ABSTRACT

Title of Dissertation: COPING WITH MULTIPLE STRESSORS: A CLOSER LOOK
                             AT PSYCHOLOGICAL DISTRESS AMONG RACIAL
                             MINORITIES

                             Min Ji Yang, Doctor of Philosophy, 2015

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This study examined a comprehensive stress and coping model in a sample of 414 racial minority participants in the U.S. Specifically, this study looked at main effects: a) racism-related stress, b) financial stress, c) problem-solving coping, d) avoidance coping and interaction effects: e) racism-related stress and financial stress, f) racism-related stress and problem-solving, g) racism-related stress and avoidance coping, h) financial stress and problem-solving coping, and i) financial stress and avoidance coping in relation to psychological distress. A latent variable path analysis of the comprehensive model and three smaller models (post-hoc analyses) were conducted. The results showed that racism-related stress, financial stress, and avoidance coping were significant predictors of psychological distress. Moreover, problem-solving coping worked as a significant moderator between racism-related stress and psychological distress. An extensive literature review of conceptual and methodological elements of the study constructs are presented. Limitations of this study as well as future directions in research and clinical practice are also included.

COPING WITH MULTIPLE STRESSORS: A CLOSER LOOK AT PSYCHOLOGICAL
DISTRESS AMONG RACIAL MINORITIES

By Min Ji Yang

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I dedicate this study to my maternal grandfather, paternal grandmother, and uncle who passed away in recent years. Their legacy of providing genuine love and care for others and contributing economically and academically to society lives on through me and my other family members. I was emotionally and financially supported by them immensely while growing up and my completion of my doctoral degree and other accomplishments would not have been possible without them. I miss them all terribly. May they rest in peace in God's arms.

My immediate family, my mother, father, and sister, have also been instrumental in my development as a counseling psychologist. My parents have sacrificed pieces of their lives to help my sister and I experience the world. They have always taught me to be righteous and loving and develop myself which are values that I hold onto strongly in my personal and professional life. My sister has always been by my side and reminded me of the importance of being in the moment and being grateful of the blessings that have been given to us. She has achieved her own set of accomplishments unique to her as a person that I admire and respect. I thank them all. I always look up to their courage, resilience, and strength that has helped me through this process.

My friends and colleagues all over the U.S. and the world have provided me with guidance, support, and numerous laughs. They have been with me when things were tough as well as joyful. I thank each and every one of them who have helped me grow as a better person and make this dissertation happen. I look forward to sharing the next stages in life with all of them and wish them all the best in their future endeavors.

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for me as a person without him and I am forever indebted to him for that. I respect how he has provided genuine care and concern for me throughout the years. I embody the healthy, caring model of mentorship he has provided for me to my students I advise and supervise. I now look forward to becoming a friend and colleague who can support him personally and professionally in years to come.

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Chapter 1. Introduction to the Problem

The 2010 U.S. Census Bureau reported that the Hispanic and/or Latino/a population consisted of 50.5 million (16.3%), the Black or African American population consisted of 38.9 million (12.6%), the Asian population consisted of 14.7 million (4.8%), the American Indian and Alaska Native population consisted of 2.9 million (.9%), and the Native Hawaiian and Pacific Islander population consisted of .5 million (.2%) out of the 308.7 million total racial minority population that live in the U.S (U.S. Census Bureau, 2011). Those in 'some other race' comprised of 19.1 million (6.2%) and those with two or more races comprised of 9.0 million people (2.9%). Hence, the U.S. population is made up of a large number of racial groups whose numbers increase every year.

The U.S. is well-known for its history of slavery, immigration, and racial segregation. These past historical events signify the multicultural society that exists in the U.S. as well as racial discrimination, unequal opportunities, and health disparities that racial minorities continue to experience. For example, racial residential segregation laws in the 1890's have largely influenced racial minorities' disadvantages in income, education, employment, and health (Williams & Collins, 2001). Smedley, Stith, and Nelson (2002) in the Institute of Medicine report explained that African Americans and Hispanic Americans tend to have limited quality of health care than Whites even after controlling for multiple clinical factors (e.g., severity of disease, stage of disease). Mulia, Ye, Zemore, and Greenfield (2008) also discovered that Blacks and Hispanics had higher levels of poverty, unfair treatment, racial stigma, and overall social disadvantage than Whites ($N = 6,631$).

As a result, several scholars have examined numerous inequalities and prejudice racial minorities experience along with the impact these have on racial minorities' levels of psychological distress. For instance, Williams, Neighbors, and Jackson (2003) found that 20 out of 25 studies in their review showed a positive, significant association between racial discrimination and psychological distress and recommended advancing research in this area. Gee, Ro, Shariff-Marco, and Chae (2009) discovered in their review that 37 out of 40 studies found that higher levels of racial discrimination was related to higher levels of mental health problems (e.g., depressive disorders, self-esteem) among Asian Americans. Greer (2011) also showed that among 128 African American females, higher levels of race-related stress was associated with higher levels of somatization symptoms, depression, interpersonal sensitivity, anxiety, and obsessive-compulsive symptoms. These results warrant further study on several different distressful experiences racial minorities go through.

Interplay of Race-Related and Social Class-Related Stressors for Racial Minorities

Many scholars have demonstrated that racial minorities in the U.S. undergo multiple struggles based on their racial minority statuses (Flores & Lin, 2013; Gallo & Matthews, 2003; Greer, 2011). Moreover, it is important to point out that many racial minorities in the U.S. tend to struggle with psychological and financial difficulties due to their racial minority statuses *and* low social class statuses that stem from their racial minority statuses. For example, Myers (2009) indicated that racial minorities tend to be strongly represented among low social classes, have higher number of stressors and experience stress as more harmful than Whites, have a significant lack of resources, and have high exposure to risk factors and chronic stress. Danty Jr. (2003) discovered that

Black participants had two times of a higher unemployment rate than White participants in their nationally representative sample (N = 12,686). Alegria and colleagues (2008) also found that compared to White individuals, racial minorities had higher levels of poverty and lower levels of health insurance coverage in their sample (N = 8,762).

Therefore, several researchers have described race and social class as macro-level factors that impact the psychological experiences of stress, coping, and health among individuals (Myers, Lewis, & Parker-Dominguez, 2003; Taylor, Repetti, & Seeman, 1997). Scholars have argued that race and social class are inseparable and that it is crucial to consider their *combined* effects (Braveman, Cubbin, Egerter, Williams, & Pamuk, 2010; Williams & Collins, 1995). For example, Myers (2009) described that racial minorities who have long-term exposure of socioeconomic disadvantage tend to have higher rates of morbidity and mortality. Hence, "both race and class matter and may compound the effects of each other for those with multiple marginalized identities" (Hardaway & McLloyd, 2009, p. 244).

Although scholars have established the importance of examining race and social class in psychological literature, several studies have included race and social class largely as categorical or control variables (Adler et al., 1994; Helms, Jernigan, & Mascher, 2005) instead of exploring the social and psychological impact individuals' race and social class statuses have on their psychological health. For example, scholars have noted that "social class should be used as a descriptor or modifier for some psychological variable of interest" in order to study "the intrapsychic processes and attitudes" of that variable (Liu et al., 2004, p. 9). This argument is in lieu with the current wave of research in the field of race and gender where researchers encourage the usage of constructs

related to race and gender rather than using them as categorical variables (Ayman & Korabik, 2010; Helms et al., 2005). Hence, it is crucial to investigate constructs that represent life experiences that racial minorities undergo as a result of their racial and social class positions.

Additionally, no study to my knowledge has investigated both race- and social class-related life experiences in a comprehensive model among the racial minority population. Given that research on racial minority health is a nascent area, the number of studies that have examined more than one type of struggle that racial minorities experience in relation to their levels of psychological distress are scant (Cokley, McClain, Enciso, & Martinez, 2013; Chen & Tryon, 2012; Miller, Yang, Farrell, & Lin, 2011). Hence, in order to get a more accurate and extensive picture of the psychosocial experiences racial minorities undergo, this study looked at: main effects of (a) racism-related stress, which represents stressful experiences racial minorities go through due to racism and their racial status, (b) financial stress, which represents stressful experiences related to the economic disadvantages and struggles racial minorities go through, (c) and the interaction between racism-related stress and financial stress, simultaneously predicting psychological distress along with other factors (e.g., coping strategies) that will be explained below in a comprehensive model among a diverse racial minority sample.

Understanding Racism-Related Stress

Many scholars have examined racism experiences that racial minorities in the U.S. endure throughout their lifetime (Broudy et al., 2007; Carter & Forsyth, 2010; Harrell, 2000). Jones (1972) defined racism as "the transformation of race prejudice and/or

ethnocentrism through the exercise of power against a racial group defined as inferior, by individuals and institutions with the intentional or unintentional support of the entire culture" (p. 117).

Past literature has applied the stress and coping theory by Lazarus and Folkman (1984) to conceptualize racism-related stress (Brondolo, Brady ver Halen, Pencille, Beatty, & Contrada, 2009; Harrell, 2000; Landrine, Klonoff, Corral, Fernandez, & Roesch, 2006). Lazarus and Folkman (1984) defined stress as a "negative and harmful interaction that occurs between individuals and the environment and impacts individuals' well-being" (p. 19). Harrell (2000) described it as "the race-related transactions between individuals or groups and their environment that emerge from the dynamics of racism, and that are perceived to tax or exceed existing individual and collective resources or threaten well-being" (p. 44). Hence, racism-related stress is a product of the transaction between the individual and environment *and* an appraisal process in which individuals subjectively evaluate whether the event they experience harms their well-being.

Researchers have found that higher levels of racism-related stress are related to detrimental psychological distress outcomes. Pascoe and Smart Richman (2009) conducted a meta-analysis of the link between perceived discrimination (e.g., racial discrimination, gender discrimination) and psychological health (e.g., mental illness, psychological distress, general well-being). Eighty-eight out of 134 articles in this meta-analysis consisted of studies looking at the racial discrimination – psychological health relationship. The authors discovered that increased levels of perceived discrimination were related to increased levels of psychological health with an effect size of .20 (95% CI: -.22 to -.17). Chou, Asnaani, and Hofmann (2012) found that perceived racial

discrimination was positively related to different clinical disorders (major depressive disorder, panic disorder with agoraphobia, agoraphobia without history of panic disorder, posttraumatic stress disorder, and substance use disorder) for Asian Americans, Hispanic Americans, and African Americans in a nationally representative sample ($N = 4,539$). Williams and Mohammad (2009) in their review also discovered that higher levels of discrimination were related to higher anxiety, depression, burnout, mental disorders, self-esteem, PTSD symptoms, and other psychological distress outcomes among 37 studies conducted primarily in the U.S. and predominantly among racial minority and immigrant participants.

Understanding Financial Stress

In addition to racism-related stress, racial minorities in the U.S. also experience several financial difficulties and inequalities due to their racial minority status. The 2011 U.S. Census Bureau reported that 27.6% of Blacks, 25.3% of Hispanic, and 12.3% of Asians had income lower than the poverty level compared to that of 9.8% of non-Hispanic Whites. Shapiro, Meschede, and Osoro (2013) also found that Whites tend to have more wealth than African American families and that this difference tripled over the span of 25 years. They reported that disparities in years of home ownership, household income, unemployment, college education, and inheritance are strong contributors to this large wealth gap. Although several national reports and empirical findings have reported income disparities and high poverty levels among racial minority groups, few studies have examined the financial difficulties and economic stress that racial minorities go through and how these impact their psychological distress levels.

Similar to racism-related stress, financial stress entails an individual-environment interaction and appraisal process in alliance with Lazarus and Folkman's theory. Northern, O'Brien, and Goetz (2010) defined financial stress as the "inability to meet one's economic responsibilities" which is also "influenced by psychological factors such as attitudes, beliefs, and cognitive appraisals of demands and available resources" (p. 79). The authors delineated financial stress to consist of troublesome financial situations that are influenced by individuals' appraisals of the amount of resources they have. In order to be consistent with prior conceptualizations of stress, this study defined financial stress as *a reaction that results from negative finance-related interactions individuals have with the environment that exceed existing individual resources and/or harm well-being*.

Only a small number of studies have examined financial stress from a psychological perspective. Furthermore, few have found that an increase in financial stress is associated with an increase in depression, an increase in marital stress, and a decrease in psychological health (Aldana & Liljenquist, 1998; Gutman, McLoyd, and Tokoyawa, 2005). For example, Ahnquist and Wamala (2011) reported that economic hardship was positively linked to mental health problems that included psychological distress, severe anxiety, and usage of antidepressant medication among 23,153 men and 28,261 women participants from the 2009 Swedish National Survey of Public Health. Notably, as mentioned above, only a handful of studies have examined racial minorities' experiences of economic stress (Bisgaier & Rhodes, 2011; Peirce, Frone, Russell, & Cooper, 1996). Moreover, no study to my knowledge has examined racial minorities' financial stress *and* racism-related stress experiences together. Hence, their individual

and interactive effects with psychological distress were addressed together as part of an exhaustive model in this study.

The Stress and Coping Model

Due to the harmful effects stress has on racial minorities' psychological distress levels, it is important to consider what methods individuals use to manage their stress. According to Lazarus and Folkman's (1984) stress and coping theory, coping methods are activated to handle the impact of stress after individuals evaluate the situation to be stressful. Therefore, they referred to coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141).

In accordance with Lazarus and Folkman's conceptualization, the moderation model became principal in scientific research (Cohen & Wills, 1985; Mueller, 2006; Thoits, 1995; Von Ah, Kang, & Carpenter, 2007). Cohen and Wills (1985) described that coping strategies can alleviate the negative impact of stress on individuals' psychological health such that the relationship between stress and psychological health is dependent on the different levels of the moderator (e.g., the magnitude of the positive relationship between the racism-related stress and psychological distress may be weaker at high levels of problem-solving coping than that of at low levels of problem-solving coping). Therefore, this study utilized the moderation approach to examine a comprehensive model of racism-related stress, financial stress, and coping for racial minorities.

Problem-Solving and Avoidance Coping Strategies

Research has revealed numerous coping mechanisms such as social support, optimism, problem-focused coping, emotion-focused coping, avoidance coping, and

benefit-finding that help people deal with different types of stressors and life struggles (Aspinwall & Tedesechi, 2010; Cohen & Wills, 1985; Dyson & Renk, 2006; Makikangas & Kinnunen, 2003; Pengilly & Dowd, 2000). Scholars have studied coping strategies to deal with racism-related stress such as reactive problem-focused coping strategies and family support (Wei, Heppner, Ku, & Liao, 2010), active coping (Noh & Kaspar, 2003), and avoidant coping (Gonzales, Tein, Sandler, & Friedman, 2001). A scarce number of studies have also explored coping strategies for particular racial groups such as collectivist coping strategies and active coping for Asian Americans (e.g., family support and private emotional outlets) (Liang, Alvarez, Juang, & Liang, 2007; Wei et al., 2010), church support, anger, social support for African Americans (Odom & Vernon-Feagans, 2010; Pittman, 2011; Utsey, Ponterotto, Reynolds, & Cancelli, 2000), and primary control engagement coping and problem-solving for Latino/a Americans (Edwards & Romero, 2008; Villegas-Gold & Yoo, 2014).

Scholars have voiced the importance of continuing to study coping strategies for racism-related stress due to mixed findings and a limited amount of research in this area (Brondolo, et al., 2009; Carter & Forsyth, 2010; Pascoe & Smart Richman, 2009). Moreover, research in the domain of financial stress and coping among racial minorities is strikingly limited to a handful of studies (Caplan & Schooler, 2007; Peirce et al., 1996; Wadsworth, Raviv, Santiago, & Etter, 2011). As a result, further research on investigating effective coping strategies for racial minorities to deal with racism-related stress and financial stress is vital.

Among several coping strategies, problem-solving and avoidance coping have been widely studied in relation to stress and psychological distress but not intensively

across several racial groups. Problem-solving coping (also described as active, problem-focused, or approach coping), or the instrumental approach to plan and take steps to resolve a specific problem, has been found to reduce the negative impact of stress on psychological distress outcomes (Gonzales et al., 2001; Yoo & Lee, 2005). For example, Noh and Kaspar (2003) showed that at high levels of problem-focused coping, that includes problem-solving coping, higher levels of perceived racial discrimination were related to lower levels of psychological distress symptoms (e.g., anxiety and depression) but not at low levels of problem-focused coping among 180 Korean Canadian immigrants.

However, avoidance coping (also described as emotion-focused coping), or the strategy of evading stressful situations, has been found to exacerbate the harmful effects of stress on psychological distress such that the magnitude of the positive relationship between stress and psychological distress is greater for those with high levels of avoidance coping than those with low levels of avoidance coping (Crockett et al., 2007; Gonzales et al., 2001; Pineles et al., 2011; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008). For example, Noh and Kaspar (2003) found that emotion-focused coping, that includes avoidance coping, was a significant moderator between perceived discrimination and depression. They explained that usage of emotion-focused coping strengthened the negative association between perceived discrimination and depression. Hence, this study included both coping strategies to further comprehend how these mechanisms work with racism-related stress, financial stress, and psychological distress in the racial minority population.

Overall, this study investigated an extensive stress and coping model of racial minorities by looking at several relationships of variables simultaneously: (a) the

relationship between racism-related stress and psychological distress, (b) the relationship between financial stress and psychological distress, (c) the relationship between the interaction of racism-related stress and financial stress (racism-related stress*financial stress) and psychological distress, (d) the relationship between the interaction of racism-related stress and problem-solving coping (racism-related stress*problem-solving coping) and psychological distress, (e) the relationship between the interaction of racism-related stress and avoidance coping (racism-related stress*avoidance coping) and psychological distress, (f) the relationship between the interaction of financial stress and problem-solving coping (financial stress*problem-solving coping) and psychological distress, (g) and the relationship between the interaction of financial stress and avoidance coping (financial stress*avoidance coping) and psychological distress, were studied together as part of one large model.

Chapter 2. Review of the Literature

This study aimed to better understand the unique stressors racial minorities face in the U.S. in an exhaustive model of stress and coping. Given the history of slavery, segregation, and discrimination in the U.S., racial minorities encounter numerous struggles and psychological distress disparities. Several scholars have documented how race and social class strongly interact with one another and how they are inseparable in nature. They also voiced the importance of studying constructs that represent internal psychological experiences racial minorities go through due to their racial group and social class statuses. Hence, I looked specifically at racism-related stress and financial stress as individual predictors of psychological distress and tested the interaction effect of both stressors on psychological distress together in this study in order to get a closer snapshot of what racial minorities' lives look like.

Due to the deleterious effects of these multiple stressors on psychological distress, it is also crucial to include and test resources that can help racial minorities handle these struggles. Research on coping mechanisms has found various ways to help people manage stressful events. Hence, I included problem-solving and avoidance coping as individual moderators between racism-related stress and psychological distress as well as between financial stress and psychological distress in addition to the aforementioned relationships in the extensive model.

Interplay of Race-Related and Social Class-Related Stressors for Racial Minorities

Past historical events of discrimination and residential segregation has strongly influenced racial minorities to be over-represented in low social class groups, have limited educational, financial, and coping resources, have higher physical and

psychological health risks, and be continuously targeted for racial prejudice (Flores &
Lin, 2013; Gallo & Matthews, 2003; Greer, 2011; Myers, 2009). For instance, Danty Jr.
(2003) reported that Black participants from the 1992 National Longitudinal Survey of
Youth (NLSY) data set, a nationally representative sample, had an unemployment rate
two times higher than White participants. The authors also reported that Black
individuals "were likely to incur more psychological damage from joblessness because
they are subjected to joblessness more often" (p. 227). Alegria and colleagues (2008) also
discovered that racial minorities had lower levels of health insurance coverage and higher
levels of poverty than Whites in their sample from the Collaborative Psychiatric
Epidemiology Surveys (CPES) which included nationally representative datasets such as
the National Latino and Asian American Study (NLAAS), the National Comorbidity
Survey Replication (NCS-R), and the National Survey of American Life (NSAL) ($N =$
8,762). Therefore, based on their racial minority status, many racial minorities in the U.S.
tend to be in lower social classes and suffer from psychological *and* financial hardships.

Consequently, countless scholars have posited race and social class as macro-
level factors that shape experiences of stress, resources, and health outcomes among
individuals (Myers et al., 2003; Taylor et al., 1997). Scholars have articulated that race
and social class are strongly *intertwined* in their relation with health outcomes and that it
is important to consider their *joint* effects (Braveman et al., 2010; Williams & Collins,
1995). For example, Myers (2009) explained that long-term susceptibility to
socioeconomic disadvantage and being of racial minority status are associated with
higher health risks and rates of morbidity and mortality. Hence, "both race and class

matter and may compound the effects of each other for those with multiple marginalized identities" (Hardaway & McLloyd, 2009, p. 244).

Prior studies have largely investigated race and social class as categorical and control variables (Adler et al., 1994; Barbeau, Krieger, & Soobader, 2004; Helms et al., 2005). For example, Twenge and Campbell (2002) described that studies that looked at the relationship between socioeconomic status and self-esteem in their meta-analysis measured socioeconomic status (e.g., income, occupation status, education level) and race (e.g., racial group, or nationality group) categorically. Many studies have also focused on comparing mean differences among Whites and racial minority groups on objective indicators of social class, such as wealth, while classifying individuals' race and social class membership into designated categories (Grable & Joo, 2006; Kochar, Fry, & Taylor, 2011; McKernan, Ratcliffe, Steuerle, & Zhang, 2013). Kahn and Fazio (2005)'s study on the relationship between financial resources and hardship on physical and psychological health among 1,100 White and Black participants, also involved race, wealth, education, and income as control variables.

Although previous research has given us a wealth of information about racial minorities' lives by exploring race and social class as categorical and control variables, researchers have argued for the need to understand these constructs more in-depth (Helms et al., 2005). For example, Kahn and Fazio (2005) demonstrated the significance of studying financial struggles rather than current income and wealth which are both objective indicators of social class. They suggested that "[financial] hardship has a powerfully noxious long-term impact on health, above and beyond the impact of dollars and cents" (p. 81). Schulz and colleagues (2006) also explained that race exemplifies

"socially structured access" to various occupational, educational, financial, and interpersonal opportunities and that "using race as a simple proxy for these social circumstances…obscures our ability to understand the social factors that contribute to health and well-being within as well as across racially defined groups" (p. 511). Therefore, several researchers have investigated constructs such as racial identity, racism-related stress, and financial stress to become more aware of the internal life experiences that racial minorities undergo.

Although scholars have emphasized the importance of studying race-related and social class-related factors, these two factors have not been conceptually and empirically examined together in scientific research. For example, Williams and Mohammad (2009) argued for the conduction of an "assessment of perceived discrimination *and* a systematic effort to assess race-related and other social, psychological and environmental stressors" that racial minorities are exposed to (p. 36). Along with other scholars they explained that this is important to assess as many racial minorities experience distress due to their combination of low socioeconomic *and* racial minority statuses (Chen & Matthews, 2001; Collins et al., 1998; Gallo & Matthews, 2003). Nevertheless, only a few studies have included and looked at multiple stressors that racial minorities undergo in relation to their psychological distress in one model (Cokley et al., 2013; Chen & Tryon, 2012; Miller et al., 2011).

Moreover, no studies, to my knowledge have examined the *combined* effects of different stressors or challenges racial minorities experience in relation to their levels of psychological distress together in an exhaustive model. For example, racial minorities may feel stressed due to experiences of both racism and financial hardship that result in

more psychological distress symptoms than when they experience only one of these stressors. These double experiences of stress may lead racial minorities to feel intense levels of depression and anxiety and thus require further attention and research.

Hence, I decided to investigate two constructs that represented different types of stress that racial minorities may go through: (a) racism-related stress, stress that racial minorities experience due to historical racism and discrimination, and (b) financial stress, stress that racial minorities experience due to financial disadvantages and inequities, and how these each related to psychological distress. Moreover, I looked at their effect in relation with psychological distress and tested all of these relationships in one comprehensive model.

The Stress and Coping Model

It is essential to review and comprehend the stress and coping process in order to understand racism-related stress and financial stress. Lazarus and Folkman defined psychological stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). The authors asserted that stress is based on individuals' *subjective appraisals* of events that happen to them as well as of the availability of coping strategies to deal with stress. They also defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). They emphasized the *dynamic process* of stress and coping such that whenever the interaction between the individual and environment fluctuates, how one responds to, revaluates, and reacts to (e.g., coping) the change differs and shifts.

Although there is a large amount of consensus on the aforementioned conceptualization of stress and coping, scholars have debated about how to understand the relationships among stress, coping, and psychological distress. Moderation and mediation models have both been used fervently among psychological literature to demonstrate the stress and coping process for general stress as well as culture-specific stress (e.g., racism-related stress). For example, Clark, Anderson, Clark, and Williams' (1999) proposed coping strategies to be mediator variables in their biopsychosocial model of racism. In addition, Harrell (2000) discussed that coping behaviors are mediators between racism-related stress and health outcomes. Mediation refers to the process in which the mediator defines the relationship between the predictor and outcome variable (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). Therefore, a mediation approach of coping argues that stress exposure fosters a coping response, which, in turn, promotes health outcomes.

Furthermore, the moderation model, also at times referred to as the stress-buffering model, has been widely applied to understand the stress and coping process for both general stress and culture-specific stress. Cohen and Wills (1985) described that the strength of the relationship between stress and psychological distress changes depending on the levels of the coping mechanisms, also known as moderators and at times stress-buffers. Hence, "a coping response may be said to buffer stress when, among individuals exposed to the stressor, those who engage in that response (or who engage in it to a greater degree) are less likely to experience a negative outcome than those who do not (or who engage in it to a lesser degree)" (Brondolo et al., 2009, p. 68).

Cohen and Wills delineated the steps of the stress-buffering model (see Fig. 1): The individual (a) goes through a stressful event, (b) evaluates this event, (c) finds the event to be stressful, (d) goes through emotional, physical, and behavioral responses to stress, (e) and develops a psychological issue. Their model particularly emphasized the importance of social support and how it can moderate the relationship between the stressful event and the reaction at step (b) and step (d) by preventing feelings of helplessness and low self-esteem from happening. Hence, this model highlights the dynamic process of stress and coping and how a coping strategy may significantly aid the negative impact of stress on psychological distress.

Frazier and colleagues noted that coping approaches may be understood from both mediation and moderation frameworks. A large amount of studies have utilized the moderation model to understand the racism-related stress and coping process (Greer, 2011; Utsey, Lanier, Williams III, Bolden, & Lee, 2006). Moreover, the aim of this study was to discover whether coping approaches could mitigate (e.g., problem-solving coping) or aggravate (e.g., avoidance coping) the strength of the stress – psychological distress relationship in order to inform and help racial minorities develop effective ways of managing these stressors. Therefore, this study applied the moderation model to investigate problem-solving and avoidance coping as moderators between racism-related stress and psychological distress and financial stress and psychological distress. In addition, the direct effects of racism-related stress, financial stress, problem-solving coping, and avoidance coping on psychological distress as well as the interaction effect of racism-related and financial stress on psychological distress were also examined in a comprehensive model.

| Potential Stressful Event(s) | → | Appraisal Process | → | Event(s) Appraised as Stressful | → | Emotionally Linked Physiological Response or Behavioral Adaptation | → | Illness and/or Illness Behavior |

Social Support: May Prevent Stress Appraisal

Social Support: May result in Reappraisal, Inhibition of Maladjustive Responses, or Facilitation of Adjustive Counter Responses
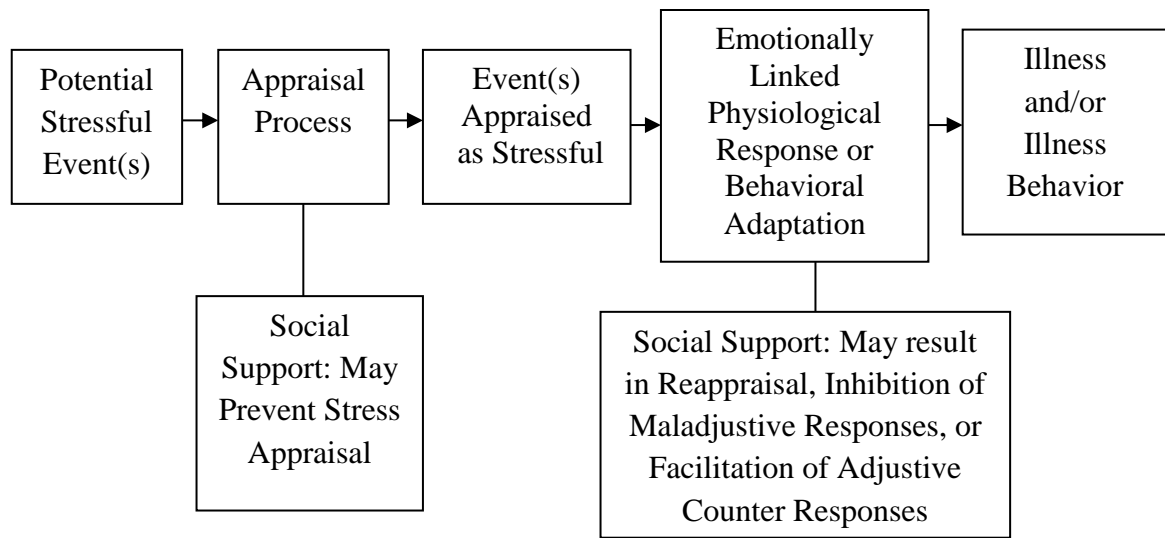
Figure 1. Conceptual stress-buffering model with social support as the stress-buffer (Cohen & Wills, 1985). Adapted from "Stress, Social Support, and the Buffering Hypothesis," by S. Cohen and T. A. Wills, 1985, *Psychological Bulletin, 98*, p. 313. Copyright 1985 by the American Psychological Association.

Understanding Racism-Related Stress

Due to the history of discrimination and segregation, numerous studies have investigated the impact of racism on racial minorities' health outcomes (Broudy et al., 2007; Miller et al., 2011; Utsey, Giesbrecht, Hook, & Stanard, 2008). Racism has been defined as "the transformation of race prejudice and/or ethnocentrism through the exercise of power against a racial group defined as inferior, by individuals and institutions with the intentional or unintentional support of the entire culture" (Jones, 1972, p. 117). In addition, due to the systemic oppression that arises through racism, racial minorities also undergo racism-related stress which is known as "the race-related transactions between individuals or groups and their environment that emerge from the

dynamics of racism, and that are perceived to tax or exceed existing individual and

collective resources or threaten well-being" (Harrell, 2000, p. 44).

Racism-related stress as a construct originated from applying the

conceptualization of stress based on Lazarus and Folkman's (1984) model to racism as a

unique stressor (Brondolo et al., 2005; Harrell, 2000; Pieterse & Carter, 2007). Lazarus

and Folkman (1984)'s focus on stress as a stimulus-response process and the importance

of considering the subjective perception of the stressful event has been central to

understanding racism-related stress. For example, Clark and colleagues (1999) noted in

their biopsychosocial model of racism that "the perception of demands as stressful is

more important in initiating stress responses than objective demands that may or may not

be perceived as stressful" (p. 809). They further explained that these stress reactions are

contextualized by constitutional (e.g., skin color), sociodemographic (e.g., social class),

and psychological and behavioral factors (e.g., optimism) as well as coping methods (e.g.,

social support) which in turn impact individuals' health outcomes. Hence, they

emphasized the need to investigate a contextual model of racism-related stress, which this

study employed by including financial stress and racism-related stress as predictors of

psychological distress as well as problem-solving and avoidance coping as coping

resources.

Harrell (2000) also defined racism-related stress by referring to the transaction

between the individual and environment *and* the stress appraisal process in accordance

with Lazarus and Folkman's model. Harrell discussed that racism-related stress can be

divided into six different types: (1) racism-related life events that result from significant

racial events, (2) vicarious racism experiences that come from learning about racism

events that occurred among family and friends, (3) daily racism microstressors that refer to daily, subtle discriminatory microaggressions, (4) chronic-contextual stress that arises from the effect of institutional racism on the environment which creates unequal opportunities and distribution, (5) collective experiences of racism in which individuals undergo racial discrimination by being part of their racial group, and (6) transgenerational transmission of group traumas that refer to race-related stress transferred down from generation to generation. Therefore, racism-related stress has been conceptualized in accordance with the stress-appraisal theory and as a dynamic construct that is interrelated with several other psychological and social factors.

Racism-related stress has been studied predominantly in the Black/ African American population (Greer, 2011; Harrell, 2000; Matthews, Hammond, Nuru-Jeter, Cole-Lewis, & Melvin, 2013; Pieterse & Carter, 2007). The history of slavery and the "persistence of residential segregation in the United States reflect[s] the successful implementation of individual and institutional discrimination rooted in racism" (Collins & Williams, 1999, p. 496). In addition, Sue, Capodilupo, and Holder's (2008) qualitative analysis of the microaggression experiences of participants that identified as Black or African American ($N = 13$) showed that they felt that they "do not belong," "are abnormal," "are intellectually inferior," "are not trustworthy," and "are all the same" (p. 333). The authors discovered that these experiences led participants to feel powerless, invisible, unable to be their true selves, and pressured to represent their racial group.

Utsey and Ponterotto (1996) developed their Index of Race-Related Stress (IRRS) based on the high need to create a survey to assess daily racism related stressful experiences among African Americans that well represent the unique stereotypes and

biases this population experiences. Their scale included items specific to African Americans' experiences such as "You notice that crimes committed by White people tend to be romanticized, whereas the same crime committed by a Black person is portrayed as savagery, and the Black person who committed it, as an animal" and "White/non-Black people have been apologetic about the Japanese internment, Jewish holocaust, and other violations of human rights, but would prefer to forget about slavery, Jim Crowism, and other abuses of Black people."

Researchers have also investigated racism-related stress in the Asian American population (Gee et al., 2009; Lee & Ahn, 2011; Liang & Fassinger, 2008; Miller et al., 2011). Liang, Li, and Kim (2004) argued that issues Asian Americans in the U.S.'s experiences in relation to racism have been glossed over due to the focus on the White-Black tension when thinking about racism in American history. Moreover, several scholars indicated that the popularization of the model minority myth, the perception that Asian Americans as the 'model minority' in which they are the most successful racial group in the U.S. based on their hard work ethic and high achievement, not only corroded racism experiences that this population undergoes but also increased discrimination based on this stereotype (Chou, 2008; Liang et al., 2004; Yoo, Miller, & Yip, 2014).

Liang and colleagues also noted the lack of measurement on assessing racism-related stress for the Asian and Asian American population, and thus, developed the Asian American Racism-Related Stress Inventory. They shared that there were cultural aspects in their instrument specific to the Asian American population. For example, they described that the Perpetual Foreigner Racism subscale uniquely reflects this population's experience with stress arising from being deemed as foreigners such as assuming that

Asian Americans have difficulty with speaking English or aren't natively from the U.S. This subscale included items such as "You are told that "You speak English so well'" and "You are asked where you are really from."

Some studies have also examined experiences of racism-related stress among the Latino/a American population although research in this area is still in its infancy stage. Scholars have documented that Latino/a Americans experience discrimination by being viewed as illegal residents, criminals, having difficulty with English, and dominant and violent (for males) in various domains of their life (e.g., education system, professional work fields, and housing markets) and that these are underlined by racism due to their racial and immigrant statuses (Alamilla, Kim, & Lam, 2010; Araujo & Borrell, 2006; Lee & Ahn, 2012). Due to the high need to examine racism experiences among the Latino/a population, Collado-Proctor (1999) developed an instrument of racism for the Latino/a population based on qualitative interviews. Some of the items included those such as "I have experienced that Latina/os who achieve are viewed as a 'special case' or 'exception to this rule" and "Some people who are not Latina/os assume I gained admission to school only because of my ethnic background."

I acknowledge that several of these studies have aggregated various ethnic groups under large umbrella racial groups. These efforts are not to devalue or minimize the unique cultural values and factors that are present in each ethnic group but rather to further understand certain cultural aspects that may be strongly represented across ethnic groups (e.g., Korean, Chinese, Vietnamese) in a larger racial group (e.g., Asian American). In addition, it is important to note that although these three racial groups have large variability within and across each group, the studies indicated above highlight the

collective experiences of discrimination and racism as well as the stress that arises from these negative experiences among all three racial groups. Therefore, numerous studies have looked at racism experiences for more than one racial group together in one study (Brondolo et al., 2005; Carter & Forsyth, 2010; Reynolds, Sneva, & Beehler, 2010). For example, although Liang and colleagues (2007) emphasized the importance of developing a racism-related stress measure for Asian Americans, they also acknowledged that there are shared experiences among African Americans and Asian Americans due to their minority group statuses in the U.S. Hence, this study assessed racism-related stress experiences from a diverse sample of racial minorities.

Racism-Related Stress and Psychological Distress

The positive association between racism-related stress and psychological distress is well noted in past literature among all of the major racial minority groups: the African American, Asian American, and Latino/a American population. In the African American population, Brody and colleagues (2006) found that higher levels of perceived discrimination was linked to higher levels of depression and conduct problems over a five-year period for 714 African American adolescents. Utsey et al. (2008) found that race-related stress was significantly and positively related to psychological distress (e.g., somatization, depression, anxiety) among 215 African American undergraduate student participants. Additionally, Williams and colleagues (2003) reported in their review that out of 25 studies that looked at the association between racial discrimination and psychological distress mostly among African Americans, 20 studies reported a positive and significant relationship (e.g., higher levels of discrimination is related to higher levels of psychological distress), 3 reported conditional relationships in which the significant

relationship was found but under particular conditions only, and 2 found no significant results.

In the Asian American population, several independent studies have looked at the link between racism and psychological distress (Hwang & Goto, 2009; Liang et al., 2007; Miller et al., 2011). For example, Mereish, Liu, and Helms (2012) discovered that among Chinese ($n = 584$), Pilipino ($n = 491$), and Vietnamese Americans ($n = 475$), racial discrimination significantly predicted higher levels of psychological distress for each ethnic group and the total sample ($N = 1,628$). Gee et al. (2009) found that 37 out of 40 studies discovered that higher levels of racial discrimination was related to higher levels of mental health problems (e.g., depressive disorders and self-esteem) for Asian Americans. Lee and Ahn (2011) conducted a meta-analysis on the association between racial discrimination and psychological health outcomes of 24 samples among the Asian American population. They also discovered that racial discrimination was significantly and positively related to depression, anxiety, and psychological distress in a total of 24 correlation coefficients: .26 ($z = 5.52$, $p < .01$) for depression, .28 ($z = 5.49$, $p < .01$) for anxiety, and .17 ($z = 9.40$, $p < .01$) for distress.

Similarly, Lee and Ahn (2012) conducted another meta-analysis that looked at the association between racial discrimination and psychological health outcomes among 60 samples of 51 studies in the Latino/a American population. They found that racial discrimination was a positive predictor of depression, anxiety, and psychological distress in a total of 59 effect sizes with the following correlation coefficients for each outcome: .29 ($z = 6.62$, $p < .01$), .37 ($z = 7.14$, $p < .01$), and .19 ($z = 6.44$, $p < .01$). Araujo and Borrell (2006) also showed that increased levels of racial discrimination were

significantly and positively related to increased levels of depression among 5 studies they reviewed. Furthermore, Alamilla and colleauges (2010) found that perceived racism significantly and positively predicted hostility, anxiety, and somatization among 130 Latino college student participants. Hence, based on prior literature, this study assessed the relationship between racism-related stress and psychological distress in a diverse racial minority sample and hypothesized that more experiences of racism-related stress would be associated with more psychological distress symptoms.

Measurements of Racism-Related Stress

Several authors have produced scales that address different aspects of racism-related stress such as the Index of Race-Related Stress (IRRS) by Utsey and Ponterotto (1996) and the General Ethnic Discrimination Scale (GEDS) by Landrine and colleagues (2006). The IRRS was created to assess stress related to daily racism experiences of African Americans based on Lazarus and Folkman's (1984) conceptualization of stress and Essed's (1990) theory on every day racism. The scale is made up of 46 items and is divided into four subscales: cultural racism, institutional racism, individual racism, and collective racism. Utsey (1999) also developed a shortened version of the IRRS with 22 items, the IRRS-B, to address the lengthy time that it took to complete the longer IRRS. The IRRS-B has also been shown to be a strongly reliable and valid measure.

However, both scales were designed to assess racism-related stress experiences specific to African Americans and have been utilized only among African American samples (Johnson & Arbona, 2006; Utsey & Constantine, 2008). For example, they included items such as "You notice that when Black people are killed by the police, the media informs the public of the victims criminal record or negative information in their

background, suggesting they got what they deserved" and "You have heard reports of White people/non-Blacks who have committed crimes, and in an effort to cover up their deeds falsely reported that a Black man was responsible for the crime." In addition, participants are asked to indicate the occurrence and the severity of the racist event without a given time frame. Hence, it is difficult to apply this scale to other racial minority groups and there may be erroneous findings due to participants having a hard time recalling racist events they went through (e.g., an event that happened 10 years ago).

On the other hand, the GEDS (Landrine et al., 2006) was created to address limitations in prior racism-related stress scales such as the usage of dichotomous items (yes/no) in a checklist that restrict construct validity, various time frames for participants to reflect on their discrimination experiences (e.g., 6 months, life time, past year) that are inconsistent and limit comparison of findings, and items specific to one racial group that constrict generalizability to other racial groups. Therefore, the GEDS, originally generated from the Schedule of Racist Events (Landrine & Klonoff, 1996), is made up of 18 items and was changed to reflect racism-related stress experiences of any racial group instead of Blacks only. The GEDS is also made up of three different subscales that reflect individuals' level of stressfulness per discrimination event (e.g., level of racism-related stress), frequency of recent discrimination within the past year, and frequency of life-time discrimination.

The original authors found that the three subscales had strong factor loadings for all racial groups (e.g., Blacks, Asians, Latino/as, and Whites) and across community and student samples in their confirmatory factor analysis. As Brondolo et al. (2005) mentioned, due to its applicability to multiple racial groups the GEDS has strengths of

being able to assess "both within-group and between-group differences in perceived exposure to ethnic discrimination" (p. 337). Hence, the GEDS was utilized to assess racism-related stress in this study. In addition, only the recent and appraised discrimination rating scales were used. I adapted the recent discrimination scale to ask of participants to recall racism-related stress events in the past 6 months as there may be limited memory recollection when they are asked to report events that happened a year ago or throughout their whole life.

Understanding Financial Stress

As discussed above, it is extremely difficult to separate racial inequalities from socioeconomic inequalities (Kahn & Fazio, 2005) due to the history of racism and racial segregation and the unequal distribution of socioeconomic and academic resources as a result. Many scholars have thus documented several economic disadvantages and distress racial minorities undergo compared to their White counterparts in addition to racism-related stress due to their racial minority status.

For example, Kochar and colleagues (2011) from the Pew Research Center found that Whites have higher median net worth of households compared to Hispanics and Blacks in the Survey of Income and Program Participation (SIPP) by the U.S. Census Bureau. McKernan and colleagues (2013) from the Urban Institute reported that the average wealth for White families increased more quickly than for Blacks and Hispanics. They also found that White families ($1.1 million) had higher average wealth rates than Blacks ($161,000) and Hispanics ($226,000) in 2010. The 2011 U.S. Census Bureau reported that in comparison to 9.6% of non-Hispanic Whites, 27.6% of Blacks, 25.3% of Hispanic, and 12.3% of Asians had lower levels of income. Furthermore, Siefert, Heflin,

Corcoran, & Williams (2001) described that poor females with children, especially those who are people of color, tend to have higher risk for not having enough food. Hence, it is important to address and further understand the economic struggles that racial minorities undergo.

Several studies have investigated poverty and poverty-related factors among low-income populations that tend to consist of a high number of racial minorities (Wadsworth & Santiago, 2008; Wadsworth, 2012) but only a few have investigated financial stress as a scientific construct. In past psychological literature, scholars have used constructs such as financial strain, financial insecurity, economic hardship, and financial stress interchangeably and lacked consensus on conceptualizing these constructs (Barrera Jr., Caples, & Tein, 2001; Selenko & Batinic, 2011). For example, financial strain is defined as "cognitive, emotional, and behavioral responses to the experience of financial hardship" (Aldana & Liljenquist, 1998, p. 11) and is similar to economic strain referred to as "individual's perception of financial inadequacy as well as her/his financial concerns and worries" (Mills, Grasmick, Morgan, & Wenk, 1992, p. 441).

Economic hardship has also been defined as "(a) the inability to afford specific necessities for living, (b) a general sense that financial obligations outstrip the family's ability to meet them, (c) behavioral attempts to reduce expenses or generate more income to meet obligations, and (d) hopelessness that the future will bring a brighter financial outlook" (Barrera Jr. et al., 2001, p. 513). All of these constructs focus on individuals' subjective experiences and reactions to financial difficulties, however, few centralize on understanding financial stress as individuals' subjective assessment of their financial struggles in their theoretical framework (Caplan & Schooler, 2007). Moreover, past

studies are limited in that the constructs mentioned above seem to have similar content yet are coined with different terms that are used interchangeably.

Northern et al. (2010) provided a comprehensive conceptualization of financial stress as the "inability to meet one's economic responsibilities" which is also "influenced by psychological factors such as attitudes, beliefs, and cognitive appraisals of demands and available resources" (p. 79). Their definition included the subjective appraisal of the level of stress and resources they have to deal with difficult financial situations and is in accordance with Lazarus and Folkman's theory of stress appraisal. In order to maintain consistency with the conceptualization of stress, I defined financial stress as *a stress response to negative finance-related interactions individuals have with the environment that exceed existing individual resources and/or harm well-being*.

Given the strong need to examine financial stress in conjunction with racism-related stress as described above, financial stress was included in the comprehensive model as an individual predictor and as a predictor interacting with racism-related stress of psychological distress in a diverse sample of racial minorities for this study.

Financial Stress and Psychological Distress

Although limited to a few studies, scholars have found that higher levels of financial stress, debt stress, or experiencing financial problems are related to increased psychological health issues (Ahnquist & Wamala, 2011; Drentea, 2000; Gorgievski, Bakker, Schaufeli, van der Veen, & Giesen, 2010). For example, Butterworth, Rodgers, & Windsor (2009) found that financial hardship was positively related to depression among 6,715 Australian adults that participated in the Personality and Total Health (PATH) Through Life Study, a longitudinal community survey conducted in Australia.

Shaw, Agahi, and Krause (2011) also discovered in their sample of 2,352 older adults that financial strain was significantly and positively related to smoking and heavy drinking for men only.

Moreover, only a minor number of studies have examined the role of financial struggles among racial minorities and their levels of psychological distress (Barrera Jr. et al., 2001; Starkey, Keane, Terry, Marx, & Ricci, 2012). For example, Gutman et al. (2005) indicated the importance of testing the relationships between financial strain and economic resources with parental mental health and parenting behavior among urban African American families as "poverty became more spatially concentrated within urban areas, especially among poor African Americans" (p. 427). They discovered that higher levels of financial strain were associated with higher levels of parental psychological distress. Krause (2012) showed that higher levels of struggles with finances were associated with higher levels of depressive symptoms among Mexican older adults. In addition, Krause, Jay, and Liang (1991) demonstrated that increased levels of financial strain were associated with increased levels of somatic depressive symptoms among Japanese older adults.

Due to the small amount of research done on the relationship between financial stress and psychological distress among different racial groups, it is important to replicate the findings discussed above and test this in this study. Moreover, most of these studies that have examined this association have primarily been studied in the African American population and future research on the financial stress experiences of other racial minority groups is essential. Also, no study to my knowledge has examined financial stress together with racism-related stress in a comprehensive model of stress and coping for

racial minorities. Hence, I designated financial stress to represent social class-related economic struggles strongly prevalent for racial minorities, looked at financial stress as a direct effect of psychological distress, and also examined financial stress with racism-related stress as an interaction effect on psychological distress in an extensive stress and coping model among a diverse racial minority sample in this study.

Measurements of Financial Stress

In addition to a lack of conceptual clarity, there are several measurement limitations in the field of financial stress. Several researchers have demonstrated lack of strong construct validity by only including one or two items to represent financial stress (Selenko & Batinic, 2011). For example, Szanton and colleagues (2008) asked participants one item, "At the end of the month, do you have some money left over, just enough, or not enough?" to measure financial strain. Wrosch, Heckhausen, and Lachman (2000) also assessed financial stress by two items such as whether participants "had enough money to meet their needs" and "had difficulties in paying the monthly bills."

Moreover, most studies have assessed financial strain and economic hardship based on the occurrence or frequency of distressful financial events individuals encounter (Barrera Jr. et al., 2001; Fox & Chancey, 1998) instead of the extent of how stressful these experiences are. For example, Northern and colleagues (2010) constructed a 22-item financial stress scale, the Financial Stress Scale – College Version (FSS-CV), for the college student population by assessing how many times individuals thought about stressful financial events on a 4-point scale (1 = *Never*, 4 = *All of the time*). They developed their measure based on the stress appraisal theory, however, didn't include a rating scale that measured the severity or level of stress individuals experienced per

financial event. In addition, although their scale included a variety of items that entailed financially distressful events, they also carried a few items that may not apply to a broad range of people. For example, items such as "worrying about having enough money to retire," "childcare expenses," and "investments decrease in value" may occur for younger aged individuals but seem more relevant to older aged populations.

Lempers, Clark-Lempers, & Simons (1989) also assessed family economic hardship in their Economic Hardship Questionnaire (EHQ) by asking participants how often their family experienced financially challenging events on a 4-point scale (1 = *Never*, 4 = *All of the time*). The scale included 12 items such as how often participants "Cut back on social activities and entertainment expenses?" "Postpone clothing purchases?" and "Reduce household utility use?" The authors created their scale to be understood and applicable to younger children who may not know their family's financial situation in detail but are able to perceive general financial struggles. In addition, in accordance with past literature they indicated the importance of measuring subjective perceptions of economic hardship and that "the self-report measure may provide valuable information in its own right, even though the expressed perceptions might not fully agree with objective indices of family financial distress" (p. 28).

Although Lempers et al.'s EHQ argued for assessing subjective views of economic hardship their scale is limited by measuring financial stress based only on frequency of finance-related stressful events. Nonetheless, unlike the FSS-CV, the EHQ can be applied to a wide range of individuals due to the generalizability of its items. Thus, the EHQ was used in this study and was adapted by adding a rating scale that asked participants to indicate the level of stress they feel for each item. This modification was

needed to be in accordance with the stress-appraisal conceptual framework introduced above.

Moreover, the last two items of the original scale were eliminated as they ask about participants' overall financial situation instead of tough financial circumstances such as "Which of the following best described what has happened to your family income during the past 6 months?" with a 5-point rating scale (1 = *Has increased very much*, 5 = *Has decreased very much*) and "Which of the following best describes your family financially at this time?" with a 4-point rating scale (1 = *No problems*, 4 = *Extreme problems*). Furthermore, in order for the scale to be accessible to a wide range of participants in age and developmental stages, I eliminated 2 more items that may not apply to younger-aged individuals such as college students (e.g., "Cut back on charitable contributions" and "Reduce household utility use").

Understanding Coping Strategies: Problem-Solving and Avoidance Coping

As described above, high levels of racism-related stress and financial stress have been known to be associated with high levels of psychological distress among different racial minority groups. These results highlight the risk factors of racism-related stress and financial stress in relation to psychological distress. Therefore, it is important to discover and test various coping strategies that would help moderate these relationships. Scholars have voiced coping as a multidimensional construct that consists of multiple actions, behaviors, and cognitions (Pearlin & Schooler, 1978; Skinner, Edge, Altman, & Sherwood, 2003). As a result, many researchers have examined various coping strategies and their function in relation to stress.

Coping strategies have been largely divided into deductive and inductive approaches. The deductive approach includes coping strategies that were created based on prior theories (Wong, Reker, & Peacock, 2006) and are generalizable to a large range of people and stressful events (Amirkhan, 1990). For instance, Rothbaum, Weisz, and Snyder (1982) utilized the locus of control theoretical framework and categorized primary and secondary control coping strategies based on the different roles they play. They explained that "the individual's ability to change the environment to fit the self's needs is emphasized" (Rothbaum et al., 1982, p. 8) and illustrated that two processes of control can be categorized as coping mechanisms: (a) primary control which refers to strategies that people use to act on changing the issue itself to fit their own needs such as "problem-solving, emotional expression, and emotional regulation" (Band & Weisz, 1990; Wadsworth, 2012, p. 21) and (b) secondary control coping that refers to strategies that people use to deal with the impact of the issue on one's psychological functioning by blending into the situation such as "reflecting active acceptance, cognitive restructuring, distraction, and positive thinking" (Band & Weisz, 1990; Wadsworth et al., 2011, p. 647).

Lazarus and Folkman (1984) also proposed two types of coping, problem-focused coping and emotion-focused coping, by utilizing the deductive approach (Pearlin & Schooler, 1978). They described problem-focused coping as "managing or altering the problem causing the distress" (p. 150) and included strategies such as "defining the problem, generating alternative solutions, weighing the alternatives in terms of their costs and benefits, choosing among them, and acting" (p. 152). They referred to emotion-focused coping as "regulating emotional response[s] to the problem" and included strategies such as "avoidance, minimization, distancing, selective attention, positive

comparisons, and wrestling positive value from negative events" (p. 150). The authors

explained that both problem-focused and emotion-focused strategies could be effective to

deal with stress but also tend to impact individuals to behave indifferently or not

accept/acknowledge the situation.

On the other hand, the inductive approach alludes to coping strategy taxonomies

there are "based on factor analyses of items pooled from several existing coping scales"

(Wong et al., 2006, p. 227). The inductive approach has also been known as a way to

study particular coping strategies in relation to specific stressors among selective

populations and is limited in generalizing coping strategies to broader populations and

types of stress (Amirkhan, 1990).

To address the limitations of both the inductive and deductive approach,

Amirkhan (1990) combined both approaches to assess coping mechanisms. He put

together coping items from previous measures such as the Ways of Coping Checklist

(WCC; Lazarus & Folkman, 1984) and empirically tested for emerging factors (inductive)

three times among heterogeneous populations and different stressors (deductive).

Amirkhan first conducted a principal-factor analysis (PFA) and principal-components

analysis (PCA) and extracted three factors made up of 63 factor indicators from the 161

items: problem-solving, seeking support, and avoidance strategies. He then conducted a

replicated analysis in a different sample of individuals who also reported various stressors

and found that the same three factors made up of 36 coping items emerged. The third

replicated analysis with another diverse sample and stress types confirmed a three-factor

model with a total of 33 items that accounted for 37% of the total variance. Problem-

solving is similar to problem-focused coping but focuses on dealing with the event

through external solutions only and is included under the umbrella of problem-focused coping. Seeking social support refers to actively seeking emotional and instrumental help from others who care about us. Avoidance coping is known as tending to ignore or getting away from the situation and is a type of emotion-focused coping introduced above.

Several coping constructs overlap and scholars have pointed out the lack of clarity in coping theories (Amirkhan, 1990; Brondolo et al., 2009). For example, problem-focused coping is similar to and contains aspects of problem-solving coping. Furthermore, emotion-focused coping is also akin to and consists of elements of avoidance coping. Folkman and Moskowitz (2004) described that certain scales that measure emotion-focused coping consist both of emotional approach (e.g., expressing and being aware of emotions) and emotional avoidance (e.g., avoiding feeling emotions) "that may actually be inversely correlated" (p. 761). Due to the fact that problem-focused and emotion-focused coping include subcategories of coping, it is difficult to distinguish their functionalities from one another. Therefore, I decided to focus this study on investigating coping strategies that entail ways in which individuals specifically react to stress: problem-solving and avoidance coping.

As further delineated below, only a handful of studies have examined the functionalities of problem-solving and avoidance coping as moderators between racism-related stress and psychological distress and have found mixed results (Barnes & Lightsey Jr., 2005; Yoo & Lee, 2005). Furthermore, no study to my knowledge has investigated them as moderators between financial stress and psychological distress. Several scholars have investigated social support as a significant moderator between stress and psychological distress. However, many have voiced the multidimensional and

complex nature of social support as a construct (Procidano & Heller, 1983; Winemiller, Mitchell, Sutliff, & Cline, 1993). Hence, a more in-depth analysis of social support as a moderator is needed and can be conducted in a separate study. Therefore, this study contributed to literature by investigating problem-solving and avoidance coping as moderators each between racism-related stress and psychological distress and financial stress and psychological distress.

Problem-Solving and Avoidance Coping among Racial Minority Groups

Both problem-solving and avoidance coping have been examined among the three major racial minority groups. Hence, I provided a brief literature review on how Asian Americans, Latino/a Americans, and African Americans have utilized both coping strategies.

Problem-Solving Coping. The usage of problem-solving has been documented among Asian American, Latino/a American, and African American groups. Ino and Glicken (2002) described that based on the important value of collectivism and social harmony, Asian clients may actively seek professional psychological help only when their "collective Asian social support system has failed to remedy the problem of the conflict" (p. 41). This suggests that Asian clients utilize their social support networks as their go-to coping strategies and actively seek ways to solve their problems. Moreover, the authors indicated that based on the cultural values of respect of authority in Asian culture, Asian clients may depend on their therapists to guide them to resolve their problems and utilize therapy effectively. In fact, Noh and Kaspar (2003) categorized problem confrontation, taking action, and seeking social support as three types of problem-focused coping and found that all three of these mechanisms served as

significant moderators between racial discrimination and depression in a sample of Korean Canadians. The authors noted that on average their participants lived in Canada for 20 years and suggested their high acculturation to Western culture may have influenced them to employ active coping strategies to deal with racism.

Hall, Everett, and Hamilton-Mason (2012) found that 41 African American females participants used various coping strategies to deal with work-place stress (racism and sexism) in their qualitative study. These included seeking social support from friends, family, and colleagues, praying, attending church that are problem-solving coping strategies participants used to directly deal with stress. West, Donovan, and Roemer (2010) also showed that in a sample of 113 African American female students, increased levels of lifetime racial discrimination was related to decreased levels of depression for those with high levels of problem-focused coping. In comparison, increased levels of lifetime racial discrimination were related to increased levels of depressive symptoms for individuals with low levels of problem-focused coping. This shows that utilization of problem-focused coping may shield African American females from the negative impact of racism-related stress on their levels of psychological distress.

Negi (2013) conducted a mixed-methods study to explore the discrimination and social isolation experiences of Latino day laborer immigrants. In their quantitative results ($N = 150$) they found that discrimination was positively and significantly related to psychological distress such that higher levels of discrimination were associated with higher levels of psychological distress. This was also found in qualitative findings where participants indicated experiencing discrimination such as receiving unfair treatment from others and security officials, being limited to finding jobs (e.g., possible passing of

anti-solicitation laws may limit them from getting employed), and being viewed as illegal immigrants of trespassers. The participants indicated protecting themselves from this stress by isolating themselves, seeking social support, attending church, and providing remittances back home. These coping strategies all entail behaviors in which individuals took action to relieve their stress.

Edwards and Romero (2008) also conducted a study on discrimination stress (largely including experiences related to their ethnicity and immigrant status), primary control engagement coping (actively engaging to solve the problem), involuntary engagement coping (projecting feelings on others), disengagement coping (avoiding the problem), and self-esteem among Mexican American adolescents ($N = 73$). They discovered that primary control engagement coping served as a significant moderator between discrimination stress and self-esteem. The authors reported that for adolescents with high levels of primary control engagement coping, increased levels of discrimination stress was related to increased levels of self-esteem, whereas for those with low levels of primary control engagement coping, increased levels of discrimination stress was associated with decreased levels of self-esteem. Hence, these findings indicated that active coping protects against the negative effects of discrimination on Mexican American adolescents' self-esteem.

Avoidance Coping. In addition to problem-solving coping, avoidance coping has been studied among Asian American, Latino/a American, and African American groups. For example, Kuo (1995) showed that individuals with higher levels of Asian cultural values also tended to have higher levels of emotion-focused coping but not problem-focused coping. The author operationalized emotion-focused coping as "cognitive

reconceptualization of problems, avoidance and optimistic comparison" (p. 125). Kuo suggested that based on the traditions of respect for authority, conformity, and reconciliation especially in regards to relationships with others as important in Asian culture, Asian Americans may "utilize intrapsychic strategies and avoidance to regulate their emotions and bear psychological strain when facing discrimination than to take direct action against racial injustice" (p.113).

Noh and Kaspar (2003) also discovered that there was a stronger relationship between perceived racial discrimination and depression such that higher levels of discrimination were associated with higher levels of depression at high levels of emotion-focused coping compared to at low levels of emotion-focused coping for 180 Korean Canadian adults. This finding indicates that increased levels of utilization of emotion-focused coping seem to exacerbate the relationship between racism and psychological distress (more racism is related to more depression).

Similar to Noh and Kaspar (2003)'s study, Shorter-Gooden (2004)'s qualitative study also found that among several coping strategies avoiding the problem was utilized to cope with racism among a community sample of African American women ($N = 196$). West and colleagues (2010) showed that in a sample of 113 African American female students, increased levels of lifetime and recent discrimination were each related to increased levels of depression for those with high levels of avoidant coping, whereas, increased levels of these two types of discrimination were related to decreased levels of depression for those with low levels of avoidant coping. The authors suggested that usage of avoidant coping may intensify the negative association between racial discrimination and depression.

Studies among the Latino/a American population showed mixed results. Edwards and Romero showed that disengagement coping was not significantly related to self-esteem and was not a significant moderator between discrimination stress and self-esteem. Villegas-Gold and Yoo (2014) also showed that problem avoidance was not significantly related with subjective well-being. Contrary to these results, Aranda and Lincoln (2011) found that avoidance coping was positively associated with depressive symptoms for adult and older adult Latino/a Americans ($N = 230$).

Furthermore, Brittian, Toomey, Gonzales, and Dumka (2013) distinguished between distraction and avoidance coping and looked at these strategies as buffers for perceived discrimination on externalizing behaviors and internalizing symptoms among Mexican American adolescents ($N = 189$). The authors shared that they followed Ayers, Sandler, West, and Roosa's (1996) approach of understanding distraction coping as a "physical release of emotions and distracting actions" which is different from avoidance coping defined as "avoidance actions and cognitive avoidance" (Cited in Brittian et al., 2013, p. 928). Brittian and colleagues found that avoidance coping was not a significant moderator but that distraction coping was between perceived discrimination and internalizing symptoms. They also explained that distraction coping was a significant buffer only for those who had a lower American acculturation orientation. Therefore, it is important to note that different operationalization of constructs may play a role in mixed results and outcomes.

Problem-Solving Coping, Avoidance Coping, and Psychological Distress

In addition to understanding the relationship between stress and coping, the theoretical background of problem-solving and avoidance coping, and how problem-

solving and avoidance coping are used among the racial minority population, it is crucial to understand how both coping strategies relate to the psychological distress of individuals.

Problem-solving coping has been found to be significantly and positively related to psychological distress (Billings & Moos, 1984; Glyshaw, Cohen, & Towbes, 1989). For instance, Penley, Tomako, and Wiebe (2002) discovered that 7 out of 23 samples demonstrated that higher levels of planful problem solving, a component of problem-focused coping from Lazarus and Folkman's Revised Ways of Coping Questionnaire (WOC-R) (1985), was a strong, positive predictor of psychological distress in their meta-analysis. Moreover, the authors found that 5 out of 13 samples demonstrated that higher levels of problem-focused coping, which was measured by Vitaliano, Russo, Carr, Maiuro, and Becker (1985), was associated with higher levels of psychological distress.

This has also been replicated among a variety of samples. Stewart et al. (1997) also found that active coping strategies were negatively related to psychological distress such that higher levels of active coping strategies were associated with lower levels of psychological distress for 121 first year medical students at the University of Hong Kong after 8 months of being in classes. Chang et al. (2007) discovered that problem-focused coping was positively related to mental health such that higher levels of problem-solving coping was associated with increased levels of mental health (higher scores indicate improved mental health results) for 518 Australian and New Zealand nurses. Additionally, McMahon, Corcoran, McAuliffe, Keeley, Perry, and Arensman (2013) established that problem-oriented coping was significantly and negatively related to depression and anxiety among a sample of Irish adolescents ($N = 3,881$). They concluded that elevated

levels of problem-oriented coping were associated with decreased levels of depression and anxiety.

In contrast, avoidance coping has been discussed as having severe costs of "result[ing] in emotional numbness, unwanted intrusions of threatening material, and disruptive avoidance behaviors when there is a conscious or unconscious attempt to keep threatening cognitions and affects out of awareness" (Roth & Cohen, 1986, p. 818). Prior research has found that higher levels of avoidance coping were significantly associated with lower levels of psychological distress (Bouteyre, Maurel, & Bernaud, 2007; Dyson & Renk, 2006; Stewart et al., 1997). For example, Penley et al. (2002) showed in their meta-analysis that subtypes of emotion-focused coping from Lazarus and Folkman's (1985) WOC-R was significantly and negatively related to psychological distress: (a) 9 out of 16 samples indicated that escape-avoidance predicted physical and psychological distress, (b) 11 out of 14 samples mentioned that wishful thinking predicted psychological distress, and (c) 2 out of 21 samples showed that distancing predicted psychological distress. In addition, the authors reported that 7 out 10 samples that looked at avoidance coping from Vitaliano et al.'s (1985) measure discovered that avoidance coping strongly and negatively predicted psychological distress.

These findings have also been confirmed in a variety of other studies. McMahon et al. (2013) discovered that emotion-oriented coping was positively and significantly associated with depression and anxiety among 3,881 Irish adolescents. They delineated that increased levels of emotion-oriented coping was related to increased levels of depression and anxiety. Chang et al. (2007) showed that avoidance coping was negatively related to mental health such that higher levels of avoidance coping was associated with

decreased levels of mental health (lower scores indicate harmful mental health results) for Australian and New Zealand nurses. Holahan, Moos, Holahan, Brennan, and Schutte (2005) also found that baseline avoidance coping predicted levels of depression after 10 years in a sample of 1,211 adult outpatients in medical health care facilities. They explained that higher levels of avoidance coping were associated with higher levels of depressive symptoms.

Problem-Solving and Avoidance Coping Strategies as Moderators

Based on previous research that showed a negative relationship between problem-solving coping and psychological distress (more problem-solving coping is associated with less psychological distress) and a positive relationship between avoidance coping and psychological distress (more avoidance coping is associated with less psychological distress), researchers have also examined how these two coping strategies function in relation to general stress and psychological distress.

A few studies have found that problem-solving coping moderates the relationship between stress and a variety of psychological health outcomes (Gonzales et al., 2001; Parkes, 1990). For example, Cheng (2001) showed that problem-solving coping was a significant moderator among 138 Chinese participants between stress and depression. They explained that the relationship between life stress and depression at high levels of stress was stronger for those with low levels of problem-solving coping compared to those with high levels of problem-solving coping. Thus, they showed that high levels of problem-solving coping help attenuate the positively associated stress – depression relationship.

Crockett et al. (2007) also tested the relationships between acculturative stress, social support, active coping, avoidant coping, and anxiety and depression among 148 Mexican American college students. They discovered that higher levels of acculturative stress was associated with higher levels of anxiety for those with low levels of active coping whereas higher levels of acculturative stress was associated with lower levels of anxiety for those with high levels of active coping. Moreover, the authors found that active coping was a significant moderator between acculturative stress and depression. They showed that higher levels of acculturative stress were related to higher levels of depression only for those with low levels of active coping but not for those with high levels of active coping. Hence, they suggested that active coping functioned as a significant stress-buffer.

Similar to problem-solving coping, few studies have investigated avoidance coping as a significant moderator between stress and psychological health outcomes. Blalock and Joiner Jr. (2000)'s study on assaying a three-way interaction between cognitive avoidance coping, stress, and gender established that at high levels of cognitive avoidance coping, high levels of stress significantly predicted high levels of depressive symptoms especially for females ($N = 179$; $n = 107$). They showed that this relationship was true for anxiety symptoms as well. This finding indicates that avoidance coping functions to exacerbate the positive relationship between stress and depression and aligns with previous research that showed increased levels of avoidance coping were associated with increased levels of psychological distress.

Problem-Solving and Avoidance Coping for Racism-Related and Financial Stress

Folkman and Moskowitz (2004) emphasized the need to discern cultural contexts when addressing the effectiveness of coping strategies. Hence, it is important to examine how problem-solving coping worked as a moderator specifically between racism-related stress and psychological distress and between financial stress and psychological distress.

The scarce numbers of studies that have examined problem-solving coping as a moderator between racism-related stress and psychological health outcomes among different racial groups have generally found that it works as an effective buffer against harmful effects of racism-related stress on psychological distress. Pascoe and Smart Richman's (2009) meta-analysis indicated that active or problem-focused coping surfaced as the "most effective type of coping, with all significant effects showing a buffering effect and no evidence of exacerbation of the effect of discrimination stress on health" (p. 546).

An even smaller amount of studies have demonstrated the role of problem-solving coping in relation to financial stress and psychological health outcomes, to my awareness. Wadsworth et al. (2011) explored primary control coping that includes problem solving, emotional expression, and emotional regulation (Wadsworth, 2012) as a moderator between poverty-related stress and psychological symptoms among a sample of 98 ethnically diverse and low-income families. They found that primary control coping was not a significant moderator. Contrary to this finding, Wadsworth, Raviv, Compas, and Connor-Smith (2005) discovered that primary control coping was a significant moderator between economic strain and depression. They found that increased levels of economic strain were associated with increased levels of depression only for those with low levels of primary control coping and indicated that primary control coping served as a

protective buffer. Based on these mixed findings and lack of research it is imperative to conduct further investigation on this subject matter. Hence, this study contributes to psychological literature by testing problem-solving coping as a moderator to alleviate the negative impact of racism-related stress and financial stress each on psychological distress.

Avoidance coping has also been looked at as a coping strategy especially specifically as a moderator between racism-related stress and psychological distress as well as financial stress and psychological distress, although it is still a fledgling area of research. Pascoe and Smart Richman's (2009) meta-analysis discovered that "passive or emotion-focused coping seemed to be much less effective at dealing with discrimination stress, with the majority of significant effects examined showing an exacerbating effect" (p. 546). Although this meta-analysis also included studies that looked at other discriminatory events in addition to racism-related stress, and thus, this finding is in line with previous research mentioned above.

In addition to looking at primary control coping as a moderator introduced above, Wadsworth and colleagues (2011) explored disengagement coping, that includes avoidance, denial, and wishful thinking (Wadsworth, 2012), as a moderator between poverty-related stress, a particular type of financial stress, and psychological symptoms among a sample of 98 ethnically diverse and low-income families. However, the authors found insignificant results. Wadsworth et al. (2005) also investigated the role of disengagement coping as a moderator between economic strain and depression among 57 parent – adolescent dyads. They discovered that disengagement coping was a significant moderator such that increased levels of economic strain were related to increased levels

of depression at high levels of disengagement coping. This suggests that those who used avoidance coping tended to have more depressive symptoms when experiencing economic strain. Therefore, this study contributes to psychological literature by testing avoidance coping as a moderator that would increase the positive relationship between racism-related stress and financial stress each on psychological distress.

Limitations of Previous Research

I have demonstrated that there are several discrepancies among findings in the stress and coping literature. These diversified findings may be due to the lack of consensus in psychological literature on operationalization of constructs (e.g., definition of coping), differences in measurement of constructs (e.g., usages of different measures to assess the same construct), and the utilization of dissimilar outcome variables (e.g., well-being versus depression) that make it difficult to compare results across studies. For example, some researchers have categorized coping into problem-focused and emotion-focused coping approaches, which each individually encompass problem-solving coping and avoidance coping, while others have examined problem-solving and avoidance coping as moderators. As a result, scholars have also used a variety of measurements for coping strategies that are not in accordance with one another. I have attempted to explain how authors conceptualized constructs in some of the literature review above to take these issues into consideration.

Furthermore, several of the studies mentioned above have different outcome variables and thus measure different elements of psychological health such as psychological well-being and psychological distress. Hence, it is challenging to directly compare results among studies and come to a general consensus. Comparisons of study

findings are also not fully possible primarily due to the scant amount of psychological research on coping strategies that help racial minorities deal with racism-related stress. These aspects denote the dire need to conduct further research in this area. Therefore, this study contributes to current literature by examining whether problem-solving and avoidance coping each work as moderators between two types of stressors, racism-related stress and financial stress, and psychological distress in an inclusive model.

Measurements of Coping Strategies

Several measures of coping exist in prior research such as the Ways of Coping Checklist by Folkman and Lazarus (1980) and the Coping Strategy Indicator (CSI) by Amirkhan (1990). The WCC included 68 items that are categorized into problem-focused and emotion-focused strategies. The authors asked participants to indicate whether they engage in the coping strategy or not (e.g., yes or no) when experiencing a particular stressor. They included items such as "Got the person responsible to change his or her mind" and "Stood your ground and fought for what you wanted" for problem-focused coping and "Accepted sympathy and understanding from someone" and "Tried to forget the whole thing" for emotion-focused coping. The WCC is problematic due to various reasons. First, the rating scale is binary and doesn't allow for a variety of responses from participants. Second, they created subscales of problem-focused and emotion-focused coping subscales that contain a huge range of coping strategies. As demonstrated above, we see that emotion-focused coping items consist of receiving support and avoidance that have been distinguished in prior studies. Third, their long list of items prolongs the time participants take when filling out the survey.

The CSI by Amirkhan (1990) is composed of problem-solving, seeking support, and avoidance coping subscales. Each subscale is made up of 11 items and is based on a three-point rating scale (1 = *a lot*; 3 = *not at all*). The scale asks participants to indicate how much they use each coping strategy and to keep a particular stressor in mind. The problem-solving subscale includes items such as "Tried to solve the problem?" and "Tried to carefully plan a course of action rather than acting on impulse?" The avoidance coping subscale includes items such as "Tried to distract yourself from the problem" and "Avoided being with people in general?" Amirkhan's CSI was based on an inductive and deductive approach to coping and thus well-represents problem-solving and avoidance coping as unique coping strategies that differ in their functionality. Therefore, the subscales of problem-solving and avoidance coping were used in this study and the rating scale was changed to a seven-point rating scale (1 = *all of the time*; 7 = *none of the time*) to be consistent with other scales in this study. Furthermore, participants were not asked to keep a particular stressor in mind while conducting the study as Amirkhan proposed. This was to assess participants' general levels of problem-solving and avoidance coping and to see how participants utilized these general coping strategies in relation to any type of stressor.

Measurements of Psychological Distress

Psychological health has been interchangeably used with mental health, psychological distress, and well-being. For example, Miller and colleagues (2011) looked at the relationship between racism-related stress, acculturative stress, bicultural self-efficacy, and mental health and designated depression and anxiety to represent mental health. Huynh, Devos, and Dunbar (2012) also posited depression and anxiety to

represent psychological distress in their study that looked at the impact of racial discrimination on psychological distress. Veit and Ware (1983) provided a clear conceptualization of mental health to be composed of psychological distress symptoms and psychological well-being such as "feeling cheerful interest in and enjoyment of life" (p.730). Therefore, this study examined the impact of racism-related stress and financial stress on the psychological distress symptoms of racial minorities, specifically depression and anxiety, in order to be consistent with prior research and to further attest the negative relationship between stressors and psychological distress.

Depression has been known as the state of feeling sad, moody, and downhearted (Veit & Ware, 1983) and anxiety has been referred to as the "physiological, behavioral, and psychological reaction" that results in rapid heartbeats, muscle tension, sweating and leads to becoming fearful and feeling uneasy (Bourne, 2000, p. 3). Both depression and anxiety have been studied frequently with various instruments such as the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) and the Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988). The BDI-II is an adjusted scale from the Beck Depression Inventory (BDI) (Beck, 1972) which was constructed to look at depressive symptoms among a psychiatric sample of adults and adolescents. The 21-item scale is based on the DSM-IV conditions and consists of mental and physical reactions such as self-dislike, suicidal thoughts or wishes, changes in appetite, and tiredness or fatigue. Likewise, the BAI is a 21-item scale that tests the severity of anxiety and was developed from a psychiatric sample. It consists of items that touch upon physical responses individuals may go through when feeling anxiety.

The Mental Health Inventory (MHI; Veit & Ware, 1983) is also a popular measure that has been used widely to test individuals' levels of psychological distress and well-being (Manne & Schnoll, 2001). It consists of factors such as anxiety, depression, loss of behavioral/emotional control, general positive affect, and emotional ties. The MHI has been praised as an innovative way of looking at psychological health; the authors distinguished psychological distress, which represents negative elements of psychological health such as depression and anxiety, from well-being, which represents positive elements of psychological health compared to past literature that has used the two factors interchangeably.

The scale differs from the BDI-II and BAI in that it was created based on a sample from the general population rather than a psychiatric population and thus can be applied to a variety of populations. Additionally, the MHI is centered on assessing individuals' levels of the psychological experiences of anxiety and depression in contrast to the BAI and BDI-II that also included the evaluation of physical symptoms related to anxiety and depression. Therefore, instead of combining and confounding psychological and physical factors in psychological health, the MHI gives a clear representation of the psychological understanding of anxiety and depression. Hence, this study used the depression and anxiety subscales of the MHI to assess psychological distress.

Chapter 3. Statement of the Problem

This study looked at the individual and interaction effects of racism-related stress and financial stress on psychological distress (Fig. 2). In addition, it examined how problem-solving and avoidance coping each work as moderators of the racism-related stress and psychological distress and financial stress and psychological distress relationships (Fig. 2).

Hypothesis 1: Racism-related stress and financial stress will relate to psychological distress (path a and path b).

(a) Racism-related stress will have a significant, positive relationship with psychological distress. Higher levels of racism-related stress will relate to higher levels of psychological distress.

(b) Financial stress will have a significant, positive relationship with psychological distress. Higher levels of financial stress will relate to higher levels of psychological distress.

Hypothesis 2: Problem-solving and avoidance coping will relate to psychological distress (path c and path d).

(a) Problem-solving coping will have a significant, negative relationship with psychological distress. Higher levels of problem-solving coping will relate to lower levels of psychological distress.

(b) Avoidance coping will have a significant, positive relationship with psychological distress. Higher levels of avoidance coping will relate to higher levels of psychological distress.

Hypothesis 3: Financial stress will moderate the relationship between racism-related stress and psychological distress (path e).

(a) At high levels of racism-related stress the positive relationship between financial stress and psychological distress will be stronger in magnitude. At low levels of racism-related stress the relationship between financial stress and psychological distress will be weaker in magnitude.

Hypothesis 4: Problem-solving coping will moderate the relationship between racism-related stress and psychological distress (path f) and between financial stress and psychological distress (path g).

(a) At high levels of problem-solving coping the positive relationship between racism-related stress and psychological distress will be weaker in magnitude than at low levels of problem-solving coping.

(b) At high levels of problem-solving coping the positive relationship between financial stress and psychological distress will be weaker in magnitude than at low levels of problem-solving coping.

Hypothesis 5: Avoidance coping will moderate the relationship between racism-related stress and psychological distress (path h) and between financial stress and psychological distress (path i).

(a) At high levels of avoidance coping the positive relationship between racism-related stress and psychological distress will be stronger in magnitude than at low levels of avoidance coping.

(b) At high levels of avoidance coping the positive relationship between financial stress and psychological distress will be stronger in magnitude than at low levels of avoidance coping.

Chapter 4. Methods

A. Design Statement:

This study is a quantitative, descriptive, cross-sectional study that was conducted

with a college student and community sample of the racial minority population to

investigate a comprehensive stress and coping model for racial minorities. This study

examined racism-related stress, financial stress, problem-solving coping, and avoidance

coping as individual predictors of psychological distress. In addition, I examined several

interaction effects: racism-related stress and financial stress (racism-related

stress*financial stress), racism-related stress and problem-solving coping (racism-related

stress*problem-solving coping), racism-related stress and avoidance coping (racism-

related stress*avoidance coping), financial stress and problem-solving coping (financial

stress*problem-solving coping), financial stress and avoidance coping (financial

stress*avoidance coping) on psychological distress. Participants were asked to participate

in the study online.

B. Participants:

A total of 717 racial minority young adult and adults participated in this study. A

missing values analysis was conducted and data with less than 10% of missing data was

initially retained. Afterward, an Expectation-Maximization imputation was conducted to

impute missing data. However, I experienced statistical and technological issues while

running the model in LISREL due to the large sample size and limited computer memory

space. Hence, all of the missing data was deleted including those that consisted of

participants who did not meet the criteria of being over 18 years old and a total of 414

cases were retained for this study (246 women, 165 men, 1 genderqueer). The age of the

participants ranged from 18 to 60 years old ($M = 23.74$, $SD = 6.79$). One-hundred and ninety-two students self-identified as Asian/Asian American/Pacific Islander (46.4%), 88 as Black/African American (21.3%), 62 as Latino/Hispanic American (15.0%), 40 as Biracial (9.7%), 30 as Multiracial (7.2%), and 2 were missing data (.5%). Of these participants, 348 were students (84.1%), 43 were employed in professional or managerial positions (10.4%), 9 were students and employed (2.2%), 6 were employed in service fields (1.4%), 2 were unemployed (.5%), 2 were other such as being in the military or a stay-at-home mom (.5%), 3 were missing information (.7%), and 1 was self-employed (.2%). One-hundred and twenty-four participants indicated that their family current annual income was $90,001 or more (30.0%), 74 was $30,001-50,000 (17.9%), 72 was $10,001-30,000 (17.4%), 61 was $70,001-90,000 (14.7%), 45 was $50,001-70,000 (10.9%), 29 was $10,000 or less (7.0%), and 9 were missing information (2.2%). Moreover for highest education level, 194 participants indicated that they were currently in college (46.9%), 79 had a Master's degree (19.1%), 53 had a high school degree of GED (12.8%), 41 had a 4 year college degree (9.9%), 23 had a higher professional degree (5.6%), 17 had a 2 year college degree (4.1%), 5 were other such as currently in graduate school or currently in college with a 2 year degree (1.2%), and 2 were missing information (.5%).

Out of the 717 participants who initially participated in this study, 357 identified as students. Hence, approximately 8.9% of students who received e-mail recruitments (357 out of 4,000) participated in this study. Unfortunately, it is difficult to estimate the number of community participants who received e-mail recruitments (as the e-mail may have been distributed to members of an organization) and the percentage of those who

received the e-mail recruitments and participated in my study. Given the fairly small number of community participants in my study, the percentage of community participants who received my e-mail recruitments and have partaken in my study is most likely to be small.

C. Measures:

Demographics. The demographic measure included general information about each participant. Their age, ethnicity, gender, income, education, and occupational status were asked.

Racism-Related Stress. The General Ethnic Discrimination Scale was used to assess racism-related stress (Landrine et al., 2006). This scale was based on the Schedule of Racist Events (SRE; Klonoff & Landrine, 1999) that was created for the African American population. Hence, Landrine and colleagues changed the instructions from referring to Black people to participants' general race/ethnic group. The GED scale consists of 18 items such as "How often have you been treated unfairly by your employers, bosses and supervisors because of your race/ethnic group?" and "How often have you been accused or suspected of doing something wrong (such as stealing, cheating, not doing your share of work, or breaking the law) because of your race/ethnic group?" For each item the scale asked participants to indicate how often they experienced the racism-related events in the past year, recent discrimination, how often they experienced racism-related events in their entire life, lifetime discrimination, and how they appraised their level of stress, appraised discrimination. In order to be able to capture recent racist events participants went through I adapted this into asking participants to indicate the frequency of racism-related events they went through in the

past 6 months and their level of stress. The appraised discrimination subscale was used to indicate their levels of racism-related stress in this study. Items were rated on a six-point scale (1 = *None of the time, Not at all stressful*; 6 = *All of the time, Extremely stressful*). Landrine and colleagues reported high internal consistency with Cronbach's alphas of .94 for recent discrimination (in past year) and .95 for appraised discrimination (level of stress). The Schedule of Racist Events (SRE; Klonoff & Landrine, 1999), which the General Ethnic Discrimination was based on with small adaptations, has been found to have strong convergent validity with other stress and racism scales such as the Hassles Scale (Kanner, Coyne, Schaefer, & Lazarus, 1981) and the Peri Life Events Scale (Dohrenwend et al., 1978) (cited in Klonoff & Landrine, 2000).

Financial Stress. To assess financial stress I adapted the Economic Hardship Questionnaire by Lempers et al. (1989) and called this the Perceived Financial Stress (PFS) scale. The original scale consists of 12 items that were rated on a 4-point rating scale (1 = *never*; 4 = *very often*). The scale asks participants to indicate how often they experienced financially challenging events such as "Change food shopping or eating habits to save money?" and "Postpone medical care to save money?" Based on Lazarus and Folkman's conceptualization of stress, in this study participants were asked to rate not only the frequency of stressful financial situations but also the severity of stress they experienced for each item. Two items from the original scale were deleted as they inquired about participants' general financial situation rather than specific financial struggles and are different from the rest of the items. In addition, in order for the scale to be applicable to all age groups two items that deemed less relevant for the college student population were eliminated. As a result, the Perceived Financial Stress scale consisted of

8 items. The rating scale was changed to a six-point scale (1 = *None of the time, Not at all stressful*; 6 = *All of the time, Extremely stressful*) in accordance with other measures in this study. The authors conducted an exploratory factor analysis and found a one-factor solution that accounted for 34.8 % of the total variance. They reported high reliability with a Cronbach's alpha of .86. I conducted an internal consistency analysis which revealed a high reliability with Cronbach's alpha of .88. I also examined the discriminant validity of the scale with the General Ethnic Discrimination Scale (Landrine et al., 2006) and the Psychological Distress subscale of the Mental Health Inventory (Veit & Ware, 1983). As hypothesized and based on prior research, the PFS significantly and positively correlated with the GED ($r = .44$) and MHI ($r = .40$) and showed strong discriminant validity.

Problem-Solving and Avoidance Coping. The problem-solving and avoidance coping subscales of the Coping Strategy Indicator (CSI) by Amirkhan (1990) were used to assess problem-solving and avoidance coping. The instructions asked participants to indicate the extent to which they utilize each of the coping strategies. The problem-solving subscale included items such as "Tried to solve the problem?" and "Tried to carefully plan a course of action rather than acting on impulse?" The avoidance coping subscale included items such as "Tried to distract yourself from the problem" and "Avoided being with people in general?" In order to be consistent with the other scales a six-point rating scale (1 = *None of the time*; 6 = *All of the time*) was used. Amirkhan (1990) demonstrated high internal consistency with both subscales and reported Cronbach's alphas of .89 for problem solving and .84 for avoidance coping. Stable test-retest reliability was shown after participants completed the CSI 4 to 8 weeks afterwards

with Pearson coefficients of .83 and .77 for problem-solving and .82 and .79 for avoidance Coping. Strong convergent validity was also shown with the moderate, significant correlations between the CSI and the Ways of Coping Checklist (WCC; Folkman & Lazarus, 1980). The CSI was also not significantly related to the Crowne-Marlowe Social Desirability scale (Crowne & Marlowe, 1960) and represented strong discriminant validity.

Psychological Distress. The depression (4 items) and anxiety (9 items) subscales of the Mental Health Inventory were used to measure psychological distress (Veit & Ware, 1983). The original authors reported a hierarchical factor model in which anxiety, depression, and loss of behavior/emotional control were nested in psychological distress and general positive affect and emotional ties were nested in psychological well-being. The depression subscale includes examples such as "How much of the time, during the past month, have you felt downhearted and blue?" and the anxiety subscale consists of items such as "How much time, during the past month, have you been a very nervous person?" Items were rated on a six-point scale (1 = *None of the time*; 6 = *All of the time*). The original authors reported Cronbach's alphas that ranged from .83 to .91 for scales based on the five second order factors and .96 for the total score, respectively. Manne and Schnoll (2001) reported strong convergent validity through positive correlations of the MHI with the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) as well as with the Dyadic Adjustment Scale (DAS; Spanier, 1976) in a sample of 433 cancer patients.

D. Procedures:

Approval from the Institutional Review Board (IRB) was attained to recruit college students on the University of Maryland campus and off-campus community participants. I searched online for various organizations and community centers for racial minorities in the U.S. and their e-mail contact information. Afterward, e-mails were sent to recruit off-campus participants through these groups. In addition, a randomly generated list of 4,000 racial minority students was obtained from the University of Maryland registrar. These students were also e-mailed to participate in the study. Participants were asked to fill out the consent form online and then proceed to fill out surveys in the order listed as follows: the General Ethnic Discrimination Scale, the Perceived Financial Stress Scale, the problem-solving and avoidance coping subscales of the Coping Strategy Indicator, the depression and anxiety subscales of the Mental Health Inventory, and a demographics questionnaire. The surveys were administrated in the order of how individuals may experience stress and coping in real life. It was also based on Lazarus and Folkman (1984)'s as well as Cohen and Will (1985)'s theoretical models of stress and coping. The study had minimal risks in that participants may have felt distressed by addressing stressful occurrences in their lives as part of the study. Students were notified that they are free to not participate in the study at any time without penalty by exiting the survey online. The consent form also indicated that participants' names and contact information will not be linked to the responses they gave for confidentiality.

Chapter 5. Data Analysis

Descriptive statistics were computed to look at the sample characteristics such as the means and standard deviations of racism-related stress, financial stress, problem-solving coping, avoidance coping, and psychological distress. Latent variable path analysis was used to test the hypotheses of main effects of racism-related stress, financial stress, problem-solving coping, avoidance coping, and interactions between stressors and coping mechanisms on psychological distress. First, the initially hypothesized comprehensive model was tested (see Figure 2). Second, in order to look at the numerous relationship between factors more closely, the full model was divided into three smaller models: (a) racism-related stress, financial stress, and racism-related stress*financial stress predicting psychological distress (see Figure 3.1), (b) racism-related stress, problem-solving coping, avoidance coping, racism-related stress*problem-solving coping, racism-related stress*avoidance coping predicting psychological distress (see Figure 4.1), (c) and financial stress, problem-solving coping, avoidance coping, financial stress*problem-solving coping, and financial stress*avoidance coping (see Figure 5.1) predicting psychological distress.

The latent constructs for the models each had 3 items parcels as observed indicators of study constructs. Item parcels are a number of items aggregated together to function as observed indicators for latent constructs (Little, Cunningham, Shahar, & Widaman, 2002). Bandalos and Finney (2001) found that scholars utilize item parceling in order to have stable parameter estimates and to make up for small sample sizes. This method is known to have better reliability, communality, common factor variance, and a

decreased level of non-normal distribution of data than using individual items as observed indicators (Thompson & Melancon, 1996).

Bandalos and Finney (2001) also recommended using the domain-representative item parcels approach for item-parceling measures that are multidimensional. As disclosed in the literature review, all of the measures for the study constructs – racism-related stress, financial stress, problem-solving coping, avoidance coping, and psychological distress – have multiple dimensions. Thus, this study created and used domain-specific item parcels in order to capture the various dimensions in each measure. Using exploratory factor analysis, three item parcels were developed by investigating how the data fits the measure for all of the items. Little et al. (2002) described various problems for having a large number of items to represent constructs: (1) an increased possibility of Type I error, (2) overlap of sources of variance, and (3) unstable item-based solutions. Hence, the three highest item factor loadings were first utilized to represent each item parcel. Then, the next three highest item factor loadings were selected, reversely ordered, and assigned to each item parcel (Little et al., 2002). Ultimately, three item parcels for each latent variable were formed.

In addition, in order to test the interaction effects with latent constructs I employed Marsh, Wen, and Hau's (2004) unconstrained matched-pair strategy to generate indicators for interaction factors (e.g., racism-related stress*problem-solving coping). In order to employ this approach, I first ran an exploratory factor analysis of all of the item parcels for each latent factor. Afterwards, I matched the highest loading item parcel in factor A to interact with the lowest loading item parcel in factor B, the second highest loading item parcel in factor A to interact with the second highest loading item

parcel in factor B, the lowest loading item parcel in factor A to interact with the highest

loading item parcel in factor B. This was done for all of the latent factor interaction

terms.

Covariance and asymptotic covariance matrices were analyzed via LISREL 8.54

(Jo¨reskog & So¨rbom, 1996). The Satorra–Bentler scaled chi-square (Satorra & Bentler,

1994) was chosen to adjust for the presence of nonnormal data. Furthermore, the

standardized root-mean-square error of approximation (RMSEA), standardized root-mean

square residual (SRMR), and the comparative fit index (CFI) were utilized to assess

model fit. Values less than .07 (RMSEA), less than or equal to .08 (SRMR), and greater

than or equal to .95 (CFI) were used to assess model fit (Hu & Bentler, 1999).

Results

Descriptives and Bivariate Correlations

First, in order to address the risk of Type I error the statistical significance was restricted to .01. Table 1 includes descriptive statistics such as the mean, SD, and minimum and maximum scores for each variable as well as bivariate correlations among the variables consisting of total scores. Internal consistency estimates for scale scores were also included and all were acceptable ($\alpha > .70$).

As shown in Table 1, all of the bivariate correlations among the latent factors calculated as total scores of each variable were significant. The total score of racism-related stress was significantly and positively related to psychological distress ($r = .35; p < .01$). The total score of financial stress was also significantly and positively related to psychological distress ($r = .40; p < .01$). In addition, the total score of problem-solving coping ($r = -.27; p < .01$) and total score of avoidance coping ($r = -.62; p < .01$) each were significantly and negatively related to psychological distress. Racism-related stress was significantly and negatively associated with both problem-solving coping ($r = -.17; p < .01$) and avoidance coping ($r = -.31; p < .01$). Similarly, financial stress was significantly and negatively associated with both problem-solving coping ($r = -.25; p < .01$) and avoidance coping ($r = -.41; p < .01$).

Table 1

Descriptive Statistics and Bivariate Correlations

Variable	1	2	3	4	5	α	M (*SD*)	Range
1. RRS	--					.93	29.77 (14.51)	17.00 – 102.00
2. FS	.44**	--				.88	16.18 (8.13)	8.00 – 48.00
3. PS	-.17**	-.25**	--			.92	38.44 (11.76)	11.00 – 66.00
4. AV	-.31**	-.41**	.36**	--		.87	44.23 (11.01)	16.00 – 66.00
5. PD	.35**	.40**	-.27**	-.62**	--	.93	35.22 (12.10)	13.00 – 77.00

Note. RRS = The General Ethnic Discrimination Scale; FS = Perceived Financial Stress; PS = Coping Strategy Indicator Problem-Solving Coping; AV = Coping Strategy Indicator Avoidance Coping; PD = Mental Health Inventory. **$p < .01$.

Latent Variable Path Analysis: Full Model

This comprehensive model exhibited a good fit to the sample data, SB χ^2(360, N = 414) = 581.081, p = .00, RMSEA = .039 (90% CI = .033; .044), SRMR = .049, CFI = .935 (see Table 2). The variance accounted for in observed indicators was 83.1% for racism-related stress, 69.9% for financial stress, 78.2% for problem-solving coping, 69.2% avoidance coping, and 81.8% for psychological distress. This model accounted for approximately 52.9% of the variance in psychological distress for the total sample. All of the estimated model parameters including factor loadings and uniqueness terms were significant. Several of the relationships between the 9 exogenous factors were significant such as racism-related stress and financial stress (r = .47, p < .05), racism-related stress and problem-solving coping (r = -.18, p < .05), and racism-related stress and avoidance coping (r = -.34, p < .05), financial stress and problem-solving coping (r = -.28, p < .05), and financial stress and avoidance coping (r = -.48, p < .05). Only one structural coefficient was significant; avoidance coping (γ = -.61, t = -8.89, p < .05) was predictive of psychological distress (see Figure 2).

None of my hypotheses were supported in this model. Thus, I conducted post-hoc analyses to explore my hypotheses in smaller models such as looking at both types of stressors and their interaction in one model, racism-related stress and coping strategies in the second model, and financial stress and coping strategies in the third model. These smaller models had fewer estimated model parameters which provided more power and are likely able to produce more stable results.
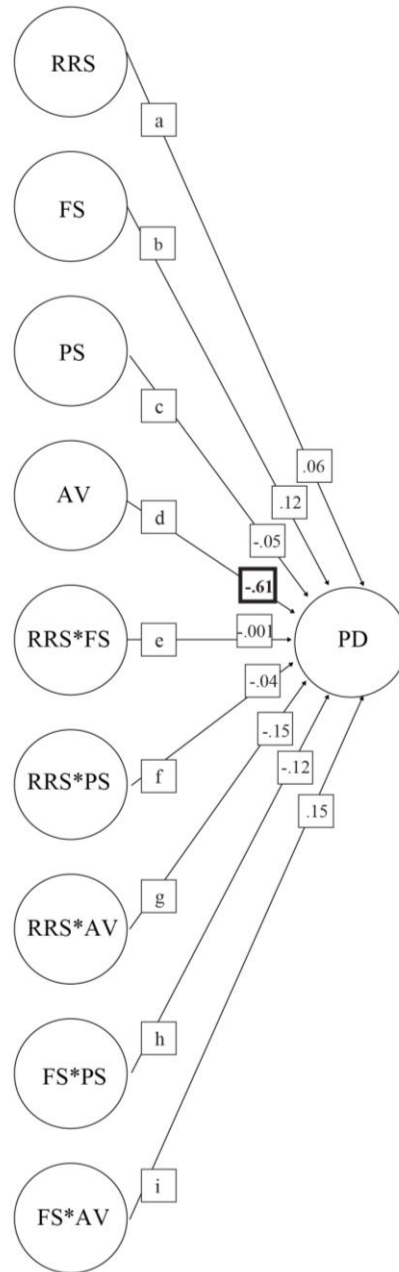
Figure 2. Hypothesized full latent variable path analysis model. RRS = racism-related stress, FS = financial stress, PS = problem-solving coping, AV = avoidance coping, PD = psychological distress, RRS*FS = interaction between racism-related stress and financial stress, RRS*PS = interaction between racism-related stress and problem-solving coping, RRS*AV = interaction between racism-related stress and avoidance coping, FS*PS = interaction between financial stress and problem-solving coping, FS*AV = interaction between financial stress and avoidance coping. Statistically significant ($p < .05$) standardized structural coefficients are presented in bold text.

Post-Hoc Latent Variable Path Analysis 1: Racism-Related and Financial Stress

The first post-hoc analysis model consisted of both stressors, racism-related stress and financial stress, predicting psychological distress independently and as an interaction latent factor (see Figure 3.1). This model exhibited a good fit to the sample data, SB $\chi^2(48, N = 414) = 85.213$, $p = .000$, RMSEA = .043 (90% CI = .028; .058), SRMR = .032, CFI = .982 (see Table 2). The variance accounted for in observed indicators was 83.1% for racism-related stress, 69.9% for financial stress, and 81.8% for psychological distress. This model accounted for approximately 26.0% of the variance in psychological distress for the total sample. All of the estimated model parameters including factor loadings and uniqueness terms were significant. Several of the relationships between the 3 exogenous factors were significant such as racism-related stress and financial stress ($r = .47$, $p < .05$). All of the three structural coefficients were significant and met racism-related stress ($\gamma = .31$, $t = 4.11$, $p < .05$), financial stress ($\gamma = .38$, $t = 5.92$, $p < .05$), racism-related stress*financial stress ($\gamma = -.22$, $t = -2.76$, $p < .05$) were predictive of psychological distress (see Figure 3.1).

In order to further understand the nature of the interaction, such as to see how the relationship between racism-related stress and psychological distress change depending on the level of financial stress, I conducted a simple slopes analysis (Aiken & West, 1991; Cohen, Cohen, West & Aiken, 2003; Frazier et al., 2004). The simple slopes of the racism-related stress – psychological distress relationship were plotted at three levels (i.e., 1 *SD* above mean, mean, and 1 *SD* below mean) of financial stress. As displayed in Figure 3.2, the findings revealed that the association between racism-related stress and psychological distress was significant and positive for participants who had high levels of

financial stress. The association between racism-related stress and psychological distress was also significant and positive for participants with low levels of financial stress. In addition, the relationship between racism-related stress and psychological distress (simple slope value = .14) at high levels of financial stress was lower than the relationship between racism-related stress and psychological distress (simple slope value = .36) at low levels of financial stress. The overall moderation effect had a medium effect size (f^2 = .29).

A few of my hypotheses were met in this model. Hypothesis 1a and 1b, which indicated that higher levels of racism-related stress and financial stress would each be associated with higher levels of psychological distress, was reflected in the findings of this model. The interaction effect of racism-related stress*financial stress, however, showed opposing results to what I proposed in hypothesis 3a in which I hypothesized that the relationship between racism-related stress and psychological distress would be stronger in magnitude for those with high levels of financial stress than those with low levels of financial stress.
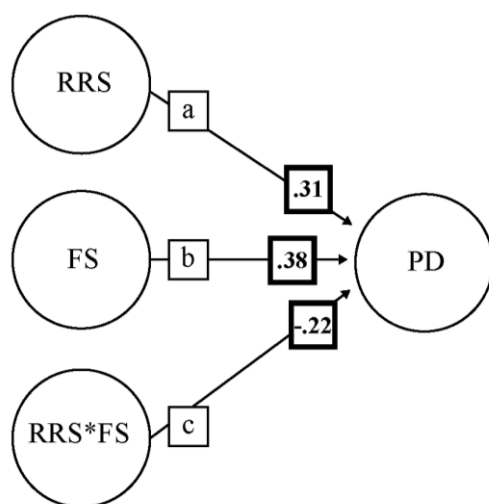
Figure 3.1. Multiple stressor model for racial minorities. RRS = racism-related stress, FS = financial stress, RRS*FS = interaction between racism-related stress and financial stress. Statistically significant ($p < .05$) standardized structural coefficients are presented in bold text.
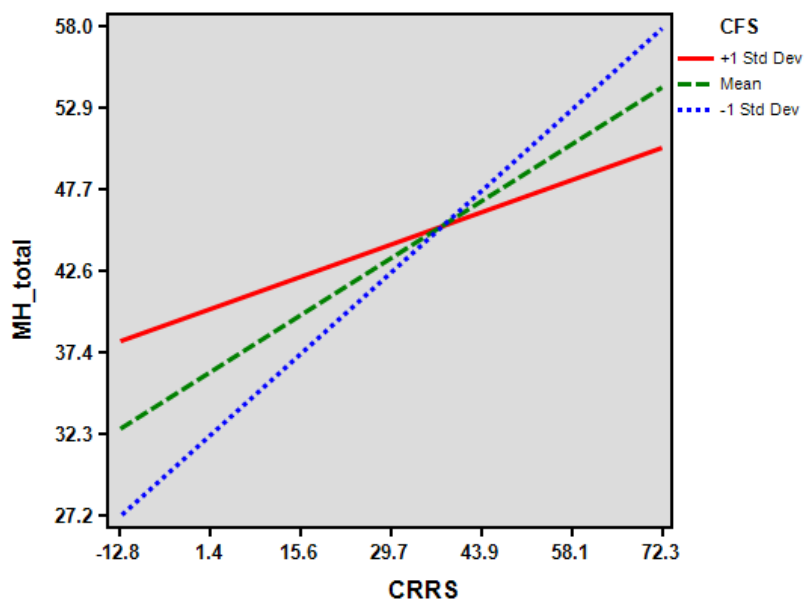
Figure 3.2. Simple slopes of racism-related stress predicting psychological distress for 1 *SD* below the mean of financial stress, the mean of financial stress, and 1 *SD* above the mean of financial stress.

Post-Hoc Latent Variable Path Analysis 2: Racism-Related Stress and Coping

The 2nd post-hoc analysis model included racism-related stress, problem-solving coping, avoidance coping, racism-related stress*problem-solving coping, and racism-related stress*avoidance coping predicting psychological distress (see Figure 4.1). This model exhibited a good fit to the sample data, SB χ^2(120, $N = 414$) = 197.330, $p = .000$, RMSEA = .040 (90% CI = .029; .049), SRMR = .043, CFI = .961 (see Table 2). The variance accounted for in observed indicators was 83.0% for racism-related stress, 78.2% for problem-solving coping, 69.2% for avoidance coping, and 81.8% for psychological distress. This model accounted for approximately 51.5% of the variance in psychological distress for the total sample. All of the estimated model parameters including factor loadings and uniqueness terms were significant. Several of the relationships between the exogenous factors were significant such as racism-related stress and problem-solving coping ($r = -.17$, $p < .05$) and racism-related stress and avoidance coping ($r = -.34$, $p < .05$). Three structural coefficients were significant; racism-related stress ($\gamma = .13$, $t = 2.86$, $p < .05$), avoidance coping ($\gamma = -.65$, $t = -9.96$, $p < .05$), and racism-related stress*problem-solving coping ($\gamma = -.10$, $t = -2.11$, $p < .05$) were predictive of psychological distress (see Figure 4.1).

Next, a simple slopes analysis of the racism-related stress* problem-solving coping interaction was conducted. Simple slopes of the racism-related stress – psychological distress relationship were plotted at three levels (i.e., 1 *SD* above mean, mean, 1 *SD* below mean) (see Figure 4.2). As displayed in Figure 4.2, the association between racism-related stress and psychological distress was significant and positive for participants who had high levels of problem-solving coping and those who had low levels

of problem-solving coping. In addition, the relationship between racism-related stress and psychological distress (simple slope value = .22) at high levels of problem-solving coping was lower than the relationship between racism-related stress and psychological distress (simple slope value = .29) at low levels of problem-solving coping. The overall moderation effect had a medium effect size (f^2 = .21).

The main effects partially met my hypotheses. First, racism-related stress was a significant and positive predictor of psychological distress, which coincide with Hypothesis 1a that was also demonstrated in the 2nd latent variable path analysis model (see Figure 3.1; path a). Problem-solving coping was not a significant predictor of psychological distress and failed to meet Hypothesis 2a. In addition, avoidance coping was negatively predictive of psychological distress and was inconsistent with Hypothesis 2b in which I proposed that there would be a positive relationship.

One of the interaction effects, racism-related stress*problem-solving coping predicting psychological distress, was consistent with my Hypothesis 4a and showed that problem-solving coping buffered against the harmful effects of racism-related stress on psychological distress for racial minorities. Contrarily, avoidance coping was not a significant moderator between racism-related stress and psychological distress and was inconsistent with Hypothesis 5a.
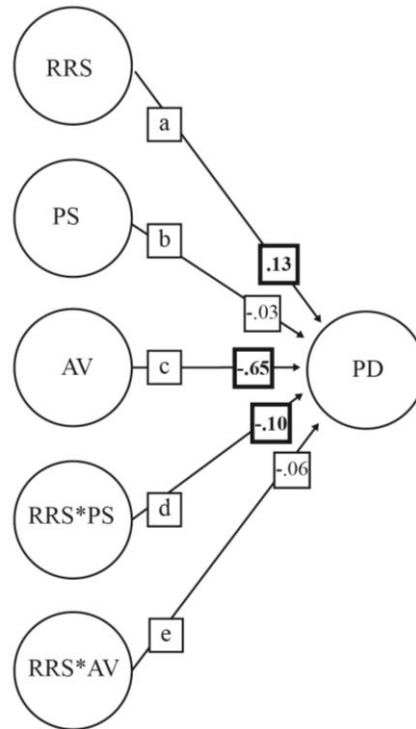
Figure 4.1. Racism-related stress moderation model for racial minorities. RRS = racism-related stress, PS = problem-solving coping, AV = avoidance coping, PD = psychological distress, RRS*PS = interaction between racism-related stress and problem-solving coping, RRS*AV = interaction between racism-related stress and avoidance coping. Statistically significant ($p < .05$) standardized structural coefficients are presented in bold text.
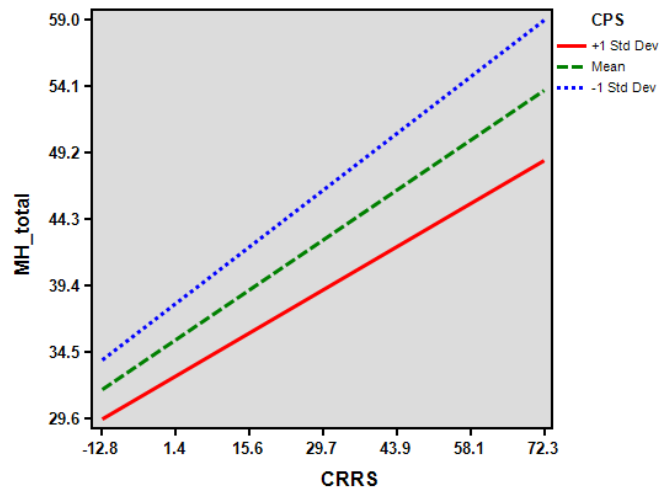

Figure 4.2. Simple slopes of racism-related stress predicting psychological distress for 1 *SD* below the mean of problem-solving coping, the mean of problem-solving coping, and 1 *SD* above the mean of problem-solving coping.

Post-Hoc Latent Variable Path Analysis 3: Financial Stress and Coping

The third post-hoc analysis model included financial stress, problem-solving coping, avoidance coping, financial stress*problem-solving coping, and financial stress*avoidance coping predicting psychological distress (see Figure 5). This model exhibited a good fit to the sample data, SB χ^2 (120, $N = 414$) = 259.309, $p = .000$, RMSEA = .053 (90% CI = .044; .062), SRMR = .046, CFI = .957 (see Table 2). The variance accounted for in observed indicators was 69.9% for financial stress, 78.2% for problem-solving coping, 69.2% for avoidance coping, and 81.8% for psychological distress. This model accounted for approximately 50.0% of the variance in psychological distress for the total sample. All of the estimated model parameters including factor loadings and uniqueness terms were significant. Several of the relationships between the exogenous factors were significant such as financial stress and problem-solving coping ($r = -.28$, $p < .05$) and financial stress and avoidance coping ($r = -.48$, $p < .05$). Two structural coefficients were significant; financial stress ($\gamma = .12$, $t = 2.08$, $p < .05$) and avoidance coping ($\gamma = -.63$, $t = -9.30$, $p < .05$) were predictive of psychological distress (see Figure 5).

The main effects partially supported my hypotheses. First, financial stress was a significant and positive predictor of psychological distress, which coincide with Hypothesis 1b that was also demonstrated in the 2nd latent variable path analysis model (see Figure 3.1). Problem-solving coping was not a significant predictor of psychological distress and failed to meet Hypothesis 2a. In addition, avoidance coping was negatively predictive of psychological distress and the direction of this relationship was inconsistent with Hypothesis 2b in which I proposed that there would be a positive relationship. Both

of the moderation effects, financial stress*problem-solving coping and financial stress*avoidance coping predicting psychological distress, were insignificant and inconsistent with Hypothesis 4b and 5b.
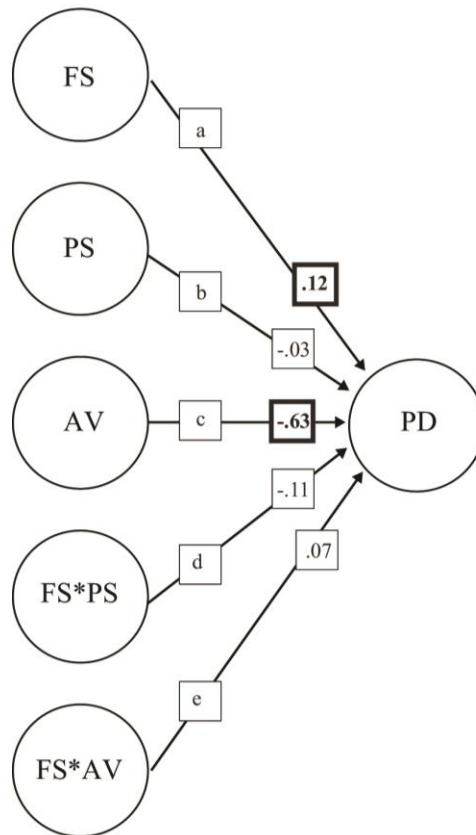
Figure 5. Financial stress moderation model for racial minorities. FS = financial stress, PS = problem-solving coping, AV = avoidance coping, PD = psychological distress, FS*PS = interaction between financial stress and problem-solving coping, FS*AV = interaction between financial stress and avoidance coping. Statistically significant ($p <$ .05) standardized structural coefficients are presented in bold text.

Table 2

Fit Statistics for Structural Models

Model	SB χ^2	*p*	*df*	SRMR	RMSEA	CFI
1: Full Model						
Structural Model	581.081	< .01	360	.049	.039 (.033; .044)	.935
2: RRS and FS						
Structural Model	85.213	< .01	48	.032	.043 (.028; .058)	.982
3: RRS and Coping						
Structural Model	197.330	< .01	120	.043	.040 (.029; .049)	.961
4: FS and Coping						
Structural Model	259.309	< .01	120	.046	.053 (.044; .062)	.957

Note. SB χ^2 = Satorra-Bentler scaled chi-square; *df* = degrees of freedom; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index. RMSEA values in parentheses represent 90% confidence intervals.

Discussion

The aim of this study was to examine the impact of race-related and finance-related factors and coping mechanisms on the psychological distress levels of racial minorities. Based on previous conceptual and empirical work, I hypothesized that racism-related stress, financial stress, problem-solving coping, and avoidance coping, racism-related stress*financial stress, racism-related stress*problem-solving coping, racism-related stress*avoidance coping, financial stress*problem-solving coping, and financial stress*avoidance coping would significantly predict psychological distress. Present findings for the comprehensive model were mostly inconsistent with prior research such that only avoidance coping was predictive of psychological distress. In addition, I conducted post-hoc analyses by dividing the larger model into three smaller models that had reduced parameters and more power to further explore my hypotheses. In the following sections I have provided information on how results from the large model and three smaller models tested my hypotheses.

Comprehensive Model

It is surprising that avoidance coping was the only significant predictor of psychological distress and had a negative relationship with psychological distress. My hypotheses based on prior research suggested the opposite direction of this relationship to be significant (Bouteyre et al., 2007; Dyson & Renk, 2006; Stewart et al., 1997). However, the conceptualization of constructs in past literature has been disorganized and inconsistent. As I indicated in the literature review, the terms emotion-focused and avoidance coping have been used interchangeably but also have been discussed to be significantly different conceptually. For example, Noh and Kaspar (2003) defined

emotion-focused coping as passive acceptance and emotional distraction. Brittian and colleauges (2003) distinguished between distraction and avoidance coping. Noh and Kaspar's inclusion of passive acceptance in their definition of emotion-focused coping and Brittian et al.'s separation between distraction and avoidance are theoretically different from my operationalization of avoidance coping in which I combined distraction and avoidance as one construct and didn't include a sense of accepting one's situation based on Amirkan's (1990) theoretical and methodological approach. Furthermore, prior research has examined different approaches of avoidance coping in relation to a wide range of outcomes (e.g., subjective well-being, self-esteem, anxiety and depression) (Aranda & Lincoln, 2011; Edwards & Romero, 2008; Villegas-Gold & Yoo, 2014). Therefore, at some level, it is difficult to compare my results directly with a number of studies on the relationship between avoidance coping and psychological distress.

It may also be that college and graduate students who are bombarded by busy schedules, numerous projects, and high academic demands in the present day of a technologically advanced, fast-paced society may utilize avoidance coping mechanisms that help reduce their levels of anxiety and depression. This study was primarily conducted at the University of Maryland, a research-intensive flagship university of the state of Maryland, which is proximal from the nation's capital. Student participants may experience academic distress, suffer from rumination, and feel overwhelmed and tense due to their numerous student activities as well as nation-wide events that occur near school. Thus, they may temporarily disengage and do things to distract themselves from their long to-do lists to help themselves feel better and less nervous.

Furthermore, although participants' range of age was wide, 18 to 60 years old, the mean age was approximately 23 years old. Hence, younger participants may be more prone to use avoidance coping strategies that temporarily relieve their levels of anxiety and depression compared to older participants that were not extensively included in this study. For example, Aranda and Lincoln (2011) discovered that avoidance coping was positively related to depression for Latino/a adults and older adults. Hence, it may be that for individuals who are older and have over time continuously engaged in avoidance coping strategies may experience exacerbated psychological distress levels.

Given the large number of Asian participants in the study, various cultural values in Asian culture may also have impacted this result. For example, Kuo (1995) discussed that Asian individuals in their study who had increased levels of Asian cultural values that may consist of authority, conformity, and reconciliation also had increased levels of emotion-focused coping. The author indicated that based on these cultural values Asian Americans may use inner psychological resources and avoidance techniques to manage their emotions and regulate stress when experiencing racism-related stress which may differ from other racial minority groups. Hence, the negative relationship between avoidance coping and psychological distress may reflect the experiences of Asian Americans, however, it is important to conduct analyses of looking at separate racial groups to see how the stress and coping process works in the future to validate this speculation.

Racism-Related Stress, Financial Stress, and Psychological Distress (Post-Hoc 1)

In the first post-hoc analysis model, I looked at racism-related stress, financial stress, and their interaction effect to predict psychological distress. It is important to

highlight that racism-related stress and financial stress each uniquely predicted psychological distress. Their positive relationships are consistent with past research (Ahnquist & Wamala, 2011; Butterworth et al., 2009; Gee et al., 2009; Mereish et al, 2012; Williams et al., 2003; Hypothesis 1a and 1b). These findings provide further validation for the negative psychological health implications for racial minorities who are subject to and experience racism-related stress and financial stress. It is also important to consider that these findings were represented amongst a diverse sample of individuals in age and racial groups. Moreover, the demographic information showed that participants came from a wide range of objective socioeconomic backgrounds such as in annual household income and education level. Therefore, these findings suggest that the negative effects of racism-related stress and financial stress on psychological functioning are prevalent among a broad spectrum of racial minorities regardless of their racial or objective socioeconomic status.

Past psychological research has primarily looked at the impact of one stressor on psychological distress. Therefore, to better capture real life experiences of racial minorities who experience multiple struggles in their daily lives due to their racial- and socioeconomic statuses (Braveman, et al., 2010; Williams & Mohammad, 2009), I examined the interaction effect of racism-related stress and financial stress on psychological distress (Hypothesis 3a). In accordance with my original hypothesis, racism-related stress*financial stress significantly and positively predicted psychological distress. However, simple slope analyses (Cohen et al., 2003; Frazier et al., 2004) of the racism-related stress and financial stress interaction revealed that at both high and low levels of financial stress, racism-related stress and psychological distress were

significantly and positively related. Furthermore, the magnitude of the relationship between racism-related stress and psychological distress was larger at low levels of financial stress than that of at high levels of financial stress. These results are contrary to my hypothesis that the interaction of the two stressors will have an enhanced effect on psychological distress when both levels of stressors are high (Hypothesis 3a).

These findings most importantly suggest that racism-related stress and financial stress experiences, together, detrimentally contribute to heightened levels of psychological distress. Regardless of the levels of financial stress, exposure to racism-related stress in addition to financial stress seems to create higher risk for more psychological distress. This is important to consider as it contributes to prior research on the deleterious influences of multiple stressors on the psychological functioning of racial minorities.

On the other hand, it is surprising to learn that at low levels of financial stress the magnitude of the relationship between racism-related stress and psychological distress was larger than that of at high levels of financial stress. Past theories have emphasized that an event is deemed stressful based upon individuals' subjective evaluation of the situation (Cohen & Wills, 1985; Lazarus & Folkman, 1984). Hence, individuals may undergo various emotional and cognitive processes while interpreting the stressful event and these internal processes may be shaped by the nature of the stressful event (e.g., racial harassment) and other life circumstances they are experiencing simultaneously (e.g., financial stress). For example, when racial minorities go through both high levels of racism-related stress and financial stress, they may not be able to address their experience of both stressors at deep levels. Individuals may have more emotional space to reflect on

racist comments they received when having less financial stress, and consequently, psychologically delve into the discriminatory and hurtful experiences that generate negative and complex emotions. Furthermore, majority of the participants who reported being students, both undergraduate and graduate, may be more psychologically-minded and educated to recognize and fathom the harmful racist events they experienced.

In addition, due to the urgent and immediate attention that financial needs may require, when undergoing high levels of financial and racism-related stress, certain participants may resolve their financial problems rather swiftly (e.g., students may access more loans, get economic assistance from their parents, or work more to earn money) leaving them to deal primarily with their racism-related stress experiences. Also, as students they may be more limited in time and resources to actively earn money to solve their financial problems. As a result, they may be well-aware and accepting of their current situations in that their primary duties consist of academic studies and college or graduate student life rather than working full-time to be fully financially responsible. Thus, when being overloaded with high levels of both racism-related and financial stress, they may be equipped to understand and cope with their situations better than when they have high levels of racism-related stress but less financial stress in which they have more opportunities to comprehend racially discriminatory events.

Problem-Solving Coping and Avoidance Coping as Moderators (Post-Hoc 2 and 3)

The second and third post-hoc analysis models looked at problem-solving and avoidance coping each as individual predictors of psychological distress and both coping strategies as moderators each between racism-related stress and psychological distress and financial stress and psychological distress (racism-related stress*problem-solving

coping, racism-related stress*avoidance coping; financial stress*problem-solving coping, financial stress*avoidance coping). The results indicated that as found in the first model, racism-related stress and financial stress were each positively and significantly related to psychological distress (Hypothesis 1). On the other hand, in both the second and third models, problem-solving coping was not significantly related to psychological distress (Hypothesis 2a). Furthermore, avoidance coping was discovered to have a negative, significant relationship with psychological distress in both models, contrary to my hypotheses and previous findings (Hypothesis 2b).

Similar to the comprehensive model results, avoidance coping was significantly and negatively related to psychological distress. On the other hand, it was not a significant moderator for both racism-related and financial stress. This may be impacted by the fact that avoidance coping deserves the need to be examined under scrutiny as a scientific construct. For example, one may intentionally and consciously or unintentionally and unconsciously avoid one's stressor, however, this was not captured in the avoidance coping operationalization and measure I used. For instance, when dealing with a traumatic racist event, one may have developed a tendency to unconsciously avoid the stressor due to the event causing several painful emotions.

One may also choose to distract oneself from the stressor but not directly avoid and minimize the stressor. For example, a racial minority college student who has several college loans may not want to constantly think about the situation and benefit from distracting oneself from worrying about how to pay back their loans. Amirkhan's operationalization of avoidance coping included aspects of being distracted, however, Brittain and colleagues (2013) differentiated between distraction and avoidance coping in

their study. Therefore, depending on how the researcher operationalizes avoidance coping, it may or may not work as a significant moderator between stress and psychological distress.

It may also be that people choose to accept the stressful situation they are experiencing which may entail not actively trying to solve the problem but also not directly avoiding the situation. Hence, in this case not doing anything to deal with the stressor doesn't necessarily entail avoiding the situation. Instead, one may choose to actively not avoid, problem-solve, or ruminate about the stressor and have a sense of peace while acknowledging what has happened to them and what they have to endure. Consequentially, clearly describing and measuring these various constructs within the coping literature is highly needed and recommended for future psychological literature. This would enhance our understanding of what avoidance coping is and how it may harm or benefit individuals who use this strategy in relation to racism-related and financial stress.

In addition, problem-solving coping worked as a moderator for racism-related stress but not for financial stress (Hypothesis 4a and 4b). The findings showed that the interaction between racism-related stress and problem-solving coping was a significant predictor of psychological distress. The simple slopes analysis showed that the magnitude of the positive association between racism-related stress and psychological distress at high levels of problem-solving coping was lower than that of at low levels of problem-solving coping. This finding is in accordance with previous studies that demonstrated that those who are able to actively solve their problem, such as thinking of and trying different ways to help them feel better, tend to have reduced anxiety and depressive

symptoms when experiencing racism-related stress (Edwards & Romero, 2008; Noh & Kaspar, 2003; West et al., 2010). Racial minorities may spend time to actively think about the situation, seek social support to talk about their experience and get validation, or confront the perpetrator of the act of racism that help them deal with racist events (Edwards & Romero, 2008; Noh & Kaspar, 2003; Wei et al., 2010; West et al., 2010). Directly dealing with the problem may be a way to express their frustration, anger, sadness, and powerlessness to others and feel connected to those they trust instead of internalizing their pain and/or blaming themselves for overreacting.

However, contrary to my hypotheses, problem-solving coping was not a significant moderator between financial stress and psychological distress (Hypothesis 4b). Racial minorities' experiences of financial stress may entail cultural influences such as being limited in financial resources due to their racial minority status and thus, bring about similar feelings of oppression, helplessness, resentment, and sorrow. However, unlike racism-related stress, individuals may lack educational and financial means that are necessary to actively solve their economic distress based on past and current experiences of oppression (e.g., African Americans were denied access to education). In particular, college and graduate students who make up majority of the sample may not have enough time and resources to directly solve their financial distress (e.g., full-time student may have significant difficulty working full-time to pay for their tuition).

Unlike what was hypothesized, avoidance coping was found to be an insignificant moderator for racism-related stress and financial stress (Hypothesis 5a and 5b). The descriptive analyses showed that avoidance coping had high mean levels which were in the higher range of scores. The avoidance coping measure was slightly skewed to the left

and the individual scores were accumulated into a uniform distribution (Skewness = -.86, *SE* = .12; Kurtosis = -.62, *SE* = .24). This was fairly close to a normal distribution in which the sample we gathered overall tended to have well-distributed levels of avoidance coping. In addition, the mean levels of racism-related and financial stress were both lower than the midpoint item range and the measure was highly skewed to the right suggesting that participants tend to be fairly psychologically healthy (Skewness = 1.69, *SE* = .12; Kurtosis = 3.18, *SE* = .24; Skewness = 1.28, *SE* = .12; Kurtosis = 1.39, *SE* = .24). Thus, the sample characteristics may have impacted the results and avoidance coping may exacerbate the effects of financial stress on psychological distress for participants who experience higher levels of stress than the participants in this study experienced.

In addition, it is interesting given that avoidance coping was significantly and negatively associated with psychological distress for both post hoc analysis models 1 and 2, which included other factors in the model, but didn't serve as a significant moderator. My previous research (Yang & Miller, N.d.) suggests that different coping mechanisms may work for certain types of stressors based on the nature and psychological process of the stressor. Hence, it may be that avoidance coping works as a moderator (stress-inducer or enhancer) with other types of stress but not for racism-related or financial stress. As discussed above, racial minority participants seemed to find it useful to actively solve racism problems. Thus, avoiding these issues may not be an option they utilize or find to be effective. Also, students who are educated and aware of racism issues may not be able to consciously or subconsciously ignore or deter their thought and emotional processes from hurtful experiences they undergo. Similarly, when undergoing financial stress

students may have difficulty evading their challenging economic situations that impact their daily life functioning. They may also be aware that avoiding their money-related issues would make things worse, resulting in their lack of usage of this coping mechanism.

Clinical Implications

The findings reveal multiple points that are contributable to clinical practice. As indicated above, it would be helpful for clinicians to help clients explore their emotions and cognitions about different types of stressors they experience such as racism-related stress and financial stress. Given that racism-related stress and financial stress for racial minorities are vulnerable and deeply personal experiences strongly influenced by systemic oppression, it is crucial to keep in the mind the sociocultural identities of power and privilege that therapists may have in this process of exploration. While being mindful of the cultural factors that play a role in clients' lives, clinicians' lives, and the relationship between the two parties, clinicians can play a significant role in helping clients become aware of how these types of stress can relate to their increased manifestation of depressive and anxiety symptoms. Hence, clinicians can be a source of comfort and healing when processing these stressful events for clients from a non-judgmental, empathetic, and culturally sensitive stance.

It may also be helpful for clinicians to relay the interaction effects of multiple stressors on individuals' levels of psychological distress, in particular racism-related stress and financial stress. It would be beneficial to explore with clients their internal processes of how they manage both stressors particularly when clients experience high levels of racism-related stress along with high and/or low levels of financial stress.

Sharing with clients that the experiences of racism may have a strong, negative influence on their psychological distress levels regardless of the intensity of financial stress and especially at low levels of financial stress may be important information to help clients fathom and manage this complicated process.

Furthermore, based on my findings that demonstrate problem-solving coping may help racial minorities deal with racism-related stress, clinicians can help clients brainstorm different ways of actively coping with the racism-related stressful event. For example, clinicians can explore with clients how they have dealt with racist events in the past, what has worked for them, and what strategies they have used to actively combat racism experiences. Clients may feel empowered in the process while working with clinicians to come up with a list of active stress management mechanisms, such as seeking social support, receiving validation, and confronting the perpetrator, which they can utilize in reaction to racism. They may also feel catharsis as they release emotions of anger, hopelessness, and powerlessness in therapy and other relationships they trust.

Additionally, it is important to help clients become aware that various types of stressors and coping mechanisms may impact their psychological distress levels differently. For example, based on my results, it is crucial to examine what type of avoidance strategies racial minorities utilize, what this experience is like for them, and how this impacts their levels of anxiety and depression. Helping clients become aware of the different processes that underline racism-related stress, financial stress, problem-solving coping, and avoidance coping would provide them with more psychological knowledge to manage their life choices and struggles. For example, my findings showed that problem-solving coping only functioned as a significant moderator between racism-

related stress and psychological distress and not for financial stress and psychological

distress. Hence, helping racial minority clients reflect on various types of coping

strategies to deal with particular stressors is essential.

Limitations and Future Directions

      Data Collection Limitations and Future Directions. The present study results

should be considered with recognition of several study limitations. First, although a

diverse group of college students and community individuals participated in this study, it

is difficult to generalize our findings to racial minorities in the U.S. as the data only

represented one portion of the larger population. In addition, the participant recruitment

rate from the random list of self-identified racial minorities provided by the University of

Maryland's registrar's office was a low rate of approximately 8.9% (357 students

responded out of 4,000 who were e-mailed to ask to participate). Furthermore, I contacted

various community organizations asking leaders of the associations to forward my

recruitment e-mail to their members and received approximately 52 responses. Therefore,

the participants who did partake in this study may be individuals who are interested,

motivated, and dedicated to the cause and study of racial minority health. They also may

have personality tendencies of feeling obligated to help others, wanting to provide

assistance to others, and/or being curious and inquisitive of this topic.

      For future research it would be important to consider various ways to get a higher

response rate when collecting data. For example, it may be helpful to post recruitment

flyers and postings electronically on student and community organizations' websites,

Facebook pages, and Twitter pages to increase visibility of research projects. This may

especially be effective given that our mode of communication has largely moved to be

online and electronic. It may also be helpful to establish professional relationships with community organizations in the U.S. to be able to better communicate the importance of conducting psychological studies and learning how to connect more with the general public.

Study Type Limitations and Future Directions. Also, the results I found can disclose information about the relationships among variables and how the relationships among variables hold together in one model but cannot infer causality. Therefore, it is important to conduct experimental studies that can show the causal relationships between racism-related stress, financial stress, and psychological distress as well as those that show the efficacy of problem-solving coping in relation to racism-related stress and its effects on the psychological distress levels of racial minorities. For example, one could generate an experimental study on the effects of problem-solving coping techniques participants acquired from a problem-solving therapy workshop on their levels of anxiety and depression after experiencing a racist event. Qualitative studies that can give us in-depth information about the pressures and strain racial minorities face and the ways they cope with these struggles are also essential to conduct. For example, conducting interviews with college students on their experiences with financial stress and how they cope with this type of stress could give us annotated examples that better demonstrate the inner psychological processes individuals go through.

Moreover, given that this study is based on participants' recall of the stressful events that occurred in the past 6 months, it is dependent on individuals' memories that may or may not reflect true experiences. Participants who also experienced racism-related and financial stress previous to 6 months were not able to report those experiences and

the study is limited in not being able to account for time and memory effects. Hence, conducting longitudinal studies that can account for the time effects to see long-term results are necessary for future research as well.

Statistical and Measurement Limitations and Future Directions. The inclusion of several variables and especially interactions of variables was attempted to get a closer picture of the real life experience of racial minorities but was also restricted given statistical limitations. Future research to advance our statistical methods is highly needed to appropriately analyze the relationships among psychological constructs that remain most true to individuals' real life experiences. I also indicated that due to computer limitations that I deleted data with all missing cases and that I wasn't able to include participants that had less than 10% missing data. This would be important to address this technological and statistical limitation to be able to account for this data that wasn't considered.

Furthermore, I discussed in my literature review that some of the constructs (e.g., racism-related and financial stress) had non-normal distributions. It would be helpful to conduct a log transformation to make the variance more uniform and compare the data results with other research.

In order to understand the level of severity of stress and psychological distress individuals go through, it would also be important to measure constructs consistently across research. For example, it was difficult to compare mean differences of my study constructs with other research given that the measurement of the total scores were different. Hence, it is important to further discuss uniformity of measurement across studies in order to compare study results.

On a measurement level, this study is also limited given that the financial stress scale was modified from Lempers et al.'s economic hardship questionnaire and was not initially validated with other populations before used in this study. Therefore, it would be important to test this measure with other racial minority populations and to consider its generalizability.

Conceptual Limitations and Future Directions. There are also various conceptual limitations of this study that could be addressed in future research. This study is also limited in not addressing and including several covariates such as social class in the comprehensive model. Although information was collected about participants' objective indicators of social class such as income, education level, and occupational status, this was not included as part of the larger model to account for objective social class status differences. This is important to address in further research to account for various different characteristics that make up the racial minority population and may play a significant role in their stress and coping process. For example, scholars could examine how this model looks differently for various social class statuses or sexes.

In this study I argued for similarities among different racial groups of their experiences with racism-related stress and financial stress due to their minority statuses. However, it is important to acknowledge the diverse culture-specific processes of stress and coping in each racial group that was not empirically investigated and elaborated. As indicated in my literature review, certain racism-related stress events may be more relevant and applicable to particular racial groups. For example, Asian American participants may be stereotyped to be smart in all subjects, especially mathematics, based on the model minority myth which may not apply as much to other racial group members

(Chou, 2008; Liang et al., 2004; Yoo et al., 2014). African Americans on the other hand may experience more discrimination and assumptions in that they tend to be aggressive and engage in delinquent, illegal behavior (Sue et al., 2008; Utsey & Ponterotto, 1996). Thus, it would be important to look at the stress and coping process across racial groups as well as ethnic groups in comparison or each racial or ethnic group uniquely to better understand the role of cultural values and norms that shape their real life experiences.

This study combined students and community participants in the sample. Therefore, the experiences of each group were not examined theoretically in detail. In future research it would be helpful to conduct separate analyses for students and community participants given the different developmental stages that the two populations undergo to see how the stress and coping process work differently for each group (e.g., college students who are financially dependent on their families vs. adult parents who are responsible for their family's finances). This would also address the fact that majority of the sample consisted of students but due to having a small sample of community participants it is difficult to comprehend and apply the results based on the sample characteristics.

Furthermore, it would be helpful to get more demographic information from participants such as on their student status for those who identify as students (e.g., seeking undergraduate or graduate degree), generational status for immigrants, and housing situations (e.g., live in college dormitory or own house/apartment) to paint a clearer picture of who the sample of the study consists of. This would aid us to better understand the study results and to infer possible clinical implications. For example, traditionally aged undergraduate students may have a harder time utilizing problem-

solving coping strategies compared to graduate students and community participants who tend to be older in age and have more experience with managing life struggles. Furthermore, third generation immigrants may have learned how to better cope with racism-related stress compared to first generation immigrants who are most likely still adjusting to life in America.

In addition to demographic variables, other constructs that could aid our understanding of the study variable relationships such as ethnic identity, ethnic social support, bicultural self-efficacy are crucial to consider. For example, those who strongly identify with their ethnic group may be more willing to utilize ethnic social support cope with racism-related stress compared to those who don't identify strongly with their ethnic group. Similarly, those who have higher levels of bicultural self-efficacy may be able to deal with racism-related stress more effectively than those with lower levels of bicultural self-efficacy.

Although I clearly explicated stress and psychological distress as two different scientific constructs this study is limited in that these two constructs may be confounded with negative affectivity. Hence, accounting for negative affect as part of racism-related and financial stress as well as psychological distress would be important to conduct in future studies that explore the stress – psychological distress relationships.

Based on the contributions of this study, scholars need to investigate the nature of various stressors and their unique characteristics as well as those aspects that overlap in the next generation if psychological research. Although many studies continue to examine the process of stress on the psychological health of individuals, stress as a construct may be too broad to include the number of different types of events that bring

about stress. For example, racism-related stress and financial stress both encompass aspects of stress in which individuals comprehend and decide if the events they are experiencing are harmful to them. On the other hand, the nature of stress stimulated by racial harassment is conceptually very different from stress induced by financial troubles.

In addition, few unique stressors (e.g., racism-related stress, acculturative stress) have been clearly identified and investigated in psychological research for racial minorities (Liang et al., 2007; Miller, et al., 2011; Pascoe & Smart Richman, 2009). As indicated earlier in this study, a large amount of research has been done among low-income populations that tend to consist of racial minorities (Wadsworth & Santiago, 2008; Wadsworth, 2012) and few studies have explicitly studied or conceptualized financial stress that occurs for the racial minority population and its relationship to psychological distress. Therefore, various types of stressors need to be closely examined, conceptualized, and empirically tested to validate them as individual constructs under the umbrella of stress and especially how they are culturally tailored for racial minorities. Furthermore, this study contributed to current literature by investigating the effects of two types of unique stressors. It is crucial to examine the role of more than one stressor among racial minorities' psychological functioning as this reflects their true-life experiences. For example, researchers could examine the roles of sexism-related stress, racism-related stress, and discrimination based on one's sexual orientation for racial minorities who also identify as part of the LGB population.

Furthermore, based on limited research it is difficult to understand how racial minorities undergo financial struggles and how this may differ for various racial minority groups. For example, financial stress has limited construct validity given the lack of

clarity on understanding financial stress as a construct and whether measures accurately represent the hypothesized construct. This is especially important to consider, as there is a huge lack of understanding on how financial stress may be experienced differently for racial groups and how cultural factors may play out in the relationship between their financial stress experiences and psychological distress.

Although there has been some research done on understanding how different racial minority groups cope with racism-related stress (Brittian et al., 2013; Noh & Kaspar, 2003; Shorter-Gooden, 2004) and the unique cultural aspects that underline these processes for each group, there is a lack of consensus on this area of research on a theoretical and methodological level. Moreover, there is limited amount of research that has been conducted to be able to compare findings. Therefore, a closer look at culture-specific racism-related and financial stressors as well as particular coping strategies for different racial groups in upcoming studies is an integral area of research.

In order to better fathom the stress and coping process for racial minorities, it is necessary to carefully examine stress and coping as scientific constructs. For example, it is arduous to assess whether participants considered racism-related and financial stress as short-term, temporary or long-term, chronic experiences. A participant could have experienced racism (e.g., being treated differently by their peers) when they were young that has resulted in him/her experiencing Post-Traumatic Stress symptoms to this day whereas another participant could have experienced the same type of racism (e.g., being treated differently by peers) but dealt with it in the moment and not have long-term effects of stress. One could hypothesize that chronic stress may have a stronger relationship with psychological distress than that of temporary stress. Furthermore,

certain coping strategies may work to alleviate distress depending on whether the stress is determined as temporary or chronic. For example, participants may use avoidance coping more when experiencing temporary financial stress but not when it is longstanding economic troubles.

Taking a closer look at coping as a scientific construct is also a high priority. As I indicated in my literature review, there are several limitations of the current coping strategy literature. First and foremost the operationalization of coping has been found to be complex and unclear. For example, it is difficult to discern the intentionality behind the usage of coping mechanisms among individuals. Are people consciously and intentionally using certain coping mechanisms (e.g., individual uses substance use to cope with difficult issues) or is it a unconscious process? When helping clients develop healthier lifestyles in therapy, most often therapists intentionally introduce various coping techniques to clients so they may learn how to address maladaptive schemas or behaviors that have negative consequences with active consideration and will. This process may be different for individuals who are not consciously thinking about which coping strategies to utilize when a stressful event occurs.

Another theoretical limitation that can be addressed in future research is conceptualizing the stress and coping model as an indirect, mediation model. As I discussed in my Literature Review both moderation and mediation models have been presented as ways to understand individuals' stress and coping process. Clark and colleagues (1999) and Harrell (2000) have discussed coping strategies as mediators in between stressors and psychological distress. As a result, it would be important to investigate whether coping mechanisms explain the relationship between racism-related

stress and psychological distress as well as financial stress and psychological distress in future studies.

Appendix A

IRB Consent Form

Project Title	Psychosocial stressors and coping strategies among racial minorities
Purpose of the Study	*This research is being conducted by **Minji Yang** under the supervision of **Dr. Matthew J. Miller** at the University of Maryland, College Park. We are inviting you to participate in this research project because you identify as a racial minority living in the U.S. The purpose of this research project is to understand the stress and coping experiences you have as a racial minority.*
Procedures	*The procedures involve completing a set of surveys online that will approximately take 15 to 20 minutes to complete.*
Potential Risks and Discomforts	*There may be some risks from participating in this research study such as experiencing distress but there are no known risks associated with participating in this study.*
Potential Benefits	*There are no direct benefits from participating in this research. However, the results of the study may help the investigators understand more about the personal stressors that racial minorities undergo and the benefits of coping strategies to help deal with these struggles. Through improved understanding of these factors, we hope to inform clinicians and educators in developing interventions that would benefit racial minorities.*
Confidentiality	*Any potential loss of confidentiality will be minimized by storing data in a secure location such as a locked office in a password protected computer.* *If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.*
Compensation	*You will be entered in a raffle to receive one of five $30 gift cards. You will be responsible for any taxes assessed on the compensation.* ☐ *Check here if you expect to earn $600 or more as a research participant in UMCP studies in this calendar year. You must provide your name, address and SSN to receive compensation.* ☐ *Check here if you do not expect to earn $600 or more as a*

	research participant in UMCP studies in this calendar year. Your name, address, and SSN will not be collected to receive compensation.
Right to Withdraw and Questions	*Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.* *If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:* **Matthew J. Miller (mmille27@umd.edu) or Minji Yang (mjyang@umd.edu) at: 3214 Benjamin Building, Counseling, Higher Education, and Special Education Department, University of Maryland, College Park, MD 20742.**
Participant Rights	*If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:* **University of Maryland College Park** **Institutional Review Board Office** **1204 Marie Mount Hall** **College Park, Maryland, 20742** **E-mail: irb@umd.edu** **Telephone: 301-405-0678** *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.*
Statement of Consent	*Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.* *If you agree to participate, please sign your name below.*
Signature and Date	**NAME OF PARTICIPANT [Please Print]**	
	SIGNATURE OF PARTICIPANT	

	DATE	

Appendix B-1

Recruitment E-Mail

Hello,

Would you like to share your experiences as a racial minority by completing a brief online survey (only 15-20 minutes of your time)? We are contacting you as you have self-identified as a racial minority attending school at the University of Maryland. Your participation in this survey will help researchers and educators learn more about experiences and struggles racial minorities undergo and to help racial minorities manage their stressors. To thank you for your participation in the study you will be entered into a raffle to win one of five $30 Amazon gift cards.

Your participation is important to us and we highly value your feedback. Please click on the link below and follow the instructions:

https://umd.az1.qualtrics.com/SE/?SID=SV_6JoSphiObkYo2EJ

This study is being conducted by Minji Yang, a graduate student in counseling psychology, under the supervision of Dr. Matthew J. Miller, at the University of Maryland, College Park. This project has been approved by the University of Maryland, College Park Institutional Review Board (IRB Approval #517703-2). If you have any questions about this study, please feel free to contact **Minji Yang (mjyang@umd.edu)**.

Best,
Minji Yang, M.A.
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Appendix B-2

Recruitment E-Mail

Hello,

Would you like to share your experiences as a racial minority by completing a brief online survey (only 15-20 minutes of your time)? If you self-identify as a racial minority we would appreciate your participation in sharing your experiences as a racial minority living in the U.S. We are currently conducting a study to learn more about experiences and struggles racial minorities undergo and how they manage their stressors. To thank you for your participation in the study you will be entered into a raffle to win one of five $30 Amazon gift cards.

Your participation is important to us and we highly value your feedback. Please click on the link below and follow the instructions:

https://umd.az1.qualtrics.com/SE/?SID=SV_6JoSphiObkYo2EJ

This study is being conducted by Minji Yang, a graduate student in counseling psychology, under the supervision of Dr. Matthew J. Miller, at the University of Maryland, College Park. This project has been approved by the University of Maryland, College Park Institutional Review Board (IRB Approval #517703-02). If you have any questions about this study, please feel free to contact **Minji Yang (mjyang@umd.edu)**.

Best,
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Appendix C

The General Ethnic Discrimination Scale

We are interested in your experience with racism in the past 6 months. As you answer the questions below, please think about your entire life from when you were a child to the present. For each question, please circle the number that best captures the things that have happened to you.

None of the time				All of the time	
1	2	3	4	5	6

Not at all stressful				Extremely stressful	
1	2	3	4	5	6

1. How often have you been treated unfairly by **teachers and professors** because of your race/ethnic group?

How often in the past 6 months?	1 2 3 4 5 6
How stressful was this for you?	1 2 3 4 5 6

2. How often have you been treated unfairly by your **employers, bosses and supervisors** because of your race/ethnic group?

	1 2 3 4 5 6
How often in the past 6 months?	
How stressful was this for you?	1 2 3 4 5 6

3. How often have you been treated unfairly by your **co-workers, fellow students and colleagues** because of your race/ethnic group?

How often in the past 6 months?	1 2 3 4 5 6
How stressful was this for you?	1 2 3 4 5 6

4. How often have you been treated unfairly by **people in service jobs (by store clerks, waiters, bartenders, bank-tellers and others)** because of your race/ethnic group?

How often in the past 6 months?	1 2 3 4 5 6
How stressful was this for you?	1 2 3 4 5 6

5. How often have you been treated unfairly by **strangers** because of your race/ethnic group?

How often in the past 6 months?	1 2 3 4 5 6
How stressful was this for you?	1 2 3 4 5 6

6. How often have you been treated unfairly by **people in helping jobs (by doctors, nurses, psychiatrists, case workers, dentists, school counselors, therapists, social workers and others)** because of your race/ethnic group?

How often in the past 6 months?   1   2   3   4   5   6

How stressful was this for you?   1   2   3   4   5   6

7. How often have you been treated unfairly by **neighbors** because of your race/ethnic group?

How often in the past 6 months?   1   2   3   4   5   6

How stressful was this for you?   1   2   3   4   5   6

8. How often have you been treated unfairly by **institutions (schools, universities, law firms, the police, the courts, the Department of Social Services, the Unemployment Office and others)** because of your race/ethnic group?

How often in the past 6 months?   1   2   3   4   5   6

How stressful was this for you?   1   2   3   4   5   6

9. How often have you been treated unfairly by **people that you thought were your friends** because of your race/ethnic group?

How often in the past 6 months?   1   2   3   4   5   6

How stressful was this for you?   1   2   3   4   5   6

10. How often have you been **accused or suspected of doing something wrong (such as stealing, cheating, not doing your share of work, or breaking the law)** because of your race/ethnic group?

How often in the past 6 months?   1   2   3   4   5   6

How stressful was this for you?   1   2   3   4   5   6

11. How often have **people misunderstood your intentions and motives** because of your race/ethnic group?

How often in the past 6 months?   1   2   3   4   5   6

How stressful was this for you?   1   2   3   4   5   6

12. How often have you **want to tell someone off for being racist towards you but didn't say anything**?

How often in the past 6 months?	1	2	3	4	5	6
How stressful was this for you?	1	2	3	4	5	6

13. How often have you been **really angry about something racist that was done to you**?

How often in the past 6 months?	1	2	3	4	5	6
How stressful was this for you?	1	2	3	4	5	6

14. How often have you been **forced to take drastic steps (such as filing a grievance, filing a lawsuit, quitting your job, moving away, and other actions)** to deal with some racist thing that was done to you?

How often in the past 6 months?	1	2	3	4	5	6
How stressful was this for you?	1	2	3	4	5	6

15. How often have you been **called a racist name**?

How often in the past 6 months?	1	2	3	4	5	6
How stressful was this for you?	1	2	3	4	5	6

16. How often have you **gotten into an argument or a fight about something racist that was done to you or done to another member of your race/ethnic group**?

How often in the past 6 months?	1	2	3	4	5	6
How stressful was this for you?	1	2	3	4	5	6

17. How often have you been **made fun of, picked on, pushed, shoved, hit, or threatened with harm** because of your race/ethnic group?

How often in the past 6 months?	1	2	3	4	5	6
How stressful was this for you?	1	2	3	4	5	6

18. How *different* would your life be now if you **HAD NOT BEEN** treated in a racist and unfair way?

In the past 6 months?	1	2	3	4	5	6

The same as it is now	Totally different

Appendix D

Perceived Financial Stress Scale

For the following questions choose one of the answers listed below:

None of the time				All of the time	
1	2	3	4	5	6

Not at all stressful				Extremely stressful	
1	2	3	4	5	6

1. Cut back on social activities and entertainment expenses.

   How often have you done this in the past 6 months? 1 2 3 4 5 6
   How stressful was this for you? 1 2 3 4 5 6

2. Postpone major purchases.

   How often have you done this in the past 6 months? 1 2 3 4 5 6
   How stressful was this for you? 1 2 3 4 5 6

3. Postpone clothing purchases.

   How often have you done this in the past 6 months? 1 2 3 4 5 6
   How stressful was this for you? 1 2 3 4 5 6

4. Change transportation patterns to save money.

   How often have you done this in the past 6 months? 1 2 3 4 5 6
   How stressful was this for you? 1 2 3 4 5 6

5. Change food shopping or eating habits to save money.

   How often have you done this in the past 6 months? 1 2 3 4 5 6
   How stressful was this for you? 1 2 3 4 5 6

6. Sell some possessions.

   How often have you done this in the past 6 months? 1 2 3 4 5 6
   How stressful was this for you? 1 2 3 4 5 6

7. Postpone medical care to save money.

    How often have you done this in the past 6 months?   1   2   3   4   5   6

    How stressful was this for you?   1   2   3   4   5   6

8. Take additional employment to help meet expenses.

    How often have you done this in the past 6 months?   1   2   3   4   5   6

    How stressful was this for you?   1   2   3   4   5   6

Appendix E

Coping Strategy Indicator – Problem-Solving & Avoidance Coping

None of the time   All of the time

1   2   3   4   5   6

We are interested in how people cope with the problems and troubles in their lives. Listed below are several possible ways of coping. We would like you to indicate to what extent you, yourself, used each of these coping methods. All of your responses will remain anonymous.

Try to think of stressful experiences you have had in the past 6 months. With these experiences in mind, indicate how you coped by choosing the correct number for each coping behavior on the following pages. Answer each and every question even though some may sound similar.

Keeping these stressful events in mind, indicate to what extend you...

1. Rearranged things around you so that your problem had the best chance of being resolved?   1   2   3   4   5   6

2. Tried to distract yourself from the problem?   1   2   3   4   5   6

3. Brainstormed all possible solutions before deciding what to do?   1   2   3   4   5   6

4. Did all you could to keep others from seeing how bad things really were?   1   2   3   4   5   6

5. Set some goals for yourself to deal with the situation?   1   2   3   4   5   6

6. Daydreamed about better times?   1   2   3   4   5   6

7. Weighed your options very carefully?   1   2   3   4   5   6

8. Spent more time than usual alone?   1   2   3   4   5   6

9.   Tried different ways to solve the problem until you found one that worked?   1   2   3   4   5   6

10. Watched television more than usual?   1   2   3   4   5   6

11. Thought about what needed to be done to straighten things out?   1   2   3   4   5   6

12. Avoided being with people in general?   1   2   3   4   5   6

13. Turned your full attention to solving the problem?   1   2   3   4   5   6

14. Buried yourself in a hobby or sports activity to avoid the problem?   1   2   3   4   5   6

15. Formed a plan of action in your mind?   1   2   3   4   5   6

16. Slept more than usual?   1   2   3   4   5   6

17. Stood firm and fought for what you wanted in the situation?   1   2   3   4   5   6

18. Fantasized about how things could have been different?   1   2   3   4   5   6

19. Tried to solve the problem?   1   2   3   4   5   6

20. Identified with characters in novels or movies?   1   2   3   4   5   6

21. Tried to carefully plan a course of action rather than acting on impulse?   1   2   3   4   5   6

22. Wished that people would just leave you alone?   1   2   3   4   5   6

Appendix F

Mental Health Inventory – Anxiety & Depression

None of the time				All of the time	
1	2	3	4	5	6

Please rate your responses based on how you felt in the past 6 months by choosing the number that best fits your answer.

1. How often did you become nervous or jumpy when faced with excitement or unexpected situations during the past 6 months? 1 2 3 4 5 6

2. Did you feel depressed during the past 6 months? 1 2 3 4 5 6

3. How much of the time, during the past 6 months, have you been a very nervous person? 1 2 3 4 5 6

4. During the past 6 months, how much of the time have you felt tense or "high-strung"? 1 2 3 4 5 6

5. During the past 6 months, how often did your hands shake when you tried to do something? 1 2 3 4 5 6

6. How much of the time, during the past 6 months, have you felt downhearted and blue? 1 2 3 4 5 6

7. How much have you been bothered by nervousness, or your "nerves", during the past 6 months? 1 2 3 4 5 6

8. During the past 6 months, how much of the time have you felt restless, fidgety, or impatient? 1 2 3 4 5 6

9. During the past 6 months, how much of the time have you been moody or brooded about things? 1 2 3 4 5 6

10. During the past 6 months, how often did you get rattled, upset or flustered? 1 2 3 4 5 6

11. During the past 6 months, have you been anxious or worried? 1 2 3 4 5 6

12. How often during the past 6 months did you find yourself trying to calm down? 1 2 3 4 5 6

13. During the past 6 months, how much of the time have you been in low or very low spirits?

1   2   3   4   5   6

Appendix G

Demographic Questionnaire

1. Sex (female = 1; male = 2; other = 3 – specify)

2. Age

3. Please indicate your racial group:

    1. Latino/Hispanic American

    2. Asian/Asian American/Pacific Islander

    3. African American

    4. Biracial

    5. Multiracial

    6. Other (specify): _____

4. Please indicate your current occupational status:

    a. Student

    b. Service

    c. Self-employed

    d. Professional or managerial

    e. Unemployed

    f. Retired

    g. Other (specify):

5. Please indicate you or your family's current annual income:

    a. $10,000 or less

    b. $10,001-$30,000

    c. $30,001-$50,000

    d. $50,001-$70,000

    e. $70,001 -$90,000

    f. $90,001 or more

6. Please indicate your highest education level:

    a. High school degree or GED

    b. 2 year college degree (e.g., A.A, A.B.)

    c. 4 year college degree (e.g., B.A., B.S.)

    d. Currently in college

    e. Master's degree

    f. Higher professional degree (e.g., Ph.D., M.D., J.D.)

    g. Other

RAFFLE REGISTRATION

7. First name (please **DO NOT** provide your last name):

8. Email address (NOTE: we also need this to enter you in the raffle for your chance to win one of five $30 gift cards; we will not share this information – as indicated in the consent form, we will do our best to keep your personal information confidential by replacing your name with a generic study ID and reporting results for the group –so that no one will know the identity of any one person)

9. Confirm email address

Please click on the next button below to submit your answers.

Thank you so much for completing the survey! You will be contacted if you have been chosen for a gift card. Please let us know if you have any questions:
Minji Yang (mjyang@umd.edu), Dr. Matthew J. Miller (mmille27@umd.edu)

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