect in the presence of a discriminatory event. Specifically, we predicted that, when experiencing a discriminatory event, use of MVL strategies would be negatively associated with negative momentary affect, such that increased use of MVL strategies would be associated with lower ratings of negative affect.

Hypothesis 3.2. We predicted that use of each MVL strategy in the presence of discrimination would be negatively associated with distress symptoms at two-week follow-up. Specifically, we predicted that increased use of MVL strategies in the presence of discrimination would be associated with lower ratings of depression and anxiety at T2.

51

Hypothesis 3.3. We predicted that MVL strategies would mediate the relation between the MVL intervention and distress symptoms at two-week follow-up. We predicted that participants in the MVL condition would use a greater number of MVL strategies compared to individuals in the waitlist control condition, (Hypothesis 2.1) and, in turn, these individuals would have lower depression and anxiety ratings at T2.

Methods

Participants

One hundred thirteen participants who self-identified as students of color were recruited from a large, public, commuter, and minority-serving university in Northeastern United States from Fall 2018 through Spring 2019. This study was approved by the IRB; all participants provided informed consent. Participants were eligible to participate if they were 18 or order, identified as POC, reported living in the U.S. for more than 5 years, and reported that they were at least moderately fluent in the English language. Participants who identified as a Multiracial or as White plus another racial identity were eligible to participate in the study. Given that this intervention aimed to reduce racism-based distress, and that participants were asked to complete EMA reports of discrimination over a two-week period, participants were not eligible if they denied any past year experiences of discrimination or any microaggression-related distress (operationalized as a score of less than one standard deviation below the mean of our microaggression-related distress measure based on unpublished data of students of color at the same university). Participants were recruited via University-wide email blasts, flyers, and promoted to diversity-focused classes on campus. Of the eligible participants, 76 were willing to participate in T1 of the study, 32 completed

T1, and 29 completed both T1 and T2 of the study. Of the three participants who did not complete T2, two were in the waitlist condition and one was in the MVL intervention. One participant was excluded from analyses due to outlier ecological momentary assessment reports[5]. The final sample consisted of 14 participants who were randomized into the waitlist condition, and 14 participants in the MVL condition. Of the 28 participants who completed the study, nine participants in the intervention condition and 11 in the waitlist condition reported experiences of discrimination during the two-week EMA reports. Therefore, analyses using EMA data (Hypotheses 2 and 3) consisted of a sample of 20 total participants.

Participants who completed the initial screening questionnaires, regardless of eligibility, had the option to enter a raffle for a $25 Amazon gift card. Participants were compensated for the experimental portion of the study by either receiving course credit or $25 for completing T1 and $25 for completing T2. Compensation for completed EMA responses were scaled based on completion rate; participants received up to $50 for completing at least 80% of all randomized daily prompts.

The racial and ethnic sample breakdown is in Table 2. The sample predominantly identified as women ($n= 22$), a quarter as men ($n= 5$), and one participant identified as non-binary. Participants' average age was 25.11 ($SD = 8.6$). A quarter of the sample had an annual household income less than $25,000 ($n =7$), and less than 15% of the sample had a household income over $100,000 ($n = 4$). The majority of the sample identified as

---

[5] The excluded participant reported 36 discriminatory events over a two-week period, compared to the sample average of 3.15 events ($z = 4.41$). Participant was a 19-year-old, Black, pansexual, cisgender man, and U.S. citizen, and was randomized into the waitlist condition. See Table 1 for a summary of the excluded participant's measure scores.

heterosexual (n=20), approximately 14% as bisexual ($n = 4$), 3.4% gay/lesbian ($n = 1$), queer ($n = 1$), asexual ($n = 1$), and one person chose not to disclose ($n = 1$).

Procedure

Participants completed an online screening battery of measures to determine eligibility. Participants who met the eligibility requirements were randomized into either the MVL condition or waitlist control and were asked to come into the laboratory for two in-person sessions. At Time 1 (T1), all participants completed T1 measures and were instructed to complete ecological momentary assessment (EMA) surveys after every discrimination experience that occurred over the following 2 weeks, as well as when randomly prompted by the LifeData survey application. Cellphones with an unlimited data plan were provided to participants who did not own a smartphone or had a limited data plan. Consistent with existing longitudinal EMA methods and pilot feedback, participants received four prompts generated by LifeData software at random between 9am and 10pm each day within 4-hour intervals (e.g., one prompt at a random time between 9am and 11am), and participants had 30 minutes to complete the prompt (Stone et al., 2003). Individuals could also independently complete an additional report at any time; however, researchers screened responses to delete any stacked responses (completing multiple reports at once). At each prompt, participants completed questionnaires that inquired whether the individual experienced a discriminatory event since last reporting, a brief description of the event, coping strategies used, and the client's mood. All participants received a phone check-in at day 2 to troubleshoot any cellphone or LifeData problems.

Participants in the MVL condition watched a voice-guided PowerPoint on MVL strategies for coping with discrimination at T1. In contrast, participants in the waitlist control condition only completed measures at T1 and watched the same voice-guided PowerPoint at Time 2 (T2), after completing the T2 measures. After two weeks, all participants returned to the laboratory to complete a final battery of questionnaires. Figure 2 provides a flowchart of the study procedure, and an overview of when each measure was administered can be found on Table 3. An example of LifeData notifications and survey questionnaire presentation can be found in Figure 3.

Mindfulness and Valued Living (MVL) Intervention

Participants watched a self-guided, 45-minute voice-recorded PowerPoint presentation on an MVL intervention adapted from Eustis et al. (2017). This adaptation was informed by research on mindfulness- and acceptance-based interventions, and suggested adaptations for coping with discrimination based on theory and qualitative studies (e.g., Watson, Black, & Hunter, 2016; Suyemoto, Roemer, Abdullah, & Rollins, 2017; Roemer, Suyemoto, Rollins, & Abdullah, 2017), as well as clinical experience providing "Coping with Post-Election Racism Related Stress" workshops at the same university this study was conducted (Suyemoto, Roemer, Ng, & Rollins, 2017). Participants received a brief psychoeducational section on emotional or behavioral reactions individuals may have in response to racial discrimination. They were asked to recall a recent experience of discrimination, and were asked to reflect on how they felt, what physical sensations arose, and how they responded. They then received psychoeducation on the four main components of the MVL intervention, mindfulness, acceptance, valued action, and coping flexibility, and

55

how they may be helpful when coping with discrimination. The presentation highlighted the potential helpfulness of developing an awareness of one's internal responses and benefits of turning towards and responding compassionately to one's internal response. Participants also engaged in a brief mindfulness of breath exercise to demonstrate one type of mindfulness-based practice. Following this, participants learned about values and valued action (i.e., identifying what is important to them and engaging in actions consistent with what matters to them), engaged in a brief values clarification exercise, and learned ways that mindfulness and valued actions may be helpful practices to make intentional choices when responding to or coping with racial discrimination. The program also highlighted the usefulness of varied coping strategies, how coping can occur at any moment (e.g., before, during, or after a racist experiences), and how strategies may be different at various points in the coping process. The presentation also discussed how mindfulness can promote the use of varied strategies (flexible coping) in the face of racist experiences. Finally, we acknowledged that MVL strategies are skills that take practice, and that they were not intended to help individuals tolerate racism, but instead to help them replenish their resources so they are able to continue to do things important to them.

Measures

Screening measures

UMB Comprehensive Demographic Questionnaire is a 45-item self-report measure that assesses a range of demographic characteristics (Suyemoto, Erisman, Holowka, et al., 2016). Participants were asked to report their age, gender, sex assigned at birth, sexual orientation, income, and English fluency. Participants were asked to report their racial

56

identity through both free-response and multiple-select check boxes. Ethnicity was reported

in an open-ended response, and researchers coded responses into a consensus-based list of

ethnic categories. Individuals were allowed to report multiple racial and ethnic identities, and

these responses were not recoded to "multiracial." Additionally, we did not change

participants' responses if they selected multiple racial identities in addition to multiracial.

Therefore, the sum of racial and ethnic identity percentages may exceed 100%. This measure

was administered at screening to determine participant eligibility based on racial identity and

English fluency.

Racial Microaggressions Scale (RMAS; Torres-Harding, Andrade, & Romero Diaz,

2012; Torres-Harding & Turner, 2015) is a 35-item measure of the frequency of experiencing

racial microaggressions, and includes six subscales: Forever foreigner, presumed criminality,

sexualization/exoticization, low-achieving/undesirable culture, invisibility, and

environmental microaggressions. Using a 4-point Likert scale, respondents are asked how

frequently they experience each specific situation (0 = never, 1 = a little/rarely, 2=

sometimes/a moderate amount, 3 = often/frequently) and how stressful, upsetting, or

bothersome the experience was for them (0 = not at all, 1 = a little, 2 = a moderate level, 3 =

high level). Frequency and distress scores were calculated by summing the total scores for

items of each subscale. If an individual did not endorse experiencing a microaggression,

distress was coded as "0" for that item. The RMAS has been validated with racially and

ethnically diverse samples, and has demonstrated strong internal consistency for the

frequency (Cronbach's alpha = .71 - 89) and distress subscales (Cronbach's alpha = .61-.83;

Torres-Harding, Andrade, & Romero Diaz, 2012; Torres-Harding & Turner, 2014). Within

this study, the frequency subscale demonstrated very strong internal consistency (Cronbach's alpha = .93), as did the distress subscale (Cronbach's alpha =.94). The RMAS was administered during the screening questionnaire to determine participant eligibility based on microaggression distress. Based on unpublished data from a UMB sample of students of color, an average distress score of 23 fell within one standard deviation below the mean. Therefore, participants who had an average distress rating at or above 24 were eligible to participate in the study to remove any participants who were not reporting any racism-based distress. The remaining participants experienced at least some microaggression distress, but they did not need to be highly distressed to be eligible to enroll.

Measures of Distress Symptoms and Perceived Helpfulness of the Intervention

Depression, Anxiety, and Stress Scales (DASS; Lovibond & Lovibond, 1995) is a widely used 21-item measure of anxiety and depression symptoms. The DASS includes three subscales: depression, anxious arousal, and stress (general anxiety) symptoms. The anxiety and stress subscales capture two types of anxiety symptoms (anxious arousal and generalized anxiety symptoms, respectively; Brown et al., 1997), therefore we renamed the subscales within this paper to reflect these associations and used both subscales to capture the full range of anxiety symptoms. Participants were asked to complete the DASS at three time-points: screening, T1, and T2. Items were rated on a 4-point Likert scale the extent to which each state was experienced in the past week (0=Did not apply to me at all, 3=Applied to me very much, or most of the time). Subscale scores range from 0-21, with higher scores indicating greater symptom distress. The DASS has been validated and has demonstrated strong internal consistency among African Americans (Cronbach's alpha = .81-.88), Asian

Americans (Cronbach's alpha= .74-.87), and Hispanics (Cronbach's alpha=.79-.84) across

DASS subscales (Norton, 2007). Within this sample, the DASS subscales demonstrated good

internal consistency at screening (Cronbach's alpha = .67-.82), at T1 (Cronbach's alpha =

.86-.90), and at T2 (Cronbach's alpha = .83-.94). The DASS was measured to test for group

equivalence of distress symptoms at baseline, and to evaluate changes in distress symptoms

from T1 to T2.

A Quantitative Evaluation of MVL Intervention was administered at T2 to evaluate

the MVL intervention and study acceptability. Participants were asked to rate the overall

helpfulness of the presentation on a 5-point Likert scale (1=Extremely unhelpful,

5=Extremely helpful). They were then asked to rate the helpfulness of 7 topics of the

presentation (e.g., "Learning that distress in response to racism is natural," "Learning how to

notice my experience in the moment") on a 5-point Likert scale (1=Not at all helpful to

5=Definitely helpful). Evaluation items can be found on Table 6.

Measures Administered as Part of the EMA Assessment (Procedures for EMA Described

Above)

Daily Coping Inventory (DCI; Stone & Neale, 1984) is a checklist developed to

assess momentary coping and responses to distress. The original measure contained 8 coping

strategies: distraction, situation redefinition, direct action, catharsis, acceptance, seeking

social support, relaxation, and religion. However, we added two strategies consistent with the

MVL intervention. We added a statement on mindfulness, "being aware of how I feel, and

being kind to myself for feeling this way," and one on valued action, "making intentional

choices of how to respond based on my values." We also modified the DCI's acceptance item

from "accepted that the problem had occurred, but that nothing could be done about it" to "recognizing that it's natural to think and feel this way right now." The DCI has demonstrated adequate interrater agreement (kappa = .74). The DCI revised version (DCI-R) was administered during EMA sessions in which participants endorsed experiencing a discrimination event since last reporting. Each response was coded as "yes" or "no." The DCI-R was used to calculate coping flexibility and frequency of use of each MVL component.

Coping flexibility was calculated by summing the number of all DCI-R coping strategies used during a single event (0-10), consistent with prior literature (Aldao & Nolen-Hoeksema, 2013; Cheng, 2001). To account for individual differences in number of discriminatory events, we averaged the number of total coping strategies across the total number of reported discriminatory instances. For example, if an individual experienced three discriminatory instances, and used three coping strategies during one instance, two at another, and one at the first instance, the participant would have a coping flexibility score of 2.

EMA mindfulness, acceptance, and valued action components were calculated using participant responses from the DCI-R. For each participant, we calculated the average use of each strategy across their total number of reported discriminatory instances (e.g., use of mindfulness in 3 out of 4 instances of discrimination would result in a participant average of 0.75) to account for proportional differences in number of discriminatory events.

The Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) is a 20-item self-report measure of positive and negative emotions at the present moment.

Participants rate each statement from a scale of 1 (Very slight or not at all) to 5 (extremely). Items include "distressed", "guilty", "enthusiastic", and "determined." Both subscales of the PANAS have demonstrated strong internal consistency (α = .85-.91) and showed strong internal consistency within the study (Cronbach's α's = .94). The PANAS was administered to participants at every momentary assessment. Only the negative affect subscale (PANAS-NA) scores from momentary reports of discrimination were used for analyses. All analyses included raw PANAS-NA scores from each reported instance of discrimination; scores were not aggregated by participant.

Power Analyses

Prior to data collection, we calculated a power analysis for one predictor and three possible demographic covariates. In order to detect a small to medium effect size ($f2$ =.15) with sufficient power (.80), we needed 85 participants to complete the study. For EMA analyses, a sample of 73 participants would have provided sufficient power (.80) to detect statistical significance (α=.05). We aimed to recruit 200 participants to complete the online questionnaires in order to obtain the sample of 85 who would complete the MVL intervention or waitlist. Due to multiple institutional delays, data collection ended prior to reaching the needed sample size to detect small to medium effects. Given that the sample is underpowered to detect even large effects, non-significant findings should be interpreted cautiously. We included effect size estimates and confidence intervals when describing all results (Wilkinson, 1999); medium and large effect sizes were cautiously interpreted. Based on established effect size estimates (Cohen, 1988), *d* values of .20, .50, and .80 would indicate small, medium, and large effect sizes, respectively. Correlation coefficients of .1, .3, and .5

were interpreted as small, medium, and large effect sizes, respectively (Cohen, 1988). Partial

eta squared values of .01, .06, and .14 would indicate small, medium, and large effect sizes

(Richardson, 2011).

Results

Correlations and distributions were examined among all key variables to test for

assumptions of normality and independence. Results indicated that the PANAS-NA was

kurtotic (statistic = 3.34). Log transformations were used to correct for kurtosis in all

subsequent analyses. All other measures were normally distributed.

We also conducted chi-square and t-tests to determine baseline equivalence of study

variables and demographic variables across experimental conditions. Conditions were not

significantly different and effect sizes were small based on self-reported racial category,

gender, and sexuality therefore these variables were not included as covariates in subsequent

analyses (Table 4).

We also evaluated differences in EMA reporting by intervention condition that may

lead to confounds in frequencies or proportions. Of note, these were calculated after

removing outliers. We found that individuals in the waitlist condition were more likely to

complete an EMA prompt (M = 84.51, SD =12.37) compared to participants in the

intervention condition (M = 64.05, SD =30.72), and this difference was statistically

significant [t (25)=-2.30; p=.03] with a large effect (Cohen's d =0.87). However, average

frequency of discrimination experiences was statistically equivalent between the waitlist (M

= 4.45, SD =2.66) and MVL condition [M=4.10, SD =4.65; t(19) = -.22; p=.83] with a small

effect (Cohen's d =0.09).

On key measures, we found that participants in the intervention condition had higher DASS-A and DASS-S scores at both the screening and T1, and there was a medium to large effect size in these differences (Table 5). Because the differences in anxious symptoms at T1 represent a significant confound, we controlled for these T1 differences in an attempt to statistically control for this confound. We used DASS-A as the covariate in analyses that did not use the DASS because that was the largest difference at T1 and anxious arousal is likely to affect both coping and momentary affect. We used the relevant DASS subscale score for analyses that used the DASS.

The first study objective was to evaluate the effectiveness of both the MVL components and the overall MVL intervention targeting coping with racism compared to waitlist control. The analyses included 28 participants who completed T1 and T2, with 14 in the intervention and 14 in the waitlist condition.

Hypothesis 1.1. Based on a 1-5 Likert scale, participants rated the coping with racism presentation as helpful overall ($M = 4.19$, $SD = .93$). Ratings for individual components of the intervention were, on average, reported as helpful (see Table 6). The intervention component with the lowest average helpfulness rating was learning about distress in response to racism as a natural response ($M = 3.89$; $SD = 1.23$). The component that was rated as the most helpful was recognizing what was important and how to choose meaningful action ($M = 4.46$; $SD = .96$). Of note, ratings were negatively skewed, in that the medians and modes were mostly higher than the mean for each item, suggesting that most participants found all of the intervention components to be very helpful.

Hypothesis 1.2. To test for condition differences in DASS scores at T2, we conducted

ANCOVAs controlling for T1 DASS scores. For unadjusted means, see Table 7. Graphs of

unadjusted DASS subscale score changes by condition are shown on Figures 4-6. Results

showed that depression scores at T2 were not statistically significantly different between the

intervention (adjusted $M = 10.34$, $SE = 2.15$; 95% CI = 5.91 – 14.76) and waitlist control

[adjusted $M = 14.09$, $SE = 2.15$; 95% CI = 9.67 – 18.52; $F(1,25) = 1.52$; $p = .23$]. However, a

medium effect size emerged ($\eta^2_p = .06$), indicating that findings might be significant in a

larger sample, with participants in the MVL condition reporting lower adjusted levels of

depression symptoms at T2.

Results showed that DASS-A scores at T2 were not statistically significantly different

between the intervention (adjusted $M = 8.95$, $SE = 1.65$) and waitlist condition [adjusted $M =$

10.85, $SE = 1.59$; $F(1,26) = 0.67$; $p = .42$]. A small effect size emerged ($\eta^2_p < 0.03$).

Finally, results showed that DASS-stress scores at T2 were not statistically different

between the intervention (adjusted $M = 13.93$, $SE = 2.05$; 95% CI = 9.72- 18.13) and the

waitlist condition [adjusted $M = 18.76$, $SE = 1.98$; 95% CI = 14.70 – 22.82; $F(1,26) = 2.84$; p

= .10]. A medium effect size emerged ($\eta^2_p = 0.10$), indicating that findings might be

significant in a larger sample, with participants in the MVL condition reporting lower

adjusted levels of stress scores at T2.

The second objective of the study was to evaluate the impact of the MVL intervention

on use of MVL strategies, flexible coping, and momentary negative affect. Given that the

analyses were conducted for individuals who reported discriminatory events during EMA,

the sample size was reduced to 20, with 9 individuals in the intervention and 11 in the waitlist control condition.

Hypothesis 2.1. To test whether the MVL program impacted use of MVL strategies and coping flexibility between conditions, we ran an ANCOVA to compare mean use of MVL strategies during momentary reports of discrimination by intervention condition, while controlling for baseline differences in DASS-A scores. There were no statistically significant differences on use of mindfulness [$F(1, 17)= 1.07$, $p=.33$; $\eta^2_p = .06$], emotional acceptance [$F(1,17) = 0.26$, $p=.62$; $\eta^2_p = .02$], valued action [$F(1,17)= 1.32$, $p=.27$; $\eta^2_p = .07$], or coping flexibility [$F(1,17)= 2.28$, $p=.15$; $\eta^2_p = .12$]. However, there were medium effect sizes in average use of mindfulness, valued action, and coping flexibility by conditions, with those strategies selected more often by participants in the waitlist condition compared to the intervention condition (see Table 8 for unadjusted and adjusted means).

Hypothesis 2.2. To test condition differences in negative affect during momentary reports of discrimination we ran an ANCOVA to compare PANAS-NA scores between conditions while controlling for baseline differences in DASS-A scores. There were no statistically significant differences in PANAS-NA scores between conditions [$F(1, 17)=0.90$, $p=.36$], but there was a marginal medium effect size ($\eta^2_p = .05$) in average PANAS-NA scores between conditions, with those in the intervention condition reporting higher average PANAS-NA scores during discriminatory events (adjusted $M = 15.32$, $SE = 0.92$, CI =13.38 – 17.26) compared to the waitlist condition (adjusted $M = 14.12$, $SD = 0.83$, CI = 12.37-15.87).

The third objective of the study was to evaluate the impact of the momentary use of

MVL strategies in the face of momentary discrimination on distress symptoms. Again, given

that EMA data was limited to individuals who reported discriminatory experiences, the

sample size for the following analyses reduced to 20.

Hypothesis 3.1. To examine the association between MVL use and negative affect

during momentary discrimination, we conducted four separate linear regressions on MVL

strategies predicting PANAS-NA while controlling for T1 DASS-A scores. We found that

reported use of mindfulness ($b = 1.65$, $p=.56$; 95% CI = -4.14 – 7.45), emotional acceptance

($b = 1.574$, $p=.50$; 95% CI = -3.23 – 6.36), valued action ($b = -0.21$, $p = .95$; 95% CI = -7.48

– 7.07) and coping flexibility ($b = -0.01$, $p=.99$; 95% CI = -1.43 – 1.41) were not

significantly associated with negative affect reported at the time of discrimination

experiences.

Hypothesis 3.2. To test the association between MVL strategies and changes in

reported symptoms at T2, we correlated mean momentary MVL use with DASS residualized

gain scores to control for T1 differences (Table 9). Residualized gain scores are calculated by

regressing T2 DASS on T1 DASS scores to determine the unstandardized residuals, or the

differences between the observed final scores and the predicted score based on baseline

scores (Fitzmaurice, Laird, & Ware, 2004). Negative residualized gain scores indicate a

decrease in scores from T1 to T2, whereas a positive residualized gain score indicates an

increase in scores from T1 to T2. Although not statistically significant, we found a medium

effect in the association between reported use of mindfulness and DASS-S residualized gain

scores ($r = -.30$; $p = .21$), suggesting that increased use of mindfulness may be associated

66

with lower DASS stress scores. Emotional acceptance was not associated with DASS subscale residualized gain scores. Although not statistically significant, there was a marginally medium effect of the association between valued action and DASS-D residualized gain scores ($r = -.25$; $p = .29$), suggesting that increased use of valued action may be associated with lower depressive symptom scores in a sample with sufficient power. Coping flexibility was not correlated with DASS residualized gain subscale scores.

Hypothesis 3.3. Given that the intervention did not impact MVL use, the data did not meet preliminary criteria for a mediation test of the impact of the coping strategy use on the relation between condition and DASS outcomes. Further, given the small sample size, we did not have sufficient power to test for mediation.

Discussion

The current study sought to examine the effectiveness of a brief mindfulness and valued living intervention adapted specifically for coping with racism. This study was novel in evaluating both the effectiveness of a brief intervention for coping with racism and evaluating momentary coping and mood in response to discrimination. Given how underpowered our study is, we will cautiously summarize and interpret medium to large effect sizes, while recognizing that replication studies with larger samples are needed to determine whether the effects would be statistically significant with sufficient power.

Additionally, an important note is that randomization failed to establish equivalency between conditions. At T1, participants in the intervention condition had higher DASS-A and DASS-S scores than the waitlist condition, of medium to large effect sizes (although not statistically significant in this sample). We also found that the waitlist condition was

significantly more likely to complete the EMA prompts compared to individuals in the

intervention condition. Despite these differences in EMA reporting, the groups were

equivalent on the average number of discriminatory experiences. Although we statistically

controlled for the pre-intervention differences in anxiety symptoms, this, coupled with the

small sample size, limited statistical power. In addition, statistical controls cannot necessarily

account for the meaningful initial differences these scores may represent. As a result of the

nonequivalence, small sample size, and statistical non-significance, all findings (and lack

thereof) should be interpreted with caution.

Consistent with our hypothesis, participants reported the MVL intervention to be

helpful overall. Specifically, participants rated all aspects of the intervention as helpful, and

reported that identifying their values and considering how to respond in ways that are aligned

with their values was the most helpful aspect of the intervention. These findings suggest that

the adaptation of MVL strategies for coping with racism were acceptable to participants.

Future studies should examine whether perceived helpfulness of strategies is associated with

effectiveness in reducing distress, and the potential implications of discrepancies. For

example, if a strategy is found to be both helpful and not effective at reducing distress,

further research is needed to examine possible mediating variables that limit the effectiveness

of the strategy, or whether the strategy is associated with other outcomes, such as quality of

life or well-being.

Although we did not find a statistically significant effect of the MVL intervention on

distress symptoms, medium effects emerged, such that individuals in the intervention

condition reported lower depression and stress (general anxiety) change scores from T1 to T2

compared to the waitlist condition. Further, based on DASS-21 severity cutoffs (Henry & Crawford, 2005), participants in the intervention condition decreased in severity from T1 to T2, with depression scores changing from "extremely severe" to "moderate" and stress from "extremely severe" to "severe." In contrast, the waitlist condition did not show any changes in severity from T1 to T2. Although we did not find statistically significant changes between conditions, we found important clinically significant differences between conditions on distress symptoms. When we examined momentary affect during reported discrimination, again no significant differences were observed. However, here a small to medium effect reflected that participants in the intervention condition reported greater negative affect compared to the waitlist condition. Given that the intervention was promoting awareness of discrimination experiences and their impact, as well as emotional acceptance of one's internal responses, the intervention may have resulted in participants increasing their awareness of distressing feelings and experiences. Therefore, participants in the intervention condition may have reported increased negative affect in the moment due to an increased awareness of their emotional response. Together, the findings suggest that the intervention is associated with lower distress symptoms over time, but may not reduce negative affect in the moment.

To our surprise, individuals in the MVL condition did <u>not</u> report using MVL strategies more often in their EMA reports. Instead, individuals who were in the waitlist condition, who did not receive formal psychoeducation on MVL strategies, reported using nonsignificantly more mindfulness, valued action, and coping flexibility strategies during momentary experiences of discrimination relative to the intervention condition. Although we

69

statistically controlled for T1 DASS differences, increased use of strategies for the waitlist condition may be attributed to lower anxiety to start. Alternatively, the intervention condition and waitlist control may not have had the same understanding of the MVL strategies, particularly given that the waitlist condition had not received psychoeducation on the components of MVL. Therefore, how these strategies were used may look qualitatively different between conditions. Given that we asked yes/no questions about strategy use, we are unable to know how participants defined these strategies or to what extent they were engaging in them. We did find that individuals in the waitlist condition completed significantly more EMA reports. Although we do not have data to explain these differences, we hypothesize that individuals in the intervention condition may been more motivated to receive the intervention and may have had less motivation to complete the remainder of the study, including the EMA phase that was conducted after the intervention for individuals in this condition. Alternatively, the intervention session lasted approximately 2 hours; participants may have experienced study burnout once the intervention was completed.

When we examined the association between MVL strategies and momentary affect, we found that neither mindfulness, emotional acceptance, valued actions, or coping flexibility were reliably associated with negative affect during momentary discrimination reports. When we examined the correlation between average MVL use during discrimination and subsequent distress symptoms, we found that reports of using mindfulness strategies were negatively associated with changes in general anxiety symptoms with a medium effect size. However, none of these correlations were statistically significant. Our findings suggest that the intervention itself may not impact use of MVL strategies in the moment. Further, the

MVL strategies may not be associated with immediate decreases in negative affect but may be helpful with distress over time.

One point of consideration is that we only assessed MVL use and negative affect when the discriminatory event was reported. One EMA study that examined discrimination and mood found increases in depression the day after the discriminatory event (Torres & Ong, 2010). Therefore, individuals may experience a lagged affective response to discrimination. We may have captured the impact on MVL on individuals' reaction to discrimination, but not evaluated coping in response to discrimination over time. As a result, we do not know whether MVL strategies may be helpful in regulating negative affect in response to a discriminatory event over time. We only assessed MVL in the moment of the discriminatory event so we could not evaluate the effectiveness of overall use of MVL strategy in terms of the potential impact on mood over time. For example, in a study of participants in an 8-week, community-based mindfulness program, Kiken and colleagues (2015) found that repeated mindfulness practice over the 8 weeks significantly predicted lower distress at 8 weeks, suggesting that mindfulness strategies may have long-term benefits in regulating mood, even if short-term changes are not detected. Although we did not see an impact on momentary use of MVL strategies on affect or distress symptoms, repeated or generalized use of MVL strategies may be associated with lower negative affect or distress symptoms. Further research is needed to evaluate the impact of repeated or generalized MVL strategy use on mood.

Alternatively, there may be other aspects of the intervention that were effective in reducing depression and anxiety that we were unable to quantitatively capture, aside from the

71

MVL strategies we measured. For example, the strategies themselves, given the distressing nature of discrimination, may not have been effective in isolation, but the overall sense of agency or countering the internalization of discrimination may have resulted in better outcomes at T2. In other words, the intervention may have impacted the ways participants experienced discrimination regardless of the skills that they used, such that knowing there are options, and those options can be based on one's values, changed the experience or impact of discrimination and therefore led to reductions in reports of distress symptoms as measured by the DASS.

In summary, we found that participants perceived an MVL intervention adapted for coping with racism as helpful. We also found medium effects in decreased depression and general anxiety symptoms for individuals in the intervention condition compared to the waitlist control condition, indicating that the intervention may have had a beneficial effect on distress symptoms over time, although further study is needed to confirm the reliability of these observed effects given the absence of statistical significance. However, surprisingly, participants in the MVL condition reported using nonsignificantly fewer MVL strategies and reported nonsignificantly higher negative momentary affect in response to discrimination relative to the waitlist condition. This suggests that individuals may experience increased distress in the moment, but MVL skills may help reduce the persistence and long-term effects of distress. Unfortunately, we were unable to fully examine the impact of MVL momentary coping in response to discrimination, and the effectiveness of these strategies on momentary affect and distress symptoms. Additional momentary and longitudinal data with a larger sample is needed to investigate these findings further.

Strengths and Limitations

There are also a number of limitations that impact our ability to draw definitive conclusions from these findings. As noted above, the lack of equivalence between conditions prior to the intervention makes interpretation of the intervention effects problematic. The statistical control for these differences rules out the possibility that detected differences are statistically due to these effects, but the groups do differ meaningfully initially, indicating a failure of randomization.

Further, due to statistical limitations, we were not able to evaluate the longitudinal unfolding of mood and coping to better understanding which momentary strategies were effective and when based on condition. Specifically, the data did not meet the needed statistical assumptions required to run tests that would allow us to simultaneously examine group and repeated individual level data (i.e., multilevel modeling). We also had a small sample for each condition, and not all individuals experienced discrimination during the course of the study. As a result, we did not have sufficient statistical power to evaluate trends, detect possible statistically significant differences, and reduce the impact of possible outlier data on outcomes. Additionally, there were significant differences in EMA reporting by conditions, which may impact the interpretability of the findings. For example, we do not know what occurred in relation to incomplete EMA prompts, or what may have impacted individuals' abilities or decisions to complete an EMA prompt, and whether those factors bias the data that was recorded.

Additionally, one limitation of the study is that we did not provide a baseline understanding of coping strategies on the DCI-R for both conditions. As a result, individuals

between conditions may have had different understandings of each strategy, and therefore the strategy they used may have been qualitatively different. Future research that examines momentary coping should consider providing brief explanations of each strategy to rule out possible differences based on baseline knowledge of the strategies. There may also be other confounding or untested moderating factors that impact this association, such as past MVL treatments or workshops, given that variations of this intervention had been implemented in classrooms and as outreach events on campus.

Further, the campus is a minority-serving institution at a public urban university; the findings from this student sample may not generalize to other samples, such as predominantly White, private, or rural institutions. Additionally, given that many students were recruited from race-related and social justice-oriented courses, their pre-existing knowledge of systemic racism, the impact of racism on mood, or validation of one's response to discrimination may have been less novel, and may have impacted their outcome data during the course of this study. These findings might differ with individuals who are less informed about the impact of systemic racism on people of color.

We also want to note the many strengths of this study. First, this was the first known MVL intervention adapted specifically for coping with racial discrimination, and quantitatively evaluated the effectiveness of an MVL intervention for coping with racism. This study is an important first step in determining which strategies may be helpful in mitigating the psychological impact of racial discrimination and identifying intervention components that may be most effective for people of color. Additionally, we found clinically meaningful changes in mood resulting from a single-session 45-minute intervention. This

study is also promising in that it appears to be helpful for a diverse group of individuals, indicating that an intervention targeting a shared impact of discrimination may be helpful even in light of the unique qualitative differences in discrimination between racial and ethnic groups. Together, the effectiveness of a brief intervention for coping with racism across a heterogenous group of people of color may mean this program can be easily disseminated across different contexts. Further, the scale of the intervention may facilitate clinician's integration of these strategies into their existing clinical practices.

The findings are also impressive in that a brief, 45-minute intervention showed a promise of disrupting the negative psychological impacts of a chronic and recurring stressor. Further, qualitative research points to the ways racism may be a type of trauma (Bryant-Davis & Ocampo, 2005; Carter, 2007; Lowe, Okubo, & Reilly, 2012), and has cumulative impacts on mental health over time (e.g., Brody et al., 2006; Galliher, Jones, & Dahl, 2011; Greene, Way, & Pahl, 2006; Juang & Cookston, 2009; Lee & Ahn, 2012; Wong, Eccles, & Sameroff, 2003). In light of the complexity and chronicity of discriminatory experiences, the impact of a 45-minute intervention on reducing distress is noteworthy, and points to the promise of larger scale interventions.

This study was also novel in that we supplemented our intervention data with momentary assessments of MVL strategy use in response to discrimination to evaluate whether those strategies impact affect in the moment. We were able to evaluate the impact of the larger intervention and the components on mood immediately in response to discrimination and over time, allowing us to understand if and when MVL strategies may be most effective for coping with racism. EMA data also allowed us to collect data in the

75

moment, thus minimizing contextual biases and inaccuracies associated with retrospective recall (Shiffman, Stone, & Hufford, 2008; Stone, Broderick, Kaell, DelesPaul, & Porter, 2000). Further, we were able to measure fluctuations in mood over the course of the day and over two-weeks, thus allowing us to compare differences in mood based on discrimination and day-to-day negative affect.

Future Directions

First and foremost, the efficacy of the MVL intervention needs to be tested in a larger sample to see if the impact on mental health outcomes is replicated with a reasonable effect size and reaches statistical significance. Replication studies with larger samples are needed to identify whether MVL strategies tailored for coping with racism would buffer against depressive and anxious symptoms in the moment and over time.

Additionally, further research is needed to better assess whether MVL strategies impact mood in response to discrimination over time. We only assessed mood at a two-week interval; more longitudinal data may better assess the effectiveness of an MVL intervention for coping with racism over time. In light of research suggesting that discrimination negatively impacts cognitive flexibility (Brondolo et al., 2016), engaging in new coping practices and decreasing automatic and rigid responding may take longer than two-weeks. Additionally, more research is needed to examine how individuals related to their momentary affect, and whether that impacted their reporting. In other words, we do not know whether they perceived negative momentary affect as a problem or if they perceived their emotions as a natural part of their experience. Avoidance of negative emotions could have led to an underreporting of negative affect.

76

Future research should also further evaluate the strategies individuals are using to cope with discrimination. We need more studies to better understand which strategies are already being utilized for coping with racism and determine ways that interventions may better be integrated into individuals' existing practices. Further, we not only need to understand which strategies are utilized, but how they are being utilized. For example, individuals may believe mindfulness-based practices are intended to make them feel calm or relaxed and engage in these practices to avoid their internal experiences. More research is also needed to whether existing strategies are leading to desirable outcomes, and which outcomes are most important for individuals. For example, individuals may perceive coping strategies in the face of discrimination as more effective if they lead to an increased quality of life, as opposed to symptom reduction (Wei et al., 2010). We did not assess the impact of MVL use on quality of life; we may see different effects of the intervention and MVL use on positive psychological outcomes.

Further research is also needed to assess use of MVL strategies across time and contexts, including use during non-discriminatory moments. Generalized use of MVL strategies may be a better predictor of lower distress symptoms, rather than use of strategies only during instances of discrimination. Additionally, we did not evaluate whether coping changed over time, and which strategies were used across different time points (i.e., the temporal unfolding emphasized by Brondolo et al., 2009); research that evaluates use of MVL coping strategies over time is needed.

In addition, research should examine the generalizability of MVL strategies in response to racial discrimination to other forms of distress and discrimination, as well as momentary

assessments of MVL strategy use in response to discrimination after the event has occurred. Given literature on the long-term impact of mindfulness practice on dispositional distress (Kiken et al., 2015), generalizability of MVL strategies may decrease distress symptoms.

Furthermore, additional research is needed to examine whether there are differences across or within racial groups in response to the intervention and the effectiveness of MVL coping strategies in response to discrimination and mental health outcomes. The aggregation of individuals from heterogenous racial and ethnic groups may have contributed to variance resulting in statistically non-significant findings between conditions. Additionally, different racial and ethnic groups have distinct sociopolitical histories that impact their experience of discrimination; interventions that are tailored to groups' experiences and cultures may be more effective (Hall, Ibaraki, Huang, Marti & Stice, 2016).

Relatedly, additional research should evaluate ways multiple marginalized identities may impact the experience of discrimination and the effectiveness of interventions. For example, in our sample, a participant who identified as a Black, pansexual, cis-gender man was excluded from analyses due to reporting a significantly higher number of racial discrimination experiences than the rest of the study participants. Although this participant appeared to be a quantitative outlier within this sample, there were not enough participants with similar intersecting identities to evaluate whether this case is qualitatively an outlier. In other words, individuals with multiple marginalized identities (e.g., Queer and Trans POC, or QTPOC) may have significantly higher daily exposures to discrimination compared to their heterosexual, cisgender counterparts. Although this is only one case, further research is needed to evaluate whether multiple marginalized identities are associated with increased

exposure to discrimination, and how these multiple minority statuses may impact coping and mental health outcomes. This individual had higher scores on distress and negative affect measures compared with other participants in the waitlist condition and also the full sample, suggesting that this individual has been experiencing significant daily distress, consistent with literature showing that QTPOC have higher distress ratings compared to their heterosexual and cisgender POC counterparts (Hayes, Chun-Kennedy, Edens, & Locke, 2011). This individual rated the intervention as very helpful. However, the participant was in the waitlist condition, so we cannot evaluate the effectiveness of the intervention for this participant who was experiencing significant distress and multiple discriminatory experiences. Further research is needed to determine whether an MVL intervention for coping with racism may be helpful and effective for individuals who experience multiple forms of discrimination, who experience persistent discrimination, and who are experiencing significant distress.

Finally, the intervention was only 45 minutes in length; a larger dose may be needed to help individuals learn and integrate the strategies to better cope with a chronic and pervasive stressor like discrimination. A longer intervention may address misconceptions and misunderstanding of MVL practices and may also facilitate a change from state mindfulness to trait mindfulness (Kiken et al., 2015).

In conclusion, this study provides some preliminary, albeit not statistically significant, evidence that a brief MVL intervention can lead to medium effect size changes in depressive and generally anxious symptoms. Future studies should explore this in larger samples, with attention to the temporal unfolding of coping strategies, a broader range of outcomes, and a longer follow-up period. Future studies should also examine responses within specific racial groups and in related to intersecting areas of oppression.

References

Aldao, A., & Nolen-Hoeksema, S. (2013). One versus many: Capturing the use of multiple emotion regulation strategies in response to an emotion-eliciting stimulus. *Cognition & Emotion, 27*(4), 753-760.

Alvarez, A. N., Juang, L., & Liang, C. T. H. (2006). Asian Americans and racism: When bad things happen to "model minorities." *Cultural Diversity & Ethnic Minority Psychology, 12*(3), 477–92.

Alvarez, A.N., Liang, C.T.H., Molenaar, C., & Nguyen, D. (2016). Moderators and mediators of the experience of perceived racism. In Alvarez, A., Liang C.T.H., & Neville, H.A. (Eds.), The cost of racism for people of color: Contextualizing experiences of discrimination (pp. 85-106). Washington, DC: American Psychological Association.

Banks, K. H., Kohn-Wood, L. P., & Spencer, M. (2006). An examination of the African American experience of everyday discrimination and symptoms of psychological distress. *Community Mental Health Journal*, *42*(6), 555-570.

Bonanno, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion regulation. *Perspectives on Psychological Science, 8*(6), 591-612.

Brody, G. H., Chen, Y. F., Murry, V. M., Ge, X., Simons, R. L., Gibbons, F. X., ... & Cutrona, C. E. (2006). Perceived discrimination and the adjustment of African American youths: A five-year longitudinal analysis with contextual moderation effects. *Child Development, 77*(5), 1170-1189.

Brondolo, E., Ng, W., Pierre, K.L.J., and Lange, R. (2016). Racism and mental health: Examining the link between racism and depression from a social cognitive perspective. In Alvarez, A., Liang C.T.H., & Neville, H.A. (Eds.), *The Cost of Racism for People of Color: Contextualizing Experiences of Discrimination* (pp. 109-132). Washington, DC: American Psychological Association.

Brondolo, E., Ver Halen, N. B., Pencille, M., Beatty, D., & Contrada, R. J. (2009). Coping with racism: A selective review of the literature and a theoretical and methodological critique. *Journal of Behavioral Medicine*, *32*(1), 64-88.

Broudy, R., Brondolo, E., Coakley, V., Brady, N., Cassells, A., Tobin, J. N., & Sweeney, M. (2007). Perceived ethnic discrimination in relation to daily moods and negative social interactions. *Journal of Behavioral Medicine*, *30*(1), 31-43.

Brown, T. A., Chorpita, B. F., Korotitsch, W., & Barlow, D. H. (1997). Psychometric properties of the Depression Anxiety Stress Scales (DASS) in clinical samples. *Behaviour Research and Therapy*, *35*(1), 79-89.

Brown, T. L., Phillips, C. M., Abdullah, T., Vinson, E., & Robertson, J. (2011). Dispositional versus situational coping: Are the coping strategies African Americans use different for general versus racism-related stressors? *Journal of Black Psychology*, *37*(3), 311-335.

Brown-Iannuzzi, J. L., Adair, K. C., Payne, B. K., Richman, L. S., & Fredrickson, B. L. (2014). Discrimination hurts, but mindfulness may help: Trait mindfulness moderates the relationship between perceived discrimination and depressive symptoms. *Personality and Individual Differences*, *56*, 201-205.

Bryant-Davis, T., & Ocampo, C. (2005). Racist incident–based trauma. *The Counseling Psychologist*, *33*(4), 479-500.

Burnett-Zeigler, I., Schuette, S., Victorson, D., & Wisner, K. L. (2016). Mind–body approaches to treating mental health symptoms among disadvantaged populations: A comprehensive review. *The Journal of Alternative and Complementary Medicine, 22*, 115–124.

Carter, R. T. (2007). Racism and psychological and emotional injury: Recognizing and assessing race-based traumatic stress. *The Counseling Psychologist*, *35*(1), 13-105.

Cheng, C. (2001). Assessing coping flexibility in real-life and laboratory settings: A multimethod approach. Journal of Personality and Social Psychology, 80(5), 814-833.

Chou, T., Asnaani, A., & Hofmann, S. G. (2012). Perception of racial discrimination and psychopathology across three US ethnic minority groups. *Cultural Diversity and Ethnic Minority Psychology*, *18*(1), 74-81.

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. American Psychologist, 54(10), 805-816.

Cohen, J. (1988). Statistical power analysis. Hillsdale, NJ: Erlbaum.

Dovidio, J. F., Gaertner, S. E., Kawakami, K., & Hodson, G. (2002). Why can't we just get along? Interpersonal biases and interracial distrust. Cultural Diversity and Ethnic Minority Psychology, 8(2), 88-102.

Dovidio, J. F., Gluszek, A., John, M. S., Ditlmann, R., & Lagunes, P. (2010). Understanding
   bias toward Latinos: Discrimination, dimensions of difference, and experience of
   exclusion. *Journal of Social Issues, 66*(1), 59-78.

Dziegielewski, S. F., Turnage, B., & Roest-Marti, S. (2004). Addressing stress with social
   work students: A controlled evaluation. *Journal of Social Work Education, 40*, 105–
   119.

Eustis, E. H., Williston, S. K., Morgan, L. P., Graham, J. R., Hayes-Skelton, S. A., &
   Roemer, L. (2017). Development, acceptability, and effectiveness of an acceptance-
   based behavioral stress/anxiety management workshop for university
   students. *Cognitive and Behavioral Practice*, *24*(2), 174-186.

Fry, B. N., & Runyan, J. D. (2018). Teaching empathic concern and altruism in the
   smartphone age. *Journal of Moral Education*, *47*(1), 1-16.

Galliher, R. V., Jones, M. D., & Dahl, A. (2011). Concurrent and longitudinal effects of
   ethnic identity and experiences of discrimination on psychosocial adjustment of
   Navajo adolescents. *Developmental Psychology*, *47*(2), 509-526.

Gee, G. C., Ryan, A., Laflamme, D. J., & Holt, J. (2006). Self-reported discrimination and
   mental health status among African descendants, Mexican Americans, and other
   Latinos in the New Hampshire REACH 2010 Initiative: The added dimension of
   immigration. *American Journal of Public Health*, *96*(10), 1821-1828.

Gee, G. C., Spencer, M., Chen, J., Yip, T., & Takeuchi, D. T. (2007). The association
   between self-reported racial discrimination and 12-month DSM-IV mental disorders
   among Asian Americans nationwide. *Social Science & Medicine*, *64*(10), 1984-1996.

Graham, J. R., West, L. M., & Roemer, L. (2013). The experience of racism and anxiety

symptoms in an African-American sample: Moderating effects of trait

mindfulness. *Mindfulness*, *4*(4), 332-341.

Graham-LoPresti, J.R., Abdullah, T., Calloway, A., & West, L.M. (2017). The link between

experiences of racism and stress and anxiety for Black Americans: A mindfulness and

acceptance-based coping approach. Retrieved from: https://www.anxiety.org/black-

americans-how-to-cope-with-anxiety-and-racism

Greene, M. L., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer

discrimination among Black, Latino, and Asian American adolescents: Patterns and

psychological correlates. *Developmental Psychology*, *42*(2), 218-236.

Hall, G. C. N., Ibaraki, A. Y., Huang, E. R., Marti, C. N., & Stice, E. (2016). A meta-analysis

of cultural adaptations of psychological interventions. *Behavior Therapy*, *47*(6), 993-

1014.

Harrell, S. P. (2000). A multidimensional conceptualization of racism related stress:

Implications for the well-being of people of color. *American Journal of*

Orthopsychiatry, *70*(1), 42-57.

Harrell, S.P (2017, November). *Psychoeducultural flexibility: A more explicit culture- and*

context- consciousness for Acceptance-based therapies. Paper presented at the annual

conference of the Association for Behavioral and Cognitive Therapies.

Harrell, J. P., Hall, S., & Taliaferro, J. (2003). Physiological responses to racism and

discrimination: An assessment of the evidence. American Journal of Public Health,

93(2), 243-248.

Hayes, J. A., Chun-Kennedy, C., Edens, A., & Locke, B. D. (2011). Do double minority

students face double jeopardy? Testing minority stress theory. *Journal of College

Counseling*, *14*(2), 117-126.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy*.

New York, NY: Guilford Press.

Hayes, S. C., Villatte, M., Levin, M., & Hildebrandt, M. (2011). Open, aware, and active:

Contextual approaches as an emerging trend in the behavioral and cognitive therapies.

Annual Review of Clinical Psychology, 7, 141–168.

Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety

Stress Scales (DASS-21): Construct validity and normative data in a large non-

clinical sample. *British Journal of Clinical Psychology*, *44*(2), 227-239.

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-

based therapy on anxiety and depression: A meta-analytic review. *Journal of

Consulting and Clinical Psychology, 78*(2), 169-183.

Jones, J. M. (1996). *Prejudice and racism* (2nd ed). New York, NY: McGraw Hill.

Juang, L. P., & Cookston, J. T. (2009). Acculturation, discrimination, and depressive

symptoms among Chinese American adolescents: A longitudinal study. *The Journal

of Primary Prevention*, *30*(3-4), 475-496.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday

life*. New York, NY: Hyperion.

Kiken, L. G., Garland, E. L., Bluth, K., Palsson, O. S., & Gaylord, S. A. (2015). From a state
to a trait: Trajectories of state mindfulness in meditation during intervention predict
changes in trait mindfulness. *Personality and Individual Differences*, *81*, 41-46.

Klonoff, E. A., & Landrine, H. (1999). Cross-validation of the schedule of racist events.
Journal of Black Psychology, 25, 231-254.

La Roche, M., & Lustig, K. (2013). Being mindful about the assessment of culture: a cultural
analysis of culturally adapted acceptance-based behavior therapy approaches.
Cognitive and Behavioral Practice, 20(1), 60-63.

Lee, D. L., & Ahn, S. (2012). Discrimination against Latina/os: A meta-analysis of
individual-level resources and outcomes. *The Counseling Psychologist*, *40*(1), 28-65.

Li, M. J., DiStefano, A. S., Thing, J. P., Black, D. S., Simpson, K., Unger, J. B., ... &
Bluthenthal, R. N. (2019). Seeking refuge in the present moment: A qualitatively
refined model of dispositional mindfulness, minority stress, and psychosocial health
among Latino/a sexual minorities and their families. *Psychology of Sexual
Orientation and Gender Diversity, 6*(4), 408-419.

Liu, C. M., & Suyemoto, K. L. (2016). The effects of racism-related stress on Asian
Americans: Anxiety and depression among different generational statuses. *Asian
American Journal of Psychology*, *7*(2), 137-146.

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states:
Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck
Depression and Anxiety Inventories. Behaviour Research and Therapy, 33(3), 335-
343.

Lowe, S. M., Okubo, Y., & Reilly, M. F. (2012). A qualitative inquiry into racism, trauma, and coping: Implications for supporting victims of racism. *Professional Psychology: Research and Practice*, *43*(3), 190.

Marger, M. N. (2003). Race & ethnic relations: American & global perspectives.(6th. Belmont, CA: Wordsworth/Thompson Learning.

Norton, P. J. (2007). Depression Anxiety and Stress Scales (DASS-21): Psychometric analysis across four racial groups. *Anxiety, Stress, and Coping, 20*(3), 253-265.

Ong, A. D., Burrow, A. L., Fuller-Rowell, T. E., Ja, N. M., & Sue, D. W. (2013). Racial microaggressions and daily well-being among Asian Americans. *Journal of Counseling Psychology*, *60*(2), 188-199.

Ong, A. D., Fuller-Rowell, T., & Burrow, A. L. (2009). Racial discrimination and the stress process. *Journal of Personality and Social Psychology*, *96*(6), 1259-1271.

Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology*, *35*(4), 888-901.

Pew Research Center (2018). *More Latinos Have Serious Concerns About Their Place in America Under Trump.* Retrieved from Pew Research Center website: https://www.pewresearch.org/hispanic/dataset/2018-national-survey-of-latinos/

Pieterse, A. L., Carter, R. T., Evans, S. A., & Walter, R. A. (2010). An exploratory examination of the associations among racial and ethnic discrimination, racial climate, and trauma-related symptoms in a college student population. *Journal of Counseling Psychology*, *57*(3), 255-263.

Richardson, J.T.E. (2011). Eta squared and partial eta squared as measurements of effect size in educational research. *Educational Research Review, 6*, 135-147.

Roemer, L., & Orsillo, S.M. (2009). *Mindfulness- and acceptance-based behavioral therapies in practice.* New York, NY: Guilford Press.

Roemer, L., Suyemoto, K.L., Rollins, L.G., Abdullah, T. (2017). Understanding racism and stress post-election: Part 2. Retrieved from https://www.anxiety.org/strategies-to-counter-the-anxiety-stress-of-racist-experiences

Sawyer, P. J., Major, B., Casad, B. J., Townsend, S. S., & Mendes, W. B. (2012). Discrimination and the stress response: Psychological and physiological consequences of anticipating prejudice in interethnic interactions. American Journal of Public Health, 102(5), 1020-1026.

Schmitt, M. T., Branscombe, N. R., Postmes, T., & Garcia, A. (2014). The consequences of perceived discrimination for psychological well-being: a meta-analytic review. *Psychological Bulletin*, *140*(4), 921-948.

Shallcross, A. J., & Spruill, T. M. (2018). The protective role of mindfulness in the relationship between perceived discrimination and depression. *Mindfulness*, *9*(4), 1100-1109.

Sobczak, L. R., & West, L. M. (2013). Clinical considerations in using mindfulness-and acceptance-based approaches with diverse populations: Addressing challenges in service delivery in diverse community settings. *Cognitive and Behavioral Practice*, *20*(1), 13-22.

Spears, C. A., Houchins, S. C., Bamatter, W. P., Barrueco, S., Hoover, D. S., & Perskaudas, R. (2017). Perceptions of mindfulness in a low-income, primarily African American treatment-seeking sample. *Mindfulness, 8*(6), 1532-1543.

Stone, A. A., & Neale, J. M. (1984). New measure of daily coping: Development and preliminary results. Journal of Personality and Social Psychology, 46(4), 892-906.

Stone, A. A., Broderick, J. E., Schwartz, J. E., Shiffman, S., Litcher-Kelly, L., & Calvanese, P. (2003). Intensive momentary reporting of pain with an electronic diary: reactivity, compliance, and patient satisfaction. *Pain*, *104*(1-2), 343-351.

Stone, A. A., & Shiffman, S. (1994). Ecological momentary assessment (EMA) in behavorial medicine. *Annals of Behavioral Medicine, 16*(3), 199–202.

Sue, D. W., Bucceri, J., Lin, A. I., Nadal, K. L., & Torino, G. C. (2007). Racial microaggressions and the Asian American experience. *Cultural Diversity and Ethnic Minority Psychology, 13*(1), 72.

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist, 62*(4), 271-286.

Suyemoto, K. L., Erisman, S. M.,Holowka, D.W., Fuchs, C., Barrett-Model, H., Ng, F., Liu, C., Chandler, D., Hazeltine, K. & Roemer, L. (2016). UMass Boston comprehensive demographic questionnaire, revised. In Wadsworth, L. P., Morgan, L. P., Hayes-Skelton, S. A., Roemer, L., & Suyemoto, K. L. Ways to boost your research rigor through increasing your cultural competence. *The Behavior Therapist, 39*, 83-89.

90

Suyemoto, K.L, Roemer, L., Ng, F., & Rollins, L.G. (2017). *Coping with Post-Election Racism Related Stress*. Unpublished 3-4 hour health promotion program.

Taylor, T. R., Kamarck, T. W., & Shiffman, S. (2004). Validation of the Detroit Area Study Discrimination Scale in a community sample of older African American adults: the Pittsburgh healthy heart project. *International Journal of Behavioral Medicine*, *11*(2), 88-94.

Thompson, R. W., Arnkoff, D. B., & Glass, C. R. (2011). Conceptualizing mindfulness and acceptance as components of psychological resilience to trauma. *Trauma, Violence, & Abuse, 12*(4), 220-235.

Torres, L., & Ong, A. D. (2010). A daily diary investigation of Latino ethnic identity, discrimination, and depression. *Cultural Diversity and Ethnic Minority Psychology*, *16*(4), 561-568.

Torres-Harding, S. R., Andrade Jr, A. L., Diaz, R., & Crist, E. (2012). The Racial Microaggressions Scale (RMAS): A new scale to measure experiences of racial microaggressions in people of color. *Cultural Diversity and Ethnic Minority Psychology, 18*(2), 153-164.

Torres-Harding, S., & Turner, T. (2015). Assessing racial microaggression distress in a diverse sample. Evaluation & the Health Professions, 38(4), 464-490.

Watson, N. N., Black, A. R., & Hunter, C. D. (2016). African American women's perceptions of mindfulness meditation training and gendered race-related stress. *Mindfulness*, *7*(5), 1034-1043.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief

    measures of positive and negative affect: the PANAS scales. *Journal of Personality*

    and Social Psychology, 54(6), 1063-1070.

Watson-Singleton, N. N., Black, A. R., & Spivey, B. N. (2019). Recommendations for a

    culturally-responsive mindfulness-based intervention for African Americans.

    Complementary Therapies in Clinical Practice, 34, 132-138.

Watson-Singleton, N. N., Hill, L. K., & Case, A. D. (2019). Past discrimination, race-related

    vigilance, and depressive symptoms: The moderating role of

    mindfulness. *Mindfulness*, *10*(9), 1768-1778.

Wei, M., Heppner, P. P., Ku, T. Y., & Liao, K. Y. H. (2010). Racial discrimination stress,

    coping, and depressive symptoms among Asian Americans: A moderation

    analysis. *Asian American Journal of Psychology*, *1*(2), 136.

West, L. M., Graham, J. R., & Roemer, L. (2013). Functioning in the face of racism:

    Preliminary findings on the buffering role of values clarification in a Black American

    sample. *Journal of Contextual Behavioral Science, 2*(1-2), 1-8.

Whitbeck, L. B., Adams, G. W., Hoyt, D. R., & Chen, X. (2004). Conceptualizing and

    measuring historical trauma among American Indian people. *American Journal of*

    Community Psychology, *33*(3-4), 119-130.

Whitbeck, L. B., McMorris, B. J., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2002).

    Perceived discrimination, traditional practices, and depressive symptoms among

    American Indians in the upper Midwest. *Journal of Health and Social Behavior,*

    43(4) 400-418.

Wilkinson, L. (1999). Statistical methods in psychology journals: Guidelines and

    explanations. *American Psychologist*, *54*(8), 594.

Wilson, K. G., & Murrell, A. R. (2004). Values work in acceptance and commitment

    therapy. *Mindfulness and Acceptance: Expanding the Cognitive-Behavioral*

    Tradition, 120-151.

Womack, V. Y., & Sloan, L. R. (2017). The association of mindfulness and racial

    socialization messages on approach-oriented coping strategies among African

    Americans. *Journal of Black Studies*, *48*(4), 408-426.

Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination

    and ethnic identification on African American adolescents' school and socioemotional

    adjustment. *Journal of Personality*, *71*(6), 1197-1232.

Woods-Giscombé, C. L., & Black, A. R. (2010). Mind-body interventions to reduce risk for

    health disparities related to stress and strength among African American women: The

    potential of mindfulness-based stress reduction, loving-kindness, and the NTU

    therapeutic framework. *Complementary Health Practice Review*, *15*(3), 115-131.

Woods-Giscombé, C. L., & Gaylord, S. A. (2014). The cultural relevance of mindfulness

    meditation as a health intervention for African Americans: Implications for reducing

    stress-related health disparities. *Journal of Holistic Nursing*, *32*(3), 147-160.

Zapolski, T. C., Faidley, M. T., & Beutlich, M. R. (2019). The experience of racism on

    behavioral health outcomes: The moderating impact of

    mindfulness. *Mindfulness*, *10*(1), 168-178.

CHAPTER 4

CONCLUSION

The dissertation monographs examined theoretical, conceptual, and empirical evidence of ways mindfulness- and valued-living (MVL) interventions may be effective strategies when adapted for coping with racism-related stress. The first monograph reviewed the preliminary literature on MVL in the context of racism and oppression. This monograph added to the existent literature by providing suggestions for adapting MVL strategies specifically for coping with racism.

The second monograph presented an empirical study on the acceptability and effectiveness of an MVL intervention adapted for coping with racial discrimination. We evaluated and interpreted data collected from a pilot intervention study using a waitlist-control design and momentary assessment methodology to evaluate the effectiveness of a brief MVL intervention for coping with racism, as well as the effectiveness of MVL strategies on negative affect during discriminatory incidences the moment they occur. Although preliminary and not statistically significant, the findings provide preliminary evidence that a brief MVL intervention can lead to medium effect size changes in depressive and generally anxious symptoms. This was the first known quantitative study evaluating an

MVL intervention adapted for coping with racism, and demonstrated that a brief, 45-minute intervention showed a promise of disrupting the negative psychological impacts of a chronic and recurring stressor. This dissertation is an important first step in determining which strategies may be helpful in mitigating the psychological impact of racial discrimination and identifying intervention components that may be most effective for people of color, and working toward eliminating racism-based mental health disparities.

APPENDIX

Table 1

Measure Scores for Outlier Participant Who Was Removed from Study Analyses

	Score
RMAS- frequency	62
RMAS-distress	61
DASS Screening	
Depression	40
Anxiety	40
Stress	38
DASS T1	
Depression	34
Anxiety	26
Stress	32
DASS T2	
Depression	30
Anxiety	28
Stress	34
Overall, how helpful did you find the coping with racism presentation?[a]	5
When you think back to the coping with racism-related stress information, how helpful did you find the following?[a]	
a. Learning that distress in response to racism is natural	5
b. Feeling like my experiences were reflected in the material	5
c. Learning how to notice my experience in the moment	5
d. Learning how being aware can help me pause so I can choose my response	5
e. Learning how self-care can help to replenish my resources	3
f. Developing more compassion for myself and my responses to racism	5
g. Recognizing what is important to me and how to choose meaningful action	5

	M (SD)
PANAS-NA	31.96 (6.36)
Mindfulness (M)	0.0 (0.0)
Acceptance	0.03 (0.16)
Valued Action	0.0 (0.0)
Coping Flexibility	0.86 (0.68)

Note. RMAS = Racial Microaggression Scale; DASS= Depression Anxiety and Stress Scale; DCI-M = Daily Coping Inventory-Modified; PANAS = Positive And Negative Affect Scale; T1 = study timepoint one; EMA = ecological momentary assessments; T2 = study timepoint two. [a]All items were rated on a 1-5 Likert scale, with higher ratings indicating greater perceived helpfulness.

Table 2

Demographic Characteristics of Study Participants in the Full Sample (N = 28) and Sample of Participants Reporting Momentary Discrimination (N=20)

Characteristic	Full Sample *n* (%)	Sample Reporting Momentary Discrimination *n (%)*
Self-identified race[1]		
Alaskan Native/Native American	2 (7.1)	2 (10.0)
Asian	8 (28.6)	6 (30.0)
Latinx-non white	7 (25.0)	5 (25.0)
Latinx-white	4 (14.3)	3 (15.0)
Black	11 (39.3)	9 (45.0)
Pacific Islander	2 (7.1)	1 (5.0)
Middle Eastern/North African	0 (0.)	0 (0.0)
White	2 (7.1)	2 (10.0)
Multiracial	3 (10.7)	2 (10.0)
Chose not to identify	0 (0.0)	0 (0.0)
Self-identified ethnicity[1,2]		
European/European American	3 (7.9)	3 (12.5)
Latinx/ Latinx-American[3]	11 (28.9)	7 (29.2)
African/ African Immigrant[4]	4 (10.5)	3 (12.5)
African-American	0 (0.0)	0 (0.0)
Asian/ Asian-American[5]	7 (18.4)	5 (20.8)
Middle Eastern/ Middle Eastern-American	2 (5.3)	0 (0.0)
Indigenous	2 (5.3)	1 (4.2)
Afro-Caribbean	8 (21.1)	5 (20.8)
Missing	1 (2.6)	0 (0.0)
Birth Country		
United States/ Territory	22 (78.6.0)	15 (75.0)
Outside of the United States	6 (21.4)	5 (25.0)
Missing	0 (0.0)	0 (0.0)
Citizenship Status		
U.S. Citizen	24 (85.7)	16 (80.0)
Lawful permanent resident	2 (7.1)	2 (10.0)
DACA recipient	1 (3.6)	1 (5.0)
Work/Student VISA	1 (3.6)	1 (5.0)

[1] Participants could select multiple racial and ethnic identities. Therefore, percentages exceed a sum of 100%; [2] Ethnic identity was assessed via an open-ended question. Participants could write multiple ethnic identities, and these identities were then coded by multiple raters. Discrepancies were coded by consensus by a team of doctoral students; [3] Collapsing responses categorized as Latinx (1), Caribbean Latinx/ Caribbean Latinx-American (6), South American (1), Mexican/ Mexican-American (2), and Central American (1); [4] Collapsing responses categorized as West African (3) and South African (1); [5] Collapsing responses categorized as East-Asian/East-Asian American (4), South-East Asian/ South-East Asian American (2), South-Asian/ South Asian American (1).

Table 3

Overview of Measurements Administered by Study Timepoints

Measure	Screening	T1	EMA	T2
Demographics	X			
RMAS	X			
DASS	X	X		X
DCI-M			X	
PANAS			X	
Quantitative Evaluation				X

Note. RMAS = Racial Microaggression Scale; DASS= Depression Anxiety and Stress Scale; DCI-M = Daily Coping Inventory-Modified; PANAS = Positive And Negative Affect Scale; T1 = study timepoint one; EMA = ecological momentary assessments; T2 = study timepoint two.

Table 4

Participant Demographic Characteristics by Condition with Statistical Comparisons (N = 28)

	Intervention n (%)	Waitlist n (%)	χ^2_{diff}
Gender			
Man	2 (14.3)	3 (21.4)	
Woman	12 (85.7)	10 (71.4)	$\chi^2 = 1.38$, p=.50
Nonbinary	0 (0.0)	1 (7.1)	
Sexual Orientation			
Bisexual	2 (14.3)	2 (14.3)	
Gay/Lesbian	0 (0.0)	1 (7.1)	
Heterosexual	10 (71.4)	10 (71.4)	$\chi^2 = 4.0$, p=.55
Queer	1 (7.1)	0 (0.0)	
Asexual	0 (0.0)	1 (7.1)	
Not Listed	1 (7.1)	0 (0.0)	
Racial Identity			
Native Alaskan/American	1 (7.1)	1 (7.1)	$\chi^2<.01$; p=1.0
Asian	4 (28.6)	4 (28.6)	$\chi^2<.01$, p=1.0
Black	5 (35.7)	6 (42.9)	$\chi^2 = .15$, p=.70
Latinx (non-white)	4 (28.6)	3 (21.4)	$\chi^2= .19$, p=.66
Latinx (white)	3 (21.4)	1 (7.1)	$\chi^2= 1.17$, p = .28
Middle Eastern/North African	0(0.0)	0 (0.0)	-
Pacific Islander/Native Hawaiian	0 (0.0)	2 (14.3)	$\chi^2= 2.15$, p=.14
White	1 (7.1)	1 (7.1)	$\chi^2<.01$, p=1.0
Multiracial	2 (14.3)	1 (7.1)	$\chi^2= .37$, p=.54
Not Listed	0 (0.0)	0 (0.0)	-

Table 5

Means and Standard Deviations of Screening and Time 1 Measure Scores by Condition, and Estimated Effect Size of Score Differences Between Conditions (N=28)

	Screening			T1		
	Intervention	Waitlist		Intervention	Waitlist	
			Cohen's			Cohen's
	M (SD)	*M (SD)*	*d*	*M (SD)*	*M (SD)*	*d*
DASS-D	14.43 (8.60)	16.86 (14.86)	0.20	15.00 (11.25)	16.31 (12.86)	0.11
DASS-A	13.43 (7.82)	10.14 (9.62)	0.38	15.00 (11.82)	8.43 (7.41)	0.56
DASS-S	18.88 (10.03)	13.81 (10.84)	0.49	21.57 (11.29)	16.05 (12.82)	0.46
RMAS-frequency	57.93 (17.42)	57.64 (23.38)	0.01	-	-	-
RMAS-distress	55.93 (19.72)	52.07 (24.70)	0.17	-	-	-

Note. Scores between conditions were not statistically significant. Based on established effect size estimates (Cohen, 1988), *d* values of .20, .50, and .80 would indicate small, medium, and large effect sizes, respectively.

Table 6

Quantitative Evaluation of the MVL Intervention (N = 28)

	Min	Max	Median	Mode	Mean	SD
1. Overall, how helpful did you find the coping with racism presentation?	2	5	4	5	4.19	0.93
2. When you think back to the coping with racism-related stress information, how helpful did you find the following?						
a. Learning that distress in response to racism is natural	1	5	4	5	3.89	1.23
b. Feeling like my experiences were reflected in the material	2	5	4.5	5	4.14	1.04
c. Learning how to notice my experience in the moment	3	5	4.5	5	4.29	0.81
d. Learning how being aware can help me pause so I can choose my response	1	5	4.5	5	4.21	1.02
e. Learning how self-care can help to replenish my resources	2	5	4	5	4.14	0.93
f. Developing more compassion for myself and my responses to racism	3	5	4.5	5	4.39	.69
g. Recognizing what is important to me and how to choose meaningful action	1	5	5	5	4.46	.96

Note. All items were rated on a 1-5 Likert scale, with higher ratings indicating greater perceived helpfulness.

Table 7

Unadjusted Means and Standard Deviations of Time 1 and Time 2 DASS Subscale Scores by Condition, and Estimated Effect Size of Score Differences Between Conditions (N=28)

| | T1 | | | T2 | | |
| | Intervention | Waitlist | Cohen's | Intervention | Waitlist | Cohen's |
	M (SD)	*M (SD)*	*d*	*M (SD)*	*M (SD)*	*d*
DASS-D	15.0 (11.25)	17.49 (13.21)	0.20	9.86 (9.20)	15.60 (14.09)	0.48
DASS-A	15.19 (11.82)	9.60 (8.46)	0.54	11.00 (9.60)	8.93 (9.13)	0.22
DASS-S	21.57 (11.29)	17.11 (13.02)	0.37	15.60 (10.32)	17.20 (12.60)	0.14

Note. Based on established effect size estimates (Cohen, 1988), *d* values of .20, .50, and .80 would indicate small, medium, and large effect sizes, respectively.

Table 8

Mean Reported Proportional Use of MLV Coping Strategies During Momentary Reports of Discrimination by Condition (Unadjusted and Adjusted Means[a])

	Intervention			Waitlist			
	M (SD)	Adj. M (SE)	95% CI	M (SD)	Adj. M (SE)	95% CI	η^2_p
Mindfulness	0.09 (0.18)	.09 (.08)	-0.08 - 0.26	0.20 (0.20)	.20 (.07)	0.05 – 0.35	.06
Acceptance	0.16 (0.34)	0.17 (0.10)	-0.04 – 0.37	0.10 (0.23)	0.10 (0.09)	-0.09 – 0.28	.02
Valued Action	0.04 (0.08)	0.06 (0.06)	-0.08 – 0.19	0.17 (0.25)	0.16 (0.06)	0.04 – 0.28	.07
Coping Flexibility	1.54 (0.97)	1.51 (0.32)	0.84 – 2.19	2.16 (0.89)	2.17 (0.29)	1.57 – 2.78	.12

Note. CI = confidence interval; η^2_p = partial eta squared. [a]Adjusted means are means accounting for a covariate. The reported adjusted means account for T1 DASS anxiety subscale. Based on established effect size estimates, partial eta squared values of .01, .06, and .14 would indicate small, medium, and large effect sizes (Richardson, 2011).

Table 9

Correlations Between Average Mindfulness and Valued Living Coping Strategy Use and DASS Residualized Gain Scores (N=20)

	DASS-D	DASS-A	DASS-S
Mindfulness	-.15	-.21	-.30
Acceptance	.15	.14	.25
Valued Action	-.25	.04	-.13
Coping Flexibility	.06	-.09	.02

Note. None of the reported correlations were statistically significant.

Figure 1

Harrell's (2000) Model for Racism-Related Stress.

MODEL OF RACISM-RELATED STRESS AND WELL-BEING: DOMAINS AND SELECTED VARIABLES

I. ANTECEDENT VARIABLES
Person Factors
Race/ethnicity, gender, age, language, physical characteristics
Socioenvironmental Factors
Current sociopolitical context, regional/geographic location, socioeconomic status (SES), racial composition of contexts

II. FAMILIAL AND SOCIALIZATION INFLUENCES
Family Characteristics/Dynamics
Family structure and roles
Racial Socialization
Family, community, institutional

III. SOURCES OF STRESS
Racism-Related Stress
Racism-related life events, daily racism microstressors, chronic conditions of living, collective/group perceptions, transgenerational transmission of trauma
Other Status-Related Stress
Sexism, heterosexism, religious discrimination, disability discrimination, ageism, classism
Generic Stressors
Episodic life events, daily hassles, role strain, multiple roles, role conflict

IV. INTERNAL AND EXTERNAL MEDIATORS
Internal Characteristics
Self-esteem, self-efficacy, cognitive appraisal and attributions
Sociocultural Variables
Worldview, cultural values, spirituality, racial/ethnic identity, racism-related coping styles, psychological acculturation, racial attitudes
Affective and Behavioral Responses to Stress
Affective reactions (sadness, anger, humiliation, etc), specific coping behavior (problem-focused/emotion-focused, active/passive, inner-directed/outer-directed, individual/collective)
External Resources
Social support (intragroup, community, intergroup, societal)

V. OUTCOMES
Physical
Hypertension, cardiovascular reactivity, risk behavior (e.g., cigarette smoking)
Psychological
Depression, anxiety, trauma-related symptoms, hostility
Social
Social connectedness; intragroup, intergroup relations
Functional
Job performance, academic achievement, parental functioning
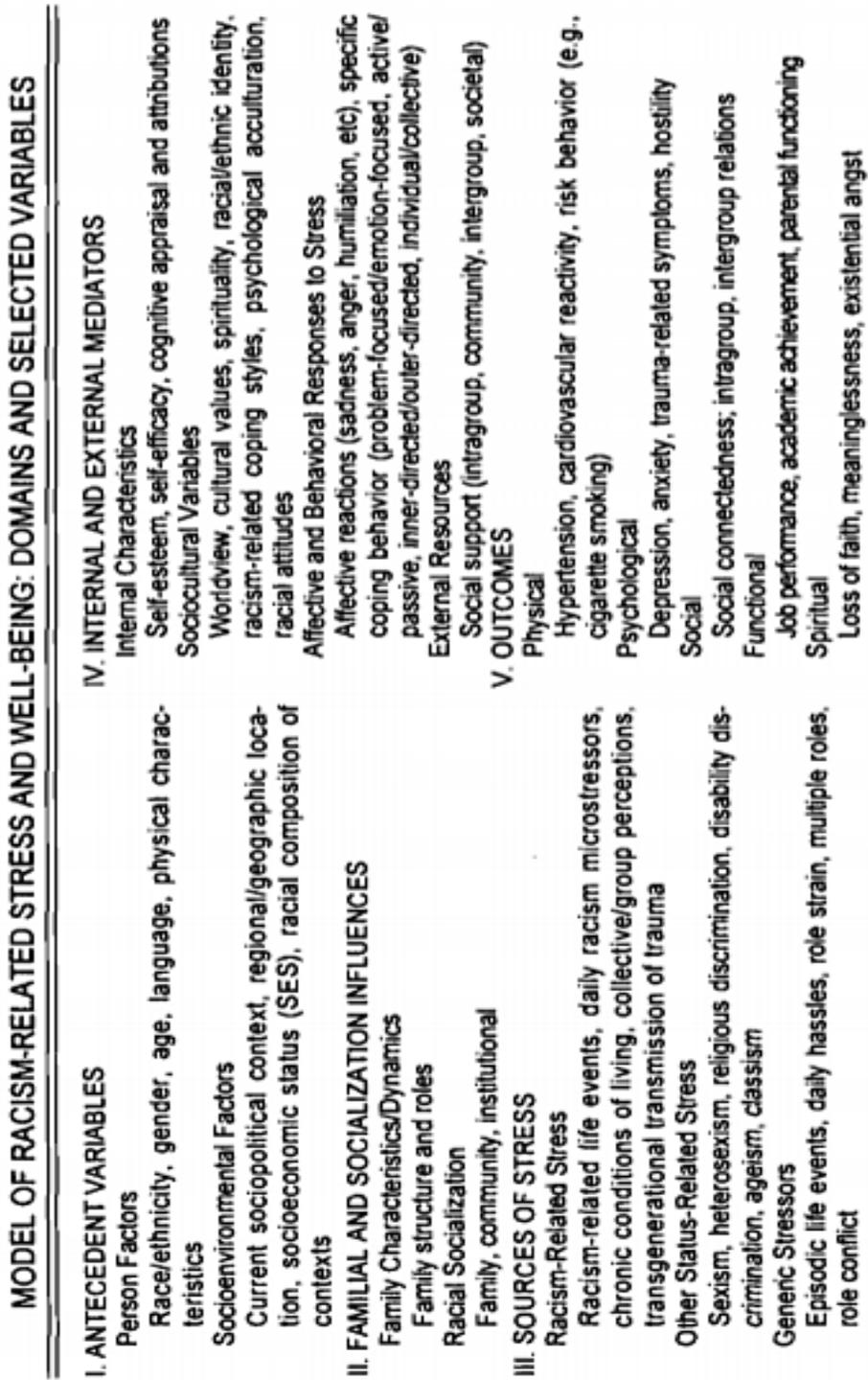Spiritual
Loss of faith, meaninglessness, existential angst

106

Figure 2

Flowchart of the Study Procedures

Online Screening

| Informed Consent | → | *N* = 113 |

| Screening Measures |

- *Demographics*
- *Racial Microaggression Scale*
- *Depression, Anxiety, and Stress Scale*

| Identify Eligible Participants | → | *N* = 76 |

- *Identify as POC*
- *Age 18+*
- *Lived in US for 5+ years*
- *At least moderately fluent in English*
- *Reported at least some microaggression distress, and past year frequency*

Time 1

| Informed Consent | → | *N* = 32 |

| *Waitlist Control* | | *Intervention* |

| Pre Questionnaires |

- *DASS*

| Intervention |

Ecological Momentary Assessment (2-weeks)

| 4 daily randomized prompts OR report after a racist experience |

- *Daily Coping Inventory*
- *Positive and Negative Affect Scale*

Time 2

```
┌──────────────────┐        ┌──────────────────┐
│ Waitlist Control │        │   Intervention   │
└──────────────────┘        └──────────────────┘
          │                          │
          ▼                          ▼
   ┌─────────────────────────────────────┐        ┌─────────┐
   │        Post Questionnaires          │───────▶│ N = 28  │
   ├─────────────────────────────────────┤        └─────────┘
   │   • DASS                            │
   └─────────────────────────────────────┘
          │                   │
          ▼                   │
   ┌──────────────────┐       │
   │   Intervention   │       │
   └──────────────────┘       │
                              ▼
          ┌─────────────────────────────────────┐
          │   • Quantitative Evaluation         │
          └─────────────────────────────────────┘
```
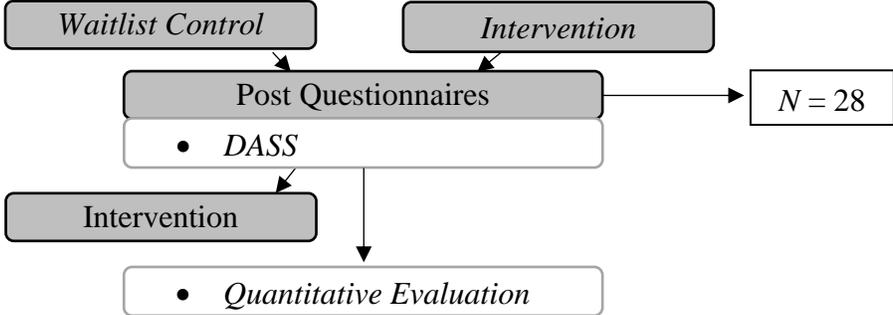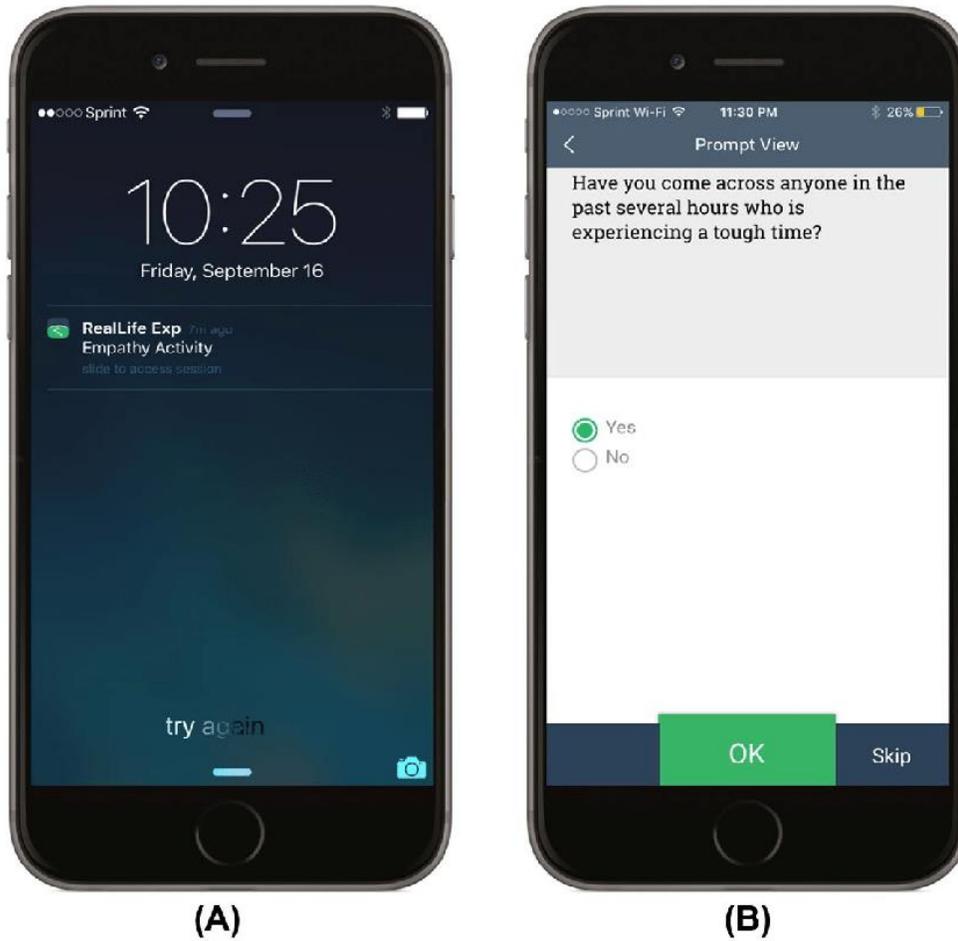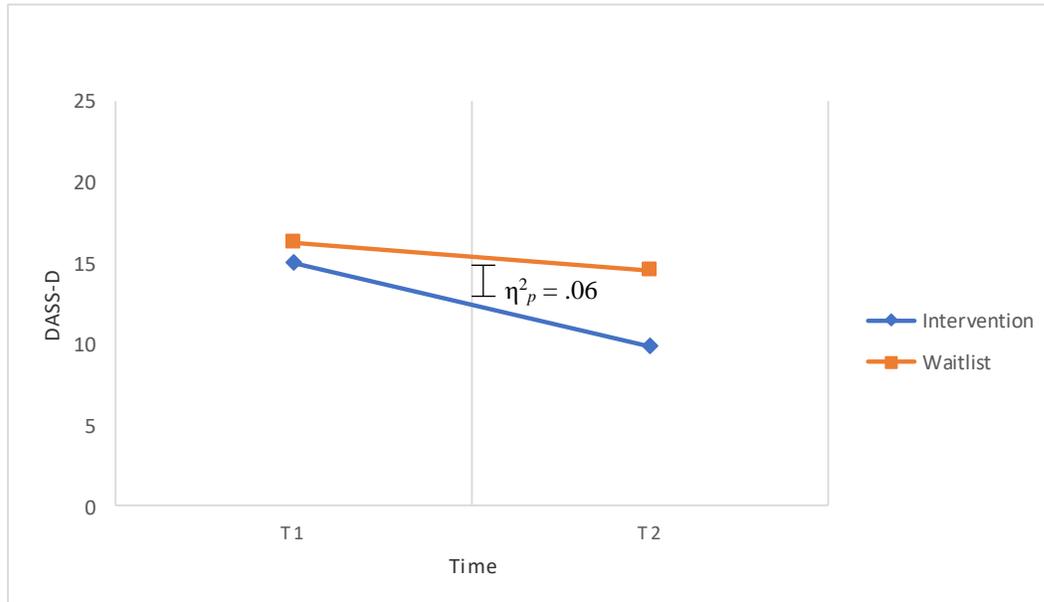
Figure 3
LifeData Software Example

Note. *(a) Example notification banner for ecological momentary assessment randomized prompts; and (b) Example of yes/no question prompts. Figure from Fry & Runyan (2018).*
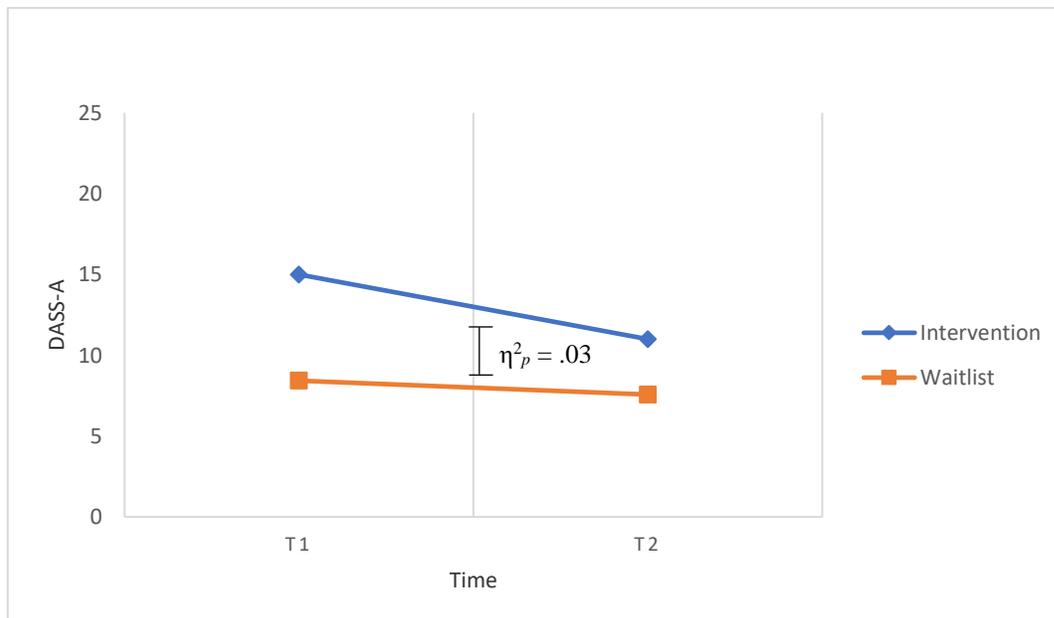
Figure 4

Change in DASS-Depression Scores from T1 to T2 by Condition

Note. Partial eta squared values of .01, .06, and .14 would indicate small, medium, and large effect sizes (Richardson, 2011).
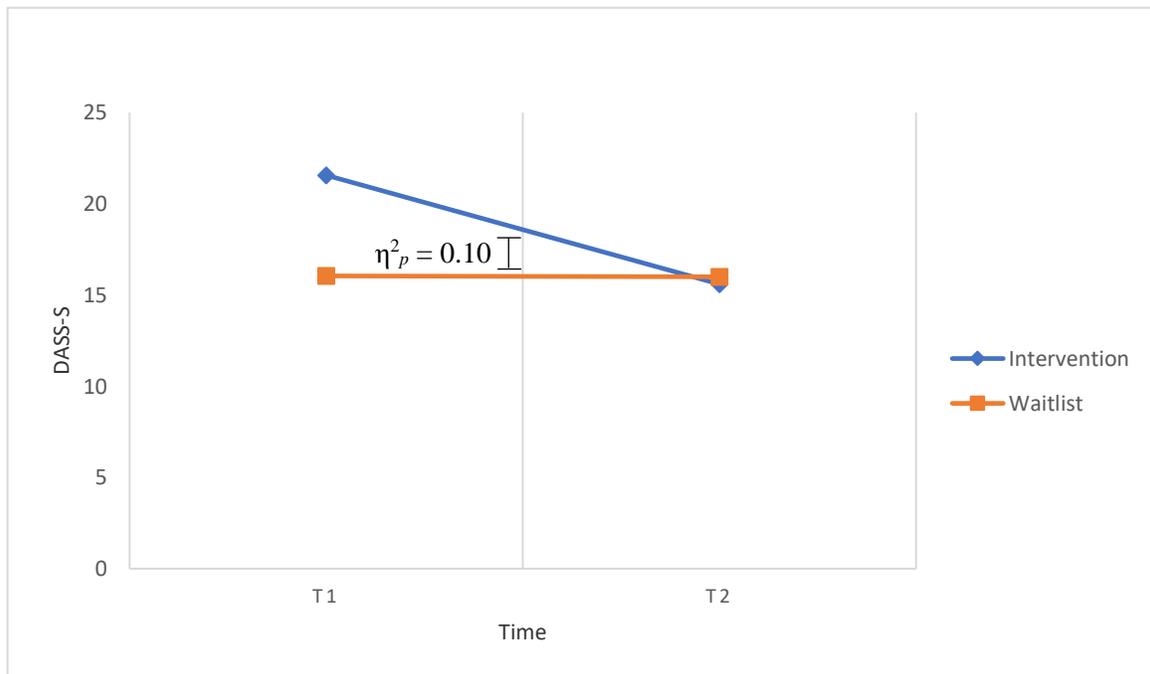
Figure 5

Change in DASS-Anxiety Scores from T1 to T2 by Condition

Note. Partial eta squared values of .01, .06, and .14 would indicate small, medium, and large effect sizes (Richardson, 2011).

Figure 6

Change in DASS-Stress Scores from T1 to T2 by Condition

Note. Partial eta squared values of .01, .06, and .14 would indicate small, medium, and large effect sizes (Richardson, 2011).

BIOGRAPHICAL SKETCH

After years of working as a research assistant, a graduate student placed her manuscript on my desk to do a reference check, not recognizing that her manuscript finally sparked my passion for clinical research. The topic, interracial anxiety, was the first time I saw research that spoke to my experience as a person of color in a predominantly White institution. From that moment, I developed an interest in factors that contribute to mental health disparities, and interventions and strategies that are culturally congruent and applicable to the lived experience of people of color. My research and educational training throughout graduate school has helped strengthen my theoretical, empirical, and clinical understanding of racism and systemic contextual stressors, as well as factors that promote resiliency. I have also translated my knowledge of these areas of study to service and practice, such as conducting "Coping with Racism" workshops, a mindfulness- and valued living-based outreach program adapted specifically for addressing race-based discrimination, for a diverse student body at the University of Massachusetts Boston. My work with the "Coping with Racism" outreach workshops informed my dissertation. My academic work has also been supported by an NIH Dissertation grant, University of Massachusetts Boston research grants, and has been recognized by a Ford Foundation Fellowship and APA Division 12 Distinguished Student Research in Diversity award. I hope to continue teaching and mentoring graduate students to further increase the representation of racial/ethnic minorities in psychology and conduct multiculturally-informed clinical research.