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educational attainment in a longitudinal study of African
American youth**

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Iowa State University

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**Racial discrimination, ethnic-racial socialization, depression, and educational attainment in
a longitudinal study of African American youth**

by

Jennifer L. L. Major

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Psychology (Counseling Psychology)

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The student author, whose presentation of the scholarship herein was approved by the program
of study committee, is solely responsible for the content of this dissertation. The Graduate
College will ensure this dissertation is globally accessible and will not permit alterations after a
degree is conferred.

Iowa State University

Ames, Iowa

2020

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ABSTRACT

Despite some politicized claims that racial discrimination no longer exists (Neville, Gallardo, & Sue, 2016), there is strong evidence that racial minorities still experience significant discrimination in the United States (Belgrave & Allison, 2014). As a result, empirical research of racial discrimination is still warranted. Meta-analyses show that perceived racial discrimination has a strong effect on psychological well-being, such as depressive symptoms and self-esteem (Lee & Ahn, 2011; Paradies et al., 2015). There is also empirical support that racial discrimination is linked with academic outcomes (e.g., academic motivations and achievement; Benner, Wang, Shen, Boyle, Polk, & Cheng, 2018). Although racial discrimination is a risk factor for poorer psychological well-being and reduced academic function, ethnic-racial socialization (ERS) may buffer these effects (Brown and Tylka 2011). In addition, recent research suggests that studying the effects of the combination of various types of ERS messages (meta-messages) buffers the negative impacts on psychological well-being and academic achievement (Granberg, Edmond, Simons, Gibbons, & Lei, 2012; Neblett, Chavous, Nguyêñ, & Sellers, 2009). Therefore, this study explored the: a) relationship of perceived racial discrimination to academics and psychological well-being and b) buffering effects of ERS meta-messages on mitigating the impact of racial discrimination in a longitudinal sample of African American young adults. Results of the present study indicated mixed results about the buffering effects of ERS meta-messages on the relationship between perceived racial discrimination and the outcome variables of interest. Additional analyses showed some significant buffering effects of ERS scales on the relationship between discrimination and educational attainment. The present study suggests that ERS may be beneficial in protecting African American youth from the deleterious effects of racial discrimination. However, further research is needed to determine

the specific impacts of ERS meta-messages compared to ERS discrete messages as a buffer against perceived racial discrimination.

CHAPTER 1. INTRODUCTION

The Obama presidency evoked conversations about the status of race in America, with individuals claiming that the United States (U.S.) transcended race as an issue (McWhorter, 2010; Neville, Gallardo, & Sue, 2016). However, with the heightened awareness of police-involved shootings of people of color, the inception of the Black Lives Matter Movement, and the occurrence of the White Supremacist March in Charlottesville, Virginia, there is much evidence that race is still a concern for U.S. society. Furthermore, racial discrimination is both systemic and cultural (Belgrave & Allison, 2014; Bulhan, 1985), and as a result, more pervasive and insidious than often understood by the masses. The byproduct of racial stress from managing racial discrimination is a risk factor for reduced well-being and functioning among African Americans (Pieterse, Todd, Neville, & Carter, 2012). Therefore, continued psychological research on the effects of racial discrimination and exploring the coping mechanisms that enable African Americans to navigate racial discrimination is needed.

Scholars suggest that racial discrimination is indeed a stressor for African Americans and impedes functioning (Clark, Anderson, Clark, & Williams, 1999; Harrell, 2000). From the transactional model perspective, racial discrimination is a stressor as it may exceed an individual's perceived resources (Lazarus & Folkman, 1984). Other theoretical perspectives have emphasized the human needs of belongingness (Baumeister & Leary, 1995) and perceived control of one's life (Verkuyten, 1998) that are threatened by racial discrimination. Subsequent meta-analytic studies have reported a significant relationship between perceived racial discrimination and psychological distress (Paradies et al., 2015). Specifically, depressive symptoms, a marker of negative well-being, have been significantly related to perceived discrimination. Also, positive markers of well-being, like self-esteem, have also been found to be

negatively impacted by racial discrimination (Paradies et al., 2015). Furthermore, racial discrimination appears to predict poorer academic functioning as well (Benner, Wang, Shen, Boyle, Polk, & Cheng, 2018).

Ethnic-racial socialization (ERS) may buffer the harmful effects of racial discrimination. ERS refers to racial and ethnic teachings transmitted to youth by their families (Hughes et al., 2006). Scholars suggest that families use ERS as a tool to ready African American youth for managing racial-stressors as a racial-ethnic minority. The four primary categories of ERS are Cultural Socialization, Promotion of Mistrust, Preparation for Bias, and Egalitarianism (Priest et al., 2014). There are mixed results in the literature about the relationship between ERS and psychological and academic youth outcomes. For instance, some research has found ERS to be correlated with decreased depressive symptoms (Stevenson, Reed, Bodinson, & Bishop, 1997) and increased self-esteem (Constantine and Blackmon, 2002).

In contrast, other studies have found no significant link between ERS and self-esteem (Fatimilehin, 1999). However, recent research has begun exploring the combination of ERS messages, meta-messages, and psychological outcomes. Researchers argue that meta-messages, the combinations of ERS messages transmitted by elders, likely reflect racial socialization as it occurs in families (Granberg, Edmond, Simons, Gibbons, & Lei, 2012; Neblett et al., 2008). This research has found some buffering effects for specific types of meta-messages that reduce the effects of racial discrimination on psychological distress.

Although the research provides strong support for the adverse effects of racial discrimination on academics and psychological well-being, much is still not understood about the relationships between these constructs. For example, the majority of the racial discrimination literature samples adult populations. Therefore, the impact of perceived discrimination during

adolescence to young adulthood is not well explored. Also, there is little research on the buffering effects of ERS meta-messages on psychological and academic outcomes. Lastly, most studies on these topics are cross-sectional and do not assess these relationships over time.

The present study sought to understand the effects of perceived racial discrimination on psychological well-being and academics in a longitudinal sample of African American young adults over time. Furthermore, this study explored ERS meta-messages in mitigating the damaging effects of racial discrimination in these outcome variables. I predicted that perceived racial discrimination and ERS meta-messages will significantly predict depressive symptoms, self-esteem, and educational attainment. Racial discrimination will be linked to higher depressive symptoms and lower self-esteem and educational attainment. Also, ERS meta-messages higher in promoting mistrust of other races will be related to poorer psychological and academic outcomes. In contrast, ERS meta-messages higher in cultural education will be related to better psychological and academic outcomes. Results from this research will aid in filling in gaps within the literature about racial discrimination, ethnic-racial socialization, psychological well-being, and academics among African American young adults.

CHAPTER 2. LITERATURE REVIEW

“Black families have always been preparing their children for the inequities and glories associated with growing up Black in the United States.”—C.L. Lesane-Brown (2006)

Racial discrimination harms African Americans across all sectors of their lives including criminal justice, healthcare, education, employment, and housing systems (Belgrave & Allison, 2014; Sidanius & Pratto, 1999; Piston, 2010). These adverse effects have been discussed across disciplines of scholarship, such as sociology (DuBois, 1898; Pager & Shepherd, 2008), political science (Huddy & Feldman, 2009; Piston, 2010), and history (Nightingale, 1993). Psychology researchers have sought to define racial discrimination, explore its harmful impacts on victims, and determine potential coping mechanisms to mitigate these adverse effects. Results show that perceived racial discrimination is negatively associated with psychological (Britt-Spells, Slebodnik, Sands, & Rollock, 2018; Lee & Ahn, 2011; Pieterse et al., 2012) and academic outcomes (Alliman-Brissett & Turner, 2010; Benner et al., 2018). This chapter will review the current racial discrimination literature, illuminate gaps, and propose a study to investigate the potential moderating effects of ethnic-racial socialization on the relationship between perceived discrimination and several psychological and academic outcomes among African American young adults.

Defining Perceived Racial Discrimination

Despite the extensive research on racial discrimination, there is no one agreed-upon definition for the construct. Some scholars define racial discrimination as wrongful acts or unfair treatment toward an individual or group based on racial or ethnic identity (Britt-Spells et al., 2018; Jones & Carter, 1996), suggesting that racial discrimination is behavioral. In contrast, others describe racial discrimination as a combination of unfair treatments, beliefs, values, and ideologies regarding the inferiority of racial or ethnic minorities (Belgrave & Allison, 2014;

Clark, Anderson, Clark, & Williams, 1999). Moreover, other definitions focus on a multilevel system of racial discrimination: individual (person-to-person discrimination), institutional (discrimination enforced with unfair practices or policies), and cultural (discrimination against minority cultures and values; Belgrave & Allison, 2014). At its core, racial discrimination is oppressive and ubiquitous in the United States (U.S.). For this dissertation, I will focus on the individual experience of racial discrimination, that is, how racial minorities perceive and experience discrimination. This discrimination may occur on individual, institutional, and cultural levels, creating societal inequalities and exclusions of racial and ethnic minorities (Belgrave & Allison, 2014; Bulhan, 1985; Pieterse et al., 2012; Paradies et al., 2015).

Moreover, all levels of discrimination may affect the subjective experience of the individual.

Racial Discrimination as a Stressor

Experiences of life stressors are associated with harmful effects on health and well-being (Almeida, 2005; Schneiderman, Ironson, & Siegel, 2005; Thoits, 2010). Examples of life stressors include, but are not limited to, finances, work, violence and crime, and the current socio-political climate (American Psychological Association, 2017). However, for racial and ethnic minorities, perceived racial discrimination is also a life stressor that may adversely affect their mental health and well-being (Clark et al., 1999; Harrell, 2000).

Harrell (2000) suggested a multidimensional conceptualization of racism-related stress. This conceptualization is grounded in ecological (Trickett, Watts, & Birman, 1994) and stress and coping approaches (Lazarus & Folkman, 1984; Pearlin, Menaghan, Lieberman, & Mullan, 1981) to understand the psychological health of people of color (Harrell, 2000). Racism is ever-present and intertwined in the dynamic relationship between an individual and their environment,

in which the environment affects the individual's functioning and the individual impacts the environment (Harrell, 2000). Therefore, stress theory is essential to the study of racial discrimination and wellness. Drawing from Lazarus and Folkman's (1984) definition of psychological stress, Harrell defined racism-related stress 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).

This approach acknowledges racism-based stress as taxing on individuals not only in coping with the specific experience but also defending one's perception of racial discrimination as valid to others and ruminating about the details well after the experience may have occurred (Essed, 1991; Harrell, 2000; Pierce, 1995).

According to Harrell's (2000) model (See Table 1), racism-based stress adversely affects psychological (e.g., general psychological distress) and functional (e.g., academic performance) outcomes. Antecedent variables (e.g., demographic characteristics, socio-environmental factors) establish the contextual background for life experiences and individual development. Familial and socialization factors (e.g., ethnic-racial socialization, family dynamics) influence an individual's development of cultural values, personal characteristics, and mechanisms for managing racial discrimination throughout life. In addition to race-based stress (e.g., daily micro-aggressions, chronic socio-political stress), people of color may navigate other forms of stress, such as ageism and classism throughout life, which may increase the likelihood of developing poorer well-being outcomes. Harrell suggests that socio-cultural values (e.g., worldview) and personality characteristics (e.g., cognitive attributions) mediate the relationship between race-based stress and outcomes (e.g., mental health, academic achievement). For instance, whether an

individual attributes their distress as related to the experience of racial discrimination or another factor (e.g., romantic relationship discord).

Racial Discrimination and Psychological Outcomes

Meta-analytic research shows that as perceived racial discrimination levels increase, individuals report poorer mental health (Lee & Ahn, 2011; Paradies et al., 2015; Carter, Lau, Johnson, & Kirkinis, 2017). These studies reported correlation coefficients ranging from .17 to .23 for the link between discrimination and psychological distress. For African Americans specifically, meta-analyses estimated small to moderate effect sizes between discrimination and psychological distress ($r = .21$, 95% CI [.18, .24]; Lee & Ahn, 2013; $r = .20$, 95% CI [.17, .22]; Pieterse, Todd, Neville, & Carter, 2012). Moreover, research indicates that discrimination is linked to higher depressive symptoms and lower self-esteem (Benner et al., 2018; Paradies et al., 2015).

Depressive Symptoms

According to the Diagnostic and Statistical Manual of Mental Disorders- 5th edition (DSM-5; American Psychiatric Association, 2013), depressive symptoms include, but are not limited to, low mood, appetite changes, sleep disturbances, loss of energy, and difficulty concentrating. The presence of one or more symptoms is not necessarily indicative of the presence of a diagnosable depressive disorder (e.g., major depressive disorder). However, the presence of depressive symptoms reflects an individual experiencing distress and perhaps decreased functioning. Therefore, examining factors, such as racial discrimination, that may cause or exacerbate depressive distress, independent of an actual diagnosis, is valuable.

Among ethnic minorities

For racial/ethnic minorities, higher perceived racial discrimination is significantly related to higher levels of depressive symptoms (Lee & Ahn, 2011; Paradies et al., 2015). Lee and Ahn (2011) conducted a meta-analysis exploring the relationship between perceived discrimination and mental health among Asians. Results showed a statistically significant and positive correlation for perceived discrimination and depression ($r = .26, p < .01$). Furthermore, the relationship between racial discrimination and depressive symptoms was significantly higher than the relationship between discrimination and general psychological distress ($z = 3.92, p < .01$, Lee & Ahn, 2011). Similarly, another meta-analysis assessing the association between perceived racial discrimination and racism among African Americans, European Americans, Hispanic/Latin/o Americans, Asian Americans, Native Americans, Arab Americans, and International students, found an effect size of -0.23 (95% CI [-.24, -.21]) in which a negative correlation reflected poorer mental health (Paradies et al., 2015).

These two meta-analytic reports (analyzing a total of 147 studies) provide support for a significant association between perceived racial discrimination and mental health distress for racially/ethnically marginalized individuals. The correlation coefficients are similar across both studies, which suggests that empirical research is capturing the true effect of racial discrimination on psychological distress. However, it is important to note that the similarity in findings is at least somewhat caused by an overlap in studies included in both meta-analyses (approximately 6.8% overlap).

Among African Americans

Although African Americans were included in the previous meta-analyses, the results were not specific to African American experiences. I could find only one meta-analysis

examining the relationship between racial discrimination and specifically depressive symptoms for African Americans, although the sample was limited to U.S. Black men (Britt-Spells et al., 2018). From 12 articles ($N = 3,252$), the authors found a significant, positive relationship between perceived discrimination and depressive symptoms, $r = .29$, 95% CI [0.24, 0.34]. This indicates that greater perceived racial discrimination was associated with higher depressive symptomatology. According to Cohen's (1992) classification, this is nearing a medium effect size for the link between discrimination and depressive symptoms. However, a limitation with these results are that they are specific to adult Black men and are completely from a cross-sectional perspective. Therefore, the results should be applied with caution.

Similarly, Pieterse and colleagues (2012) conducted a meta-analysis of studies examining the relationship between perceived discrimination and psychological distress among adult Black Americans but included studies that assessed either depression or anxiety. They found of a significant association of $r = .20$, 95% CI [0.16, 0.23]). Although, this result supports the relationship between racial discrimination and psychological distress specifically among Black Americans, it does not provide specific information about the discrimination and depressive symptoms relationship.

Overall, there is compelling evidence that higher perceived racial discrimination is linked with higher depressive symptoms. The existing research also suggests that this relationship is likely to exist specifically for African Americans (Brody et al., 2006; Gibbons, Gerrard, Cleveland, Wills, & Brody, 2004; Kessler, Mickelson, & Williams, 1999).

Self-Esteem

Racial discrimination is a potential threat to the self-esteem of people of color (Crocker & Major, 1989; Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007). Scholars suggest that there

are various types of self-esteem (e.g., global vs. domain specific; Dutton & Brown, 1997). However, despite the differences in types of self-esteem, the underlying theme is that self-esteem refers to an individual's evaluation of self (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Furthermore, individuals strive to maintain higher self-esteem and defend themselves against threats to their self-esteem.

Compared to research examining the association between perceived racial discrimination with general psychological distress and depressive symptoms, fewer studies have assessed the relationship between discrimination and self-esteem. However, a few meta-analyses studying racial discrimination as a determinate of psychological well-being assessed self-esteem separately from other psychological outcomes. For instance, in one meta-analysis, the relationship between racial discrimination and self-esteem was estimated to be $r = -.12$, 95% CI [-.12, -.15] (Paradies et al., 2015). A similar relationship was found for adolescents ($r = -.17$, 95% CI [-.19, -.14]; Benner et al., 2018). Both results suggest that higher levels of perceived racial discrimination are associated with lower levels of self-esteem, although this relationship appears to be smaller than the relationship between perceived discrimination and depression.

These meta-analytic studies provide support for the significant link between perceived racial discrimination and poor psychological well-being among African Americans. Furthermore, the data suggest increased depressive symptoms and decreased self-esteem with higher perceived discrimination. In addition to psychological distress, the relationship between perceived discrimination and other outcomes for African Americans are also important to understand. One of those outcomes is academic achievement.

Racial Discrimination and Academic Outcomes

There is a long history of racial oppression and difficulties within the African American academic experience. For instance, before the landmark *Brown vs. the Board of Education* court case, schools across the nation were segregated by race (Gardner & Miranda, 2001). The segregated schooling system provided African American children with inferior quality education (e.g., outdated textbooks) and school capital (e.g., inadequately maintained school buildings; Dentler, 1991). Moreover, segregated education was cited for contributing to lowered self-esteem, feelings of inferiority, and lowered self-concept in African American children, which led to fewer job opportunities for them during adulthood (Irons, 1994).

Fifty-years after *Brown vs. the Board of Education*, there are still achievement gaps between African Americans and their racial/ethnic counterparts (Harris & Graham, 2014). Research shows that racial discrimination is associated with lowered student academic self-concept (Graham, 1994; Steele & Aronson, 1995), perceptions of limited occupational gains post-graduation (Mickelson, 1990; Ogbu, 1990), biased teacher attitudes/expectations (Beane, 1985; Seyfried, 1998), and hostile school racial climate (Cabrera, Nora & Terenzini, Pascarella and Hagedom, 1999; Nora & Cabrera, 1996).

In the first meta-analysis (including 73 studies) assessing the relationship between perceived racial discrimination and academics among adolescents, results showed a significant correlation between discrimination and academic outcomes, such as academic motivation, academic motivation, and school engagement ($r = -.10$, 95% CI [-.12, -.07]; Benner et al., 2018). This result suggests that greater perceived discrimination is related to poorer academic outcomes among adolescents. Post-hoc analyses revealed negative relationships for racial discrimination with achievement ($r = -.09$), school engagement ($r = -.14$), and academic motivation ($r = -.11$;



Benner et al., 2018). In other words, as perceived racial discrimination increased, adolescents reported lower academic achievement, school engagement, and academic motivation. Further analysis showed a significant relationship between perceived discrimination and overall academic performance for students of African descent ($r = -.04$, 95% CI [-.09, -.00]).

Educational Attainment

Although empirical research shows a statistically significant link between discrimination and some academic outcomes, little to no research has been conducted on the relationship between discrimination and educational attainment (i.e., the highest level of formal education completed). Higher educational attainment is positively correlated with higher employment rates and median income (Bureau of Labor Statistics, 2018; National Center for Education Statistics, NCES, 2019). According to an NCES (2019) study of educational attainment, in both 2010 and 2016, 25 percent of African American adults 25 years and older who had completed some college coursework, did not earn a degree. The study results also showed that, during 2016, only 21 percent of African Americans who were at least 25 years old earned a bachelor's degree or higher, compared to 35 percent of their White counterparts (NCES, 2019).

According to the research discussed above (Irons, 1994; Mickelson, 1990; Ogbu, 1990; Steele & Aronson, 1995), perceived racial discrimination is likely to be significantly associated with educational attainment. However, additional research is needed to understand this relationship among African Americans.

Moderators between Racial Discrimination and Well-being

Moderators are variables that influence the direction and/or strength of the association between a predictor and outcome variable (Baron & Kenny, 1986). Empirical literature shows that socio-demographic factors (e.g., sex, socioeconomic status; Clark et al., 1999; Williams &

Mohammed, 2013) are potential moderators of the relationship between racial discrimination and well-being. In addition, recent research suggests that ethnic-racial socialization may moderate this relationship (Brown and Tylka 2011; Granberg et al., 2012; Neblett et al., 2013).

Ethnic-Racial Socialization

Research indicates that racial discrimination may have profound and harmful effects on the psychological and academic well-being of African Americans (Benner et al., 2018; Paradies et al., 2015; Pieterse et al., 2012). However, African Americans employ a range of coping strategies to mitigate the adverse effects of discrimination (Boyd & Waanders, 2013; Sue & Sue, 2013). These strategies may be culture-specific (e.g., religion and spirituality; Belgrave & Allison, 2014) or general (e.g., social support; Belgrave & Allison, 2014). One culture-specific coping mechanism, ethnic-racial socialization (ERS) has been linked to lower levels of psychological distress and greater academic achievement (Hughes et al., 2006; Lesane-Brown, 2006; Reynolds & Gonzales-Backen, 2017), and therefore might be a particularly helpful buffering factor. The following sections will introduce ERS as a construct and review the research findings as they relate to psychological and academic outcomes.

Definition

Although there is no single definition of ERS, scholars have agreed that ERS is a complex, multidimensional process in which older generations provide verbal and non-verbal messages about ethnicity and race to younger generations (Hughes et al., 2006; Lesane-Brown, 2006; Priest et al., 2014; Reynolds & Gonzales-Backen, 2017; Saleem et al., 2016). Furthermore, these messages promote ethnic/racial-specific values, beliefs, and culture. Elders within racially marginalized communities use ERS to prepare their youth to navigate racial stressors within the dominant culture successfully (Belgrave & Allison, 2014; Lesane-Brown, 2006; Saleem et al.,

2016). Although there are several different ways in which ERS has been conceptualized in the literature, results suggest that the content of ERS messages fall into four primary categories: *cultural socialization, promotion of mistrust, preparation for bias, and egalitarianism* (Hughes et al., 2006; Lesane-Brown, 2006; Priest et al., 2014; Reynolds & Gonzales-Backen, 2017).

Message Content

Cultural Socialization is the aspect of ERS that teaches younger generations about their ethnic-racial history and culture, cultural traditions and practices, and promotes ethnic-racial pride (Hughes et al., 2006; Lesane-Brown, 2006; Priest et al., 2014; Reynolds & Gonzales-Backen, 2017). In contrast, Promotion of Mistrust emphasizes a need for caution and distrust of interracial interactions (Hughes et al., 2006; Priest et al., 2014; Saleem et al., 2016). To prepare their children, parents may warn youth of experiences of discrimination or potential racial barriers to success. This type of socialization message focuses on what can occur and often encourages mistrust of majority culture but does not provide active strategies for coping with discrimination (Hughes et al., 2006; Reynolds & Gonzales-Backen, 2017; Saleem et al., 2016). Similarly, the third category, Preparation for Bias, forewarns of the realities of experiencing racial discrimination (Hughes et al., 2006; Lesane-Brown, 2006; Reynolds & Gonzales-Backen, 2017; Saleem et al., 2016). However, in contrast to the Promotion of Mistrust, elders engaging in preparation for bias typically provide tools for coping with discrimination. Egalitarianism emphasizes commonalities among people and de-emphasizes ethnic-racial differences (Hughes et al., 2006; Lesane-Brown, 2006; Reynolds & Gonzales-Backen, 2017). Critics of egalitarianism cite its likelihood of actually promoting mainstream culture (i.e. White/European) over racial and ethnic minority cultures (e.g., African American; Hughes et al., 2006; Spencer, 1983; Boykin & Toms, 1985). Moreover, egalitarianism may encourage color-blind racial ideology (Neville,

Gallardo, & Sue, 2016), which harmfully minimizes and denies the influence of race (and skin color) on individuals' lived experiences.

Meta-Messages

The majority of ERS research has studied the previously described content types as discrete, but related messages (Granberg, et al., 2012). However, there is a movement within the literature to study ERS meta-messages, the combinations of ERS messages, which are more likely to reflect ERS as it occurs within families (Neblett et al., 2008; Granberg et al., 2012). Neblett et al. (2008) used cluster analytic procedures to identify ERS meta-messages using the ERS scale developed by Lesane-Brown and colleagues (2006), which includes six distinct types of racial socialization messages (i.e., racial pride, racial barriers, egalitarian, self-worth, negative, and behaviors; Lesane-Brown, Scottham, Nguyn, & Stellers, 2006), instead of four. A four-cluster model of ERS meta-messages emerged from the data analysis: *high positive, moderate-positive, low-frequency, and moderate-negative* (Neblett et al., 2008). The high-positive cluster was marked by higher scores, compared to the rest of the sample, on each subscale except the negative message subscale. Respondents in the moderate-positive cluster had scores near the sample mean for all six original subscales. In contrast, the low-frequency cluster showed low scores on all the subscales except for the negative and self-worth message subscales. Lastly, the moderate-negative cluster had the highest scores on the negative message subscale compared to the rest of the sample (Neblett et al., 2008).

Similarly, Granberg and colleagues (2012), assessed for ERS meta-messages by analyzing the four subscales of the Racial Socialization Scale (cultural education; discrimination warnings; promotion of mistrust; coping with discrimination; adapted from Hughes & Johnson, 2001). A five-cluster model emerged from their analysis, reflecting both the frequency and

content of the messages. The results and details of both articles will be discussed later in this section as they are pertinent to the present study.

In sum, ERS meta-messages are a new and developing aspect of empirical research. Meta-messages allow for better understanding ERS as it occurs within families and more specific examinations of the buffering effects of ERS on psychological distress and academics. The following sections will review the known literature on ERS concerning psychological and academic outcomes.

Ethnic-Racial Socialization and Psychological Outcomes

Scholars suggest that ERS should have a beneficial impact on psychological outcomes by buffering the adverse effects of race-related stress (Barnes, 1980; Fischer & Shaw, 1999; Hughes & Chen, 1999; Hughes et al., 2006). As previously discussed, race-related stress can have deleterious effects on the psychological health of African Americans (Pieterse et al., 2012). Therefore, exploring the potential buffering effects of ERS is pertinent to the wellbeing of African Americans. Hughes and colleagues (2006) argue that there is a lack of theoretical explanation for the relationship between ERS and youth outcomes. However, other scholars argue that the primary functions of ERS are to provide youth with the tools to recognize and cope with discrimination and develop a healthy sense of self (Barnes, 1980; Peters, 1985; Spencer, 1983). Therefore, ERS may be a type of adaptive coping response that is applied to alleviate the psychological distress caused by racial discrimination.

Depressive Symptoms

Despite its potential beneficial effects, research shows mixed results concerning the relationship between ERS and depressive symptoms among African Americans (Banerjee,

Rowley, & Johnson, 2015; Liu & Lau, 2013; Neblett, et al., 2013). In particular, the specific, discrete types of ERS messages appear to have differing effects on depressive symptoms.

In one of the first studies of ERS and psychological outcomes, the authors sought to investigate the link between adolescent reports of received ERS and psychological adjustment (i.e., depressive symptoms and anger expression; Stevenson, Reed, Bodinson, & Bishop, 1997). The cross-sectional study included 287 African American boys and girls (average age = 14.6 years) who were participants in an urban community-based job-support program. The adolescents completed surveys about the ethnic-racial socialization received from their caregivers and anger and depressive symptoms. Results showed that boys with high levels of global ERS scores reported greater levels of sad mood, instrumental helplessness, and low self-esteem (i.e., depressive symptoms) compared to girls with high levels of global ERS (Stevenson et al., 1997). In another study, Davis and Stevenson (2006) examined the relationship between ERS and depressive symptoms among 160 African American adolescents (Mean age = 15.4 years). Depressive symptoms included: low self-esteem, social introversion, lethargy, guilt, sad mood, irritability, instrumental helplessness, and overall depression. Results indicated that adolescents who received a greater frequency of egalitarian messages reported higher levels of depression (Davis & Stevenson, 2006). In contrast, adolescents who reported receiving both cultural coping and egalitarian messages, also reported lower levels of irritability.

The above results suggest that the specific message content and combination of ERS message content are essential in understanding the relationship between ERS and depressive symptoms. In addition, there is a gap in the empirical research focusing on the combination of messages or meta-messages African American families transmit to their youth. Moreover, the

effect of gender on the relationship between ERS meta-messages and depressive symptoms needs to be explored.

Self-Esteem

Similarly, there are mixed results regarding the link between ERS and self-esteem for African Americans (Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007; Hughes, Hagelskamp, Way, & Foust, 2009; Phinney & Chavira, 1995). For instance, Constantine and Blackmon (2002) assessed the ERS messages received, global self-esteem, and domain-specific self-esteem (i.e., home, school, and peers) among 115 Black, parochial middle school students (average age = 12.29 years). The authors found that ERS messages (globally) were a significant predictor of home, school, and peer-specific self-esteem (Constantine & Blackmon, 2002). Furthermore, one subcategory of ERS specific to this study, cultural pride reinforcement, was related to increased peer-specific self-esteem (Constantine & Blackmon, 2002). In contrast, a different subcategory, higher cultural endorsement of the mainstream, was linked with lower school self-esteem.

In another study, scholars focused on the experiences of 23 multi-racial, British teenagers (mean age = 14.78 years; Fatimilehin, 1999). The teens completed surveys about their racial identity, experiences of ERS within their families, and self-esteem. However, in contrast to the study previously discussed, the results of this study showed no significant correlation between ERS messages and self-esteem. Overall, there is a lack of research findings to develop conclusions about the relationship between discrete ERS messages and self-esteem. Furthermore, there is little to no research on the association between ERS meta-messages and self-esteem.

Ethnic-Racial Socialization and Academic Outcomes

As previously discussed, there is a complex history between discrimination and academic achievement for African Americans. Research suggests that ERS may buffer the harmful effects

of racial discrimination on academics. In an early study of ERS and academics, Bowman and Howard (1985) examined the experiences of 377 African American youth (age range = 14 to 24 years). Participants completed interviews surveying ERS messages received from family (e.g., awareness of racial barriers, necessity to excel/achieve/work hard, etc.) and school experiences. The authors found that individuals who had received racial-barrier awareness messages, highlighting racial inequalities and how to cope with them, earned higher academic grades (Bowman & Howard, 1985). Also, individuals who received self-development messages (which emphasized a need for personal excellence and character building) reported greater personal efficacy compared to individuals who did not receive similar ERS messages from their families.

Banerjee, Rivas-Drake, and Smalls-Glover (2017) conducted a study on the direct and indirect links between ERS and academic achievement among 226 African American college students (mean age = 20.05 years) attending a predominately White institution. Participants completed surveys about their experiences of ethnic-racial socialization (specifically cultural socialization and preparation for bias), academic engagement, and academic achievement. Path analyses showed a significant, positive direct link between cultural socialization and academic engagement, after adjusting for gender, age, high school grade point average (GPA), and household income (Banerjee et al., 2017). Individuals who received more cultural socialization messages from family reported greater academic engagement in college. In contrast, there was no significant direct link between cultural socialization and college GPA. However, there was an indirect relationship between cultural socialization and college GPA through academic engagement in college (Banerjee et al., 2017). Furthermore, results indicated a significant direct and negative association between preparation for bias messages and college GPA. In other words, individuals who reported higher levels of preparation for bias messages reported

significantly lower GPAs. However, there was not a significant relationship from preparation for bias to academic engagement or an indirect link to GPA through academic engagement (Banerjee et al., 2017). This is one of the few studies that investigated ERS and academics.

However, there is research that explores constructs that may be similar to ERS. In a study of 115 male African American students, researchers assessed the relationship of identity variables to academic achievement (Irving & Hudley, 2008). Participants were 11th and 12th-grade students at an urban high school in Southern California. They completed measures about their mistrust of the dominant culture, personal expectations and values of academic achievement, ethnic identity, and oppositional cultural attitudes and values related to achievement motivation. Results indicated significant main effects for mistrust of the dominant culture, oppositional cultural attitudes and academic outcome values in predicting academic outcome expectations (Irving & Hudley, 2008). Higher cultural mistrust and oppositional attitudes predicted lower academic outcome expectations. However, higher academic outcome values predicted higher academic outcome expectations.

Furthermore, mistrust of the dominant culture was a significant and negative predictor of academic GPA, indicating that greater mistrust predicts significantly lower GPAs. Moreover, there was a significant interaction between mistrust and socioeconomic status (SES; Irving & Hudley, 2008). For individuals with higher SES, cultural mistrust showed a stronger negative impact on GPA; however, there was no significant effect of mistrust on GPA for individuals with lower SES.

Educational Attainment

There is a lack of research on the association between perceived racial discrimination and educational attainment. Educational attainment has implications for an individual's occupation

and financial status (Bureau of Labor Statistics, 2018). However, despite the lack of research, scientific literature provides theoretical support for a significant relationship between ERS and educational attainment.

For instance, Jeynes (2015) conducted a meta-analysis of the factors that may best reduce the achievement gap between White, Black, and Latino students. The analysis included 30 studies of approximately 1 million students and found a significant effect of family factors in the reduction of the achievement gap. Family factors included family cohesion (Brody, Stoneman, & Flor, 1996) and parental involvement (McNeal, 1999). In particular, parental involvement includes parent-child discussions about education, which may include the importance of education, the ability to succeed in academic realms, and potential barriers to success. These results are in line with Harrell's (2000) racism-related stress model, in which familial and social socialization influences an individual's concept of racial discrimination (which may occur in educational settings) and healthy coping strategies. Therefore, evaluating the transmission of ERS messages to youth may be crucial to understanding the impact of racial discrimination on educational attainment.

Ethnic-Racial Socialization as a Buffer

Given the research findings that link perceived discrimination and ERS to depressive symptoms and self-esteem, ERS may be an essential coping mechanism for dealing with racial discrimination. In fact, initial evidence supports the buffering effects of ERS on the relationship between racial discrimination and psychological resilience (Brown & Tylka, 2011); which is the ability to cope successfully with the risk of and exposure to negative life events (Fergus & Zimmerman, 2005). Specifically, 290 African American college students provided information about their experiences of racial discrimination, psychological resilience, and racial socialization.

ERS significantly moderated the relationship between discrimination and resilience. At high levels of racial discrimination, participants who reported higher ERS also reported significantly higher resilience scores compared to individuals who reported lower ERS (Brown & Tylka, 2011). The authors further analyzed the results by examining specific ERS messages: cultural coping with antagonism, cultural appreciation of legacy, and cultural pride reinforcement. From these analyses, it appears that cultural appreciation of legacy was the primary ERS category that significantly buffered the link between discrimination and resilience (Brown & Tylka, 2011).

Research results also support ERS as a potential moderator for the link between perceived discrimination and depressive symptoms. Moreover, researchers have investigated the effects of ERS meta-messages (i.e., the combination of specific ERS messages) as a moderator variable. In particular, it is predicted that specific meta-messages will be more predictive of outcome variables and serve as a buffer against the adverse effects of racial discrimination compared to other meta-messages.

Depressive Symptoms

Neblett and authors (2008) sought to longitudinally test: a) racial discrimination as a risk factor for psychological adjustment (e.g., depressive symptoms, psychological distress) and b) ERS meta-messages as a protective buffer against racial discrimination among African American adolescents ($N = 361$). Greater racial discrimination (at Time 2) predicted greater depressive symptoms (also at Time 2). Moreover, ERS meta-messages were related to less depressive symptoms. However, there was no significant interaction between ERS meta-messages and racial discrimination, which suggests that ethnic-racial socialization did not buffer the effects of discrimination on depressive symptoms (Neblett et al., 2008).

Despite this, individuals in the high positive group (i.e., those high on all positive ERS messages) reported the lowest levels of depressive symptoms of all the meta-message groups. Furthermore, the moderate negative (i.e., high scores on negative messages and low scores on racial pride and self-worth) and low frequency (i.e., low scores on all the ERS messages except self-worth and negative messages) meta-message groups reported significantly higher depressive symptoms compared to the high positive group (Neblett et al., 2008). There was no significant difference in depressive symptoms between the high positive and moderate positive groups.

A second study also examined the relationships between racial discrimination, ERS, and depression among 714 African American youth. Granberg and colleagues (2012) conducted a latent profile analysis (LPA) and found a five-class model of ERS meta-messages. Three of the meta-messages were primarily quantitative distinctions, reflecting the frequency of ERS messages reported (i.e., *low-frequency*, *moderate-frequency*, and *very high-frequency*). The remaining two meta-messages were categorized as more qualitative, as they reflected frequency differences in the content of the messages (Granberg et al., 2012). Both meta-messages had similar (high) levels of cultural-socialization, preparation for discrimination, and coping with discrimination. However, they differed regarding promotion of mistrust; the authors termed the one higher in promotion of mistrust as *guarded* and the one lower in levels of mistrust as *empowered*.

The authors conducted a multivariate, ordinary least squares regression to test for significant predictors of depression during young adulthood. For Step 1, they examined the ERS meta-messages as predictors. Results showed that individuals with guarded ERS reported significantly higher depressive symptoms than those in the reference group (i.e., moderate-frequency ERS; Granberg et al., 2012). For Step 2, the researchers added racial discrimination as

a predictor. Racial discrimination was a statistically significant predictor of depressive symptoms; such that higher perceived discrimination predicted higher depressive symptoms. Also, guarded ERS continued to significantly predict depressive symptomatology. In Step 3, parenting quality, family class status, and sex were added as covariates to the model. Lower levels of parenting quality and being a female significantly predicted higher depressive symptoms. Both guarded ERS and racial discrimination remained significant predictors.

For Step 4, Granberg et al. (2012) tested ERS meta-messages as a buffer against later depressive symptoms. Therefore, the interaction terms: discrimination x low-frequency ERS; discrimination x guarded ERS; discrimination x empowered ERS; and discrimination x high-frequency ERS were added to the model. Results showed that only the interaction between discrimination and empowered ERS was significant (Granberg et al., 2012). A post-hoc analysis revealed that empowered ERS partially buffered depressive symptoms. At lower levels of discrimination, youth receiving moderate-frequency ERS (the reference group) and those receiving empowered ERS showed similar levels of depression. However, as racial discrimination increased, those with empowered ERS had significantly lower levels of depression than those with moderate ERS. The previously significant predictor variables maintained their statistical significance, including racial discrimination.

Lastly, for Step 5, the authors controlled for previous depressive symptoms by adding depressive symptoms at Time 1 to the model. Time 1 depressive symptoms were found to be a significant predictor of depression. Additionally, guarded ERS, racial discrimination, female sex, and empowered ERS remained significant predictors. However, parenting quality was not found to be a significant predictor.

In short, Granberg and scholars (2012) found that racial discrimination and a guarded ERS significantly positively predicted depressive symptoms during young adulthood. Furthermore, an empowered racial socialization (a combination of warnings about discrimination and strategies for coping with discrimination) partially buffered the impact of perceived racial discrimination. Youth who experienced high levels of discrimination and had high levels of empowered racial socialization were less depressed than those who received low levels of empowered socialization.

However, there are a few analytic shortcomings in the Granberg study. Granberg and colleagues conducted a principle components analysis (PCA) of all the ERS scale items, which resulted in only three factors, rather than the four factors identified by the authors. Instead of using the three-factor solution, they included the four subscales of the ERS in a LPA to determine ERS class membership. They cited theoretical reasons for including four factors, reflecting the fours ERS subscales (i.e., cultural education, promotion of mistrust, preparation for bias, and coping with discrimination). The subsequent LPA resulted in five clusters but at least one of the groups had significantly fewer participants compared to other groups. Therefore, it is uncertain whether this five-cluster model is the most appropriate fit for the data.

Self-Esteem

A study by Harris-Britt and authors (2007) examined ERS as a moderator in a sample of 128 eight-grade African American students (mean age = 13.9 years). Participants were administered questionnaires about racial socialization (i.e., racial pride and preparation of bias messages), self-esteem, and experiences of perceived racial discrimination (in intuitional, educational, and peer settings). The authors conducted two stepwise regression analyses (one with racial pride as a predictor and one with preparation of bias as a predictor) to investigate

adolescent self-esteem (Harris-Britt et al., 2007). Step 1 for each regression included the participants' age and gender, household income, and parental marital status and highest level of education. For Step 2, the racial socialization message being examined, and an interaction term of the socialization message and perceived discrimination were added to the model. Lastly, in Step 3, the quadratic term for the socialization message and an interaction term created from the product of the quadratic term for the socialization and discrimination were included. The inclusion of this quadratic term allowed the authors to assess for a curvilinear effect of ERS on the link between discrimination and self-esteem.

There were main effects for racial pride and the interaction between racial pride and discrimination, which was attributed to the interaction between the quadratic term for racial pride and perceived discrimination. Post hoc analyses show that racial pride messages buffered against the link between discrimination and self-esteem for adolescents who reported higher levels of racial pride compared to lower levels of racial pride (Harris-Britt et al., 2007).

There was a significant effect for the interaction between the preparation for bias and discrimination, which was due to the significant interaction between the squared term for preparation for bias and perceived racial discrimination (Harris-Britt et al., 2007). A follow-up analysis revealed a curvilinear interaction between perceived racial discrimination and preparation of bias on self-esteem as an outcome. The inverse relationship between discrimination and adolescent self-esteem was mitigated for youth that reported low and high levels of preparation for bias (Harris-Britt et al., 2007).

Academics

Researchers have also sought to understand the associations between experiences of perceived racial discrimination, racial socialization, and academic outcomes. In a study of 144

African American adolescent boys (mean age = 13.79 years; grades 7 to 11), researchers sought to investigate ERS meta-messages as a buffer against the link between perceived racial discrimination and academic outcomes (i.e., curiosity, persistence, and performance; Neblett, Chavous, Nguyêñ, & Sellers, 2009) across two waves of a longitudinal study. Academic curiosity refers to a student's interest in academics and learning and academic persistence relates to a student's perseverance to engage in educational studies despite any difficulties they may have encountered (Neblett, et al., 2009). Academic achievement was operationalized by assessing students' cumulative grade point averages (GPAs).

To determine ERS meta-message groups, Neblett and colleagues (2009) conducted a latent class analysis (LCA) of the six Racial Socialization Questionnaire-Teen subscales (i.e., racial pride, racial barriers, egalitarian, self-worth, negative, and behaviors; Lesane-Brown, et al., 2006) at Time 1. Model fit statistics suggest a four-class model solution for the LCA (i.e., *positive socialization, moderate negative, self-worth, and low-frequency*). Compared to the other three classes, individuals in the *positive socialization* group had means scores approximately one standard deviation above the sample mean for all of the message subscales, except for negative messages (Neblett, et al., 2009). This group showed higher scores on racial pride, self-worth, and racial barriers, moderate scores on the egalitarian and socialization behavior, and low scores on the negative messages. In contrast, the *moderate negative* class had scores similar to the sample mean for each subscale, except the self-worth and negative subscales. Similarly, the *self-worth* class had scores near the sample mean for the majority of the subscales, but showed higher relative scores on self-worth, and fewer racial socialization behaviors (Neblett, et al., 2009). And lastly, individuals in the *low-frequency* group had scores one to two standard deviations below

the sample mean on the socialization subscales, except for negative messages compared to the other socialization classes.

The authors conducted three analyses of variance (ANOVAs) to examine the relationships between discrimination, latent class membership, and academic outcomes at Time 2 (Neblett, et al., 2009). For each ANOVA, the participant's age and parent's highest level of education were included in the model as covariates. Perceived discrimination, which occurred the year prior to Time 2 data collection, and latent class membership were included in the models as main effect variables. The results showed that previous racial discrimination was not significantly related to academic persistence or curiosity (Neblett, et al., 2009). However, there was a marginal main effect for perceived discrimination on academic performance, $F(1, 100) = 3.45, p = .05$. Follow-up analysis showed that when controlling for the covariates, youth reporting higher levels of perceived racial discrimination had lower GPAs ($\beta = -.42$).

The next set of ANOVAs conducted by Neblett and colleagues (2009) analyzed the statistical relationships between the ERS-classes and academic achievement (i.e., academic persistence and performance). For academic persistence, the generalized linear model (GLM) explained 15% of the variance (Neblett, et al., 2009). There was a significant main effect for latent class membership, $F(3, 125) = 3.25, p < .05$; partial eta-squared = .07. Post-hoc analyses indicated that individuals in the Self-Worth Group reported significantly higher levels of academic persistence than the adolescents in the Moderate Negative and Low Frequency Groups (Neblett, et al., 2009). Furthermore, participants in the Positive Socialization Group had a statistically significant higher mean score for academic persistence compared to the Moderate Negative Group.

For academic performance, the GLM explained 28% of the variance (Neblett, et al., 2009). Group membership approached significance as a main effect for academic grade performance, $F(3, 101) = 2.30, p = .05$; partial eta-squared = .07. Further analyses found adolescents in the Self-Worth Group had a significantly higher grades compared to those in the Positive Socialization Group. In addition, parent's educational attainment was a significant main effect on achievement, which indicated that individuals with parents who completed higher levels of education also reported higher grade point averages, ($\beta = .20, p < .001$; partial eta-squared = .14). None of the discrimination- socialization interaction terms were found to be significant.

In an earlier study, Neblett and colleagues (2006) investigated discrete racial socialization messages as a moderator on the relationship between discrimination and academic outcomes. The study sample included 548 African American students in grades 7 through 10 (41.1% male). Participants were administered questionnaires about racial socialization and perceived racial discrimination, academic curiosity, academic persistence, and academic performance (i.e., GPA).

A total of three ordinary least squares (OLS) regressions were used to examine significant predictors of the academic outcomes (i.e., one for each outcome variable; Neblett et al., 2006). For each regression participant sex, current grade school level, and parental educational attainment were included in the model as covariates. The six-discrete socialization subscales (Racial Socialization Questionnaire-Teen; Lesane-Brown, et al., 2006) and discrimination by socialization interaction terms were included in the OLS model as main effect variables (Neblett et al., 2006).

For academic curiosity, the model explained 8% of the variance in the outcome. Results showed discrimination ($\beta = -.16$), racial pride ($\beta = -.15$), negative ($\beta = -.12$), self-worth ($\beta = .16$),

and egalitarian messages ($\beta = .12$), and socialization behaviors ($\beta = .15$) as significant main effects (Neblett et al., 2006). This suggests that higher perceived discrimination, racial pride, and negative message are related to lower levels of academic curiosity. In contrast, adolescents who reported higher levels of self-worth, egalitarian messages, and socialization behaviors, reported higher academic curiosity. However, results indicated no statistically significant main effect for racial barrier messages on academic curiosity (Neblett et al., 2006). None of the interaction terms were significant main effects.

The second regression was conducted to assess academic persistence as an outcome. This model accounted for 10% of the outcome variance (Neblett et al., 2006). Discrimination ($\beta = -.19$), negative ($\beta = -.14$), self-worth ($\beta = .14$), and racial socialization behaviors ($\beta = .19$) were significantly related to academic persistence. Higher levels of racial discrimination and negative messages were related to lower academic persistence. However, higher levels of self-worth messages and racial socialization behaviors were linked with higher persistence. The covariates and racial barrier, egalitarian, and racial prides messages were not significant predictors of persistence. Again, none of the discrimination-socialization interaction terms were statistically significant (Neblett et al., 2006).

The final regression assessed the predictors variables with academic performance (GPA) as an outcome variable. The overall model accounted for 10% of the variance (Neblett et al., 2006). The following were found to be significant main effect variables in the model: parental highest level of education ($\beta = .25$), perceived racial discrimination ($\beta = -.09$), racial pride messages ($\beta = -.19$), and racial socialization behaviors ($\beta = .20$). These results indicate that individuals who reported higher levels of discrimination and racial pride messages, reported lower GPAs. However, adolescents whose parents completed higher levels of education and

reported higher levels of racial socialization behaviors experienced higher GPAs. There were no significant relationships between academic performance and participant sex, current grade in school, and racial barrier, egalitarian, self-worth, and negative socialization messages (Neblett et al., 2006). Consistent with the previous regression analyses for academic curiosity and persistence, none of the interaction terms were found to be statistically significant.

In sum, these two studies support there being significant associations between perceived discrimination and racial socialization (meta-messages and discrete subscales). However, the results about ERS as a moderator variable on the discrimination-academic outcome link, is inconclusive. Furthermore, the previous studies did not examine educational attainment. However, academic higher curiosity, persistence, and achievement are likely significantly related to higher educational attainment. Therefore, research to clarify the relationships between discrimination, ERS, and educational attainment is crucial. Additionally, a longitudinal perspective of these relations would be enlightening.

Gaps in the Literature

Racial discrimination is related to poorer psychological well-being among African Americans. In addition, ERS may be an important mechanism to mitigate the harmful impacts of perceived discrimination. However, there are still gaps within the scientific literature about the effects of racial discrimination during adolescence and the development of psychological distress during early adulthood. First, we do not know the buffering effects of ERS against psychological distress from a longitudinal standpoint. In past research on the buffering effects of ERS meta-messages, researchers have argued that the experiences of perceived discrimination affect psychological well-being immediately as well as over time (Granberg et al., 2012; Neblett et al., 2008). In such cases, the researchers used an instantaneous effect model, in which the predictor

and outcome variables were measured at the same time point. However, the more stringent test of the effect of perceived racial discrimination on outcomes is over time; specifically, does earlier perceived discrimination predict later outcomes (e.g., depression) and if so, does ERS buffer that effect? Families transmit ERS messages to prepare their youth to navigate life as an ethnic-racial minority (Barnes, 1980; Peters, 1985; Spencer, 1983). Families share these lessons with the hope that they will be beneficial for present and future experiences. Investigating whether ERS buffers the relationship between perceived discrimination and important psychological and educational outcomes over time is an important next step.

Second, we do not have a clear picture of the effects of racial discrimination on academic outcomes among African Americans. Given the history of limits and barriers to fair and appropriate education for African Americans, understanding the role of discrimination on educational attainment is crucial. Third, although ERS may prove to be a meaningful buffer for the relation between discrimination and academic outcomes, this has not been empirically established. Therefore, the proposed study will investigate ERS as a buffer to the relationship between racial discrimination and depressive symptoms, self-esteem, and academic outcomes.

The Present Study: Research Questions and Hypotheses

The purpose of this study was to examine the relationship between perceived racial discrimination (experienced at approximately 21 years) and depressive symptoms, self-esteem, and educational attainment among African American youth over time. Previous literature suggests that African American families engage ERS to prepare their youth for the experiences of navigating life as an ethnic/racial minority in the United States (Barnes, 1980; Peters, 1985; Spencer, 1983). Therefore, I sought to explore ethnic-racial socialization received during late adolescence (between the ages of 15 to 18 years old) as a buffer against the effect of perceived

racial discrimination on psychological outcomes and educational attainment over the course of adolescence through early adulthood (between the ages of 23 to 28 years old). For clarity, Figure 1 shows the variables included in the present study grouped by data collection wave.

Analyzing Ethnic-Racial Socialization Meta-Messages

The first goal of this study was to reinvestigate ERS meta-message content in a longitudinal sample of African American young adults. To achieve this goal, I revisited Granberg et al.'s (2012) latent profile analysis (LPA) of ERS messages among African American youth, using the same dataset that they used, the Family and Community Health Study (Cutrona, Russell, Hessling, Brown, & Murry, 2000). In the present study, I addressed the following questions:

1. What ERS profiles (i.e., meta-messages) emerge from separate LPAs of the Wave 3 and Wave 4 ERS messages (Figure 2)?
 - a. Is a five-class model (like the one found in Granberg et al., 2012) the best fit for the data?
2. Do participants remain in the same ERS meta-message groups between Wave 3 and Wave 4?

Ethnic-Racial Socialization Meta-Messages as Moderators

The second goal of this study was to assess whether the ERS meta-message groups, determined via LPA, moderate the perceived discrimination-outcome link (Figures 3 and 4). Therefore, I tested the relationship between perceived discrimination measured at Wave 5 and outcome variables measured at Wave 6 and Wave 7, respectively. I predicted that:

1. Higher discrimination (at Wave 5) would be significantly and positively related to depressive symptoms at Wave 6 and Wave 7. In contrast, higher perceived racial

discrimination would be significantly and inversely related to self-esteem and educational attainment at both time points.

2. For people who are in ERS meta-message classes that are lower in promotion of mistrust, perceived discrimination will not be related to the outcome variables at either time point.

For people who are in ERS meta-message classes that are higher in cultural education, perceived discrimination will also not be related to the outcome variables at either time point.

Tables and Figures

Table 1. *Summary of Racism-Related Stress and Well-Being: Domains and Selected Variables*

Domains	Variables
Antecedent variables	Person factors (e.g., demographics) Socioenvironmental factors (e.g., socioeconomic status)
Familial & socialization influences	Family characteristics & dynamics (e.g., family social dynamics) Racial socialization (e.g., cultural values)
Sources of stress	Racism-related stress (e.g., microaggressions) Other status (i.e. social identity)-related stress (e.g., sexism) Generic stressors (e.g., role conflicts)
Internal & external mediator variables	Internal characteristics (e.g., cognitive attributions) Sociocultural variables (e.g., worldview) Affective and behavioral responses to stress (e.g., active vs. passive coping) External resources (e.g., social support)
Outcome variables	Physical (e.g., hypertension) Psychological (e.g., depressive symptoms) Social (e.g., social trust) Functional (e.g., academic achievement) Spiritual (e.g., sense of meaninglessness)

Notes. Adapted from “A Multidimensional Conceptualization of Racism-Related Stress: Implications for the Well-Being of People of Color,” S.P. Harrell, 200, *American Journal of Orthopsychiatry*, 70(1), 42-57. Copyright 2000 by the Global Alliance for Behavioral Health and Social Justice. Adapted with permission.

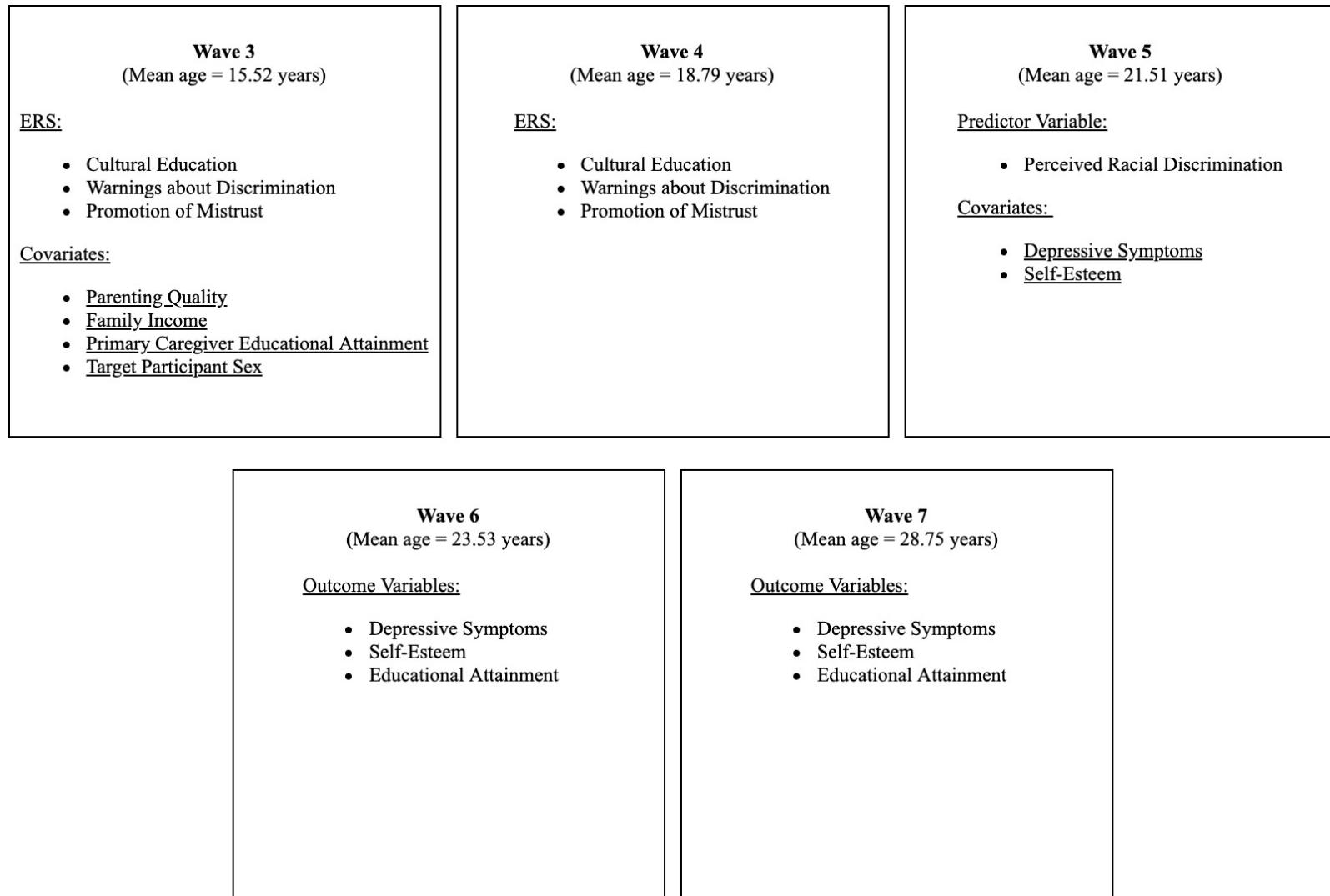


Figure 1. Study Variables Grouped by Wave

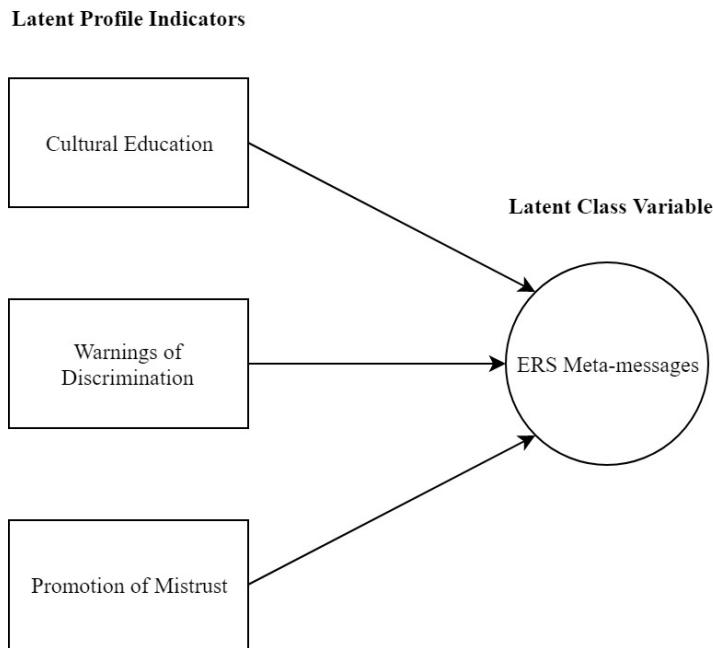


Figure 2. Hypothesized latent profile analysis model.

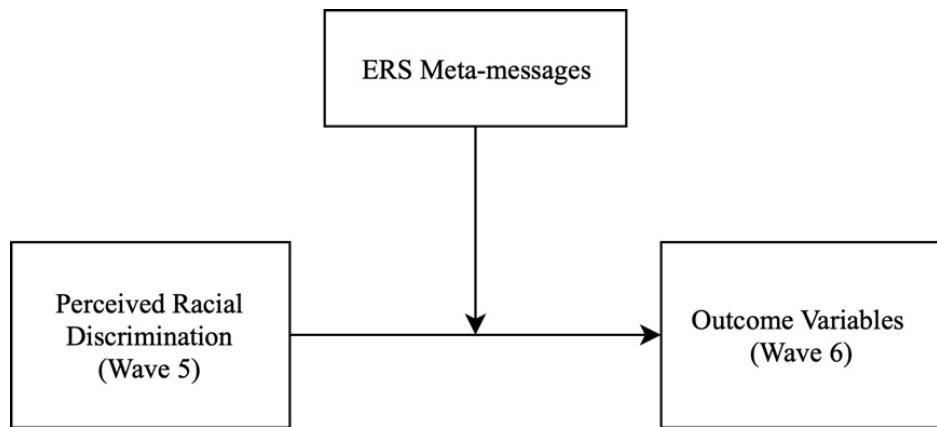


Figure 3. Hypothesized moderation model for Empowered ERS moderating the relationship between perceived discrimination and outcome variables.

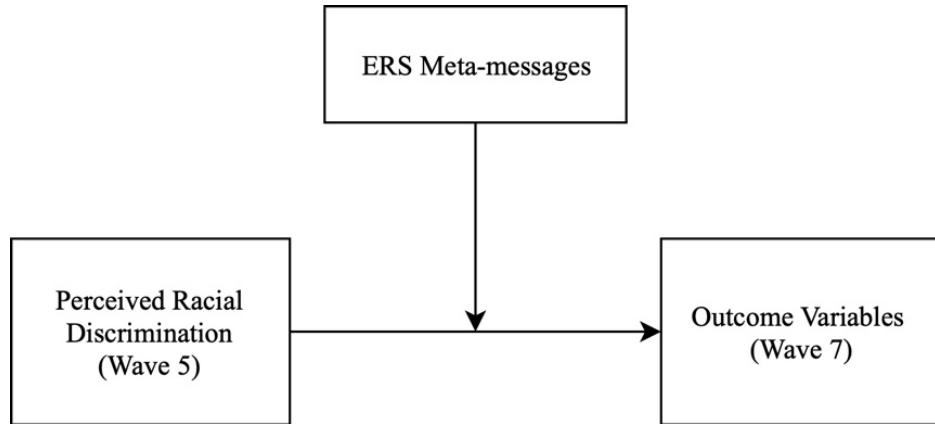


Figure 4. Hypothesized moderation model for Empowered ERS moderating the relationship between perceived discrimination and outcome variables.

CHAPTER 3. METHOD

Participants

The present study utilized data from the Family and Community Health Study (FACHS) to examine the proposed models (see Figures 1- 3). FACHS is a multisite, longitudinal study of African American families examining resiliency and vulnerability in African American children (Cutrona et al., 2000). The complete sample consists of 889 families from Iowa ($N = 467$) and Georgia ($N = 422$), in which the primary caregiver (the adult living in the household who is primarily responsible for the child's care) had an African American target child between the ages of 10 to 12 years old in 1997 (Wave 1). Subsequent data collection for waves 2 through 7 occurred every two to three years. To be included in the present study, participants (i.e., target children) had to complete the interviews for Wave 3 (mean age = 15.42 years, $SD = .86$) through Wave 7 (mean age = 28.75 years, $SD = .85$). See Table 2 for descriptive statistic for target participants' age at each Wave of data collection included in the present study.

The initial data set included 889 target participants; for simplicity, 62 cases were excluded because they had more than one primary caregiver. An additional 200 were excluded because they were missing data for the ERS subscales. Therefore, data analysis included a total of 627 target participants. At Wave 3, three-hundred twenty-two participants (51.4%) identified as female and 237 (37.8%) participants identified as male; 68 (10.8%) participants did not indicate sex. See Table 3 for the descriptive statistics for the study variables at each Wave of data collection included in data analysis.

Procedures

Sampling Strategy

A goal of the FACHS study was to recruit families from neighborhoods of diverse economic backgrounds (i.e., including families with children above and below the poverty line; Cutrona et al., 2000). Participants were sampled from U.S. Census Block Group Areas (BGAs), which are clusters of blocks within a census tract. Based on the 1990 U.S. census data, BGAs were identified in both Iowa and Georgia, where: 1) there was a large enough proportion of African Americans to ensure recruitment feasibility (10% or higher) and 2) the proportion of the African American families with children above and below the poverty line varied.

The recruitment strategies differed between Iowa and Georgia. In Iowa, the following locations were identified with BGAs that met the criteria for percent of African American residents: Waterloo, with a population of 65,000, and Des Moines, with a population of 193,000. Families with African American children between the ages of 10 and 12 years old were identified through the local public-school system and randomly selected to participate in the study. A modest percentage (3%) of African American children sampled attended private schools in Iowa at this time. Therefore, this recruitment strategy should not lead to significant sampling bias in the Iowa sample.

For recruitment in Georgia, BGAs in northeast Georgia, excluding inner-city Atlanta that met the racial and economic composition criteria were selected. Each BGA had community members who agreed to act as liaisons between the community residents and the University of Georgia researchers. The liaisons utilized their knowledge and information from community resources (i.e., community organizations, teachers, clergy members,

parents, and youth groups) to compile rosters of children within each BGA who met the sampling criteria. Families were then randomly selected from these rosters and contacted to determine their interest in participating in the research project. Families who declined participation were removed from the rosters and other families were randomly selected until the required number of families from each BGA had been recruited.

Across census tracts, the recruitment of eligible families ranged from 61% to 68% and did not vary significantly by location (Iowa vs. Georgia).

Interview Procedure

Participants completed a range of questionnaires for the FACHS study. However, the current study included measures related to perceived racial discrimination, racial socialization, depression, educational attainment, self-esteem, parenting quality, and family social class.

Interviewers were African American, and the majority lived in or near the communities where the study was conducted. Interviews were conducted in participants' homes or, if preferred, in a convenient location near the families' home (e.g., library, school, church). Interview questions were administered via computer-assisted personal interviews (CAPI). Interview questions appeared in order on the computer screen and were read aloud to the participant, who could also view the screen. Interviewers entered responses into the computer immediately following each question.

Measures

Depressive Symptoms

To assess depressive symptoms, targets were administered a depressive symptom count. The symptoms count was drawn from the University of Michigan Composite

International Diagnostic Interview (UM-CIDI; Kessler, 1994). Participants were asked to respond “yes” or “no” to each item on the scale. An example item states: “In the past year, was there ever a two-week period when you woke up at least two hours before you wanted to?” For Wave 5 and Wave 6, the depressive symptoms scale included 16 items. However, for Wave 7, the measure only included 9 items. For the current study, the scale had a reliability coefficient of .86, .89, and .86 for Wave 5, Wave 6, and Wave 7, respectively. In a previous study, the Cronbach’s alpha for this scale was .68 (Schwab et al., 1993).

Self-Esteem

Participants completed a modified version of the Rosenberg (1965) Self-Esteem scale to assess the targets’ level of self-esteem. The scale provided to FACHS participants maintained all 10 items that inquire about an individual’s positive and negative feelings about the self. However, compared to the original scale, the modified measure items were listed in a different order. For instance, the item “On the whole, I am satisfied with myself.” appeared first in the original scale but was listed seventh in the modified scale. In addition, for the modified scale participants rated the extent to which they agreed to each statement on a Likert scale from 1 (*strongly agree*) to 5 (*strongly disagree*). However, for the original scale, participants rated each item on a 4-point Likert scale (1 = *strongly agree*; 4 = *strongly disagree*). Donnellan and colleagues (2016) obtained a Cronbach alpha coefficient of .88 for this scale with their sample (Donnellan, Ackerman, & Brecheen, 2016). For this study there was an internal consistency of .78 for Wave 5, .81 for Wave 6, and .77 for Wave 7.

Educational Attainment

To measure educational attainment, targets reported their highest level of education completed. Participant responses were represented on a scale of 1 (*first grade*) to 17 (*graduate training or more*).

Ethnic-Racial Socialization

Participants were administered an adapted version of the Racial Socialization Scale (Hughes & Johnson, 2001) to measure the extent to which participants' families provided racial socialization within the past year. The scale was comprised 15 items across four scales. The cultural education subscale was made up of five items that inquire about familial activities promoting African American history and culture. For instance, "How often within the past year have adults in your family taken you to places that reflect your racial heritage?" The six-item discrimination warning subscale assessed messages from the respondent's family about the likelihood of experiencing racial discrimination. For example, "How often within the past year have adults in your family indicated that you will have to be better than other people your age to get the same rewards because of your race?" The promotion of mistrust subscale included four items about whether family members warned respondents to be wary of inter-racial interactions. An example item asks: "How often within the past year have adults in your family told you to be careful around people your age or adults of a certain race or ethnicity?" Participants used a 5-point scale to indicate the frequency with which each event occurred during the past year (*1 = never; 5 = 10 or more times*). The Cronbach alpha for the cultural education subscale was .84 and .85 for Wave 3 and Wave 4, respectively. The warnings about discrimination subscale had an internal reliability of .87 for Wave 3 and .91 for Wave 4. Lastly, the promotion of mistrust subscale had a reliability of .77 for Wave 3 and .82

for Wave 4. Hughes and Johnson (2001) reported a Cronbach alpha of .86 for cultural education, .81 for warnings of discrimination, and .73 for promotion of mistrust.

Perceived Racial Discrimination

To measure participants' perceptions of racial discrimination, they were administered a 13-item scale adapted from the Schedule of Racist Events (Landrine & Klonoff, 1996). Participants rated each item on a scale of 1 (*never*) to 4 (*frequently*). For example, "How often has someone ignored you or excluded you from some activity just because you are African American?" For the present study, target responses from Wave 5 were used, when the target participants were a mean age of 21.51 years old. The Cronbach's alpha coefficient was .94 for a previous study (Klonoff & Landrine, 1999). In this study, internal consistency was .90.

Demographics

Demographic information including the participants' age, gender, location (Iowa or Georgia), and racial/ethnic identity was collected at baseline and each subsequent data collection point. In addition, primary caregiver demographic information (i.e., age, ethnicity, income, and education) was included for each target participant included in data analysis.

CHAPTER 4. RESULTS

Preliminary Analyses

Descriptive statistics were conducted for the study variables. The results are displayed in Table 3. I conducted a series of independent-samples t-tests to determine whether there were significant differences in the study variables between participants included in the present study and those excluded (i.e., participants who did not complete the ERS measures for both Waves 3 and 4). There were no statically significant mean differences between the two groups for the ERS scales (Wave 3 and Wave 4), depressive symptoms (Wave 6 and Wave 7), self-esteem (Wave 6 and Wave 7), parenting quality, or family income.

However, there was a significant mean difference between the groups for perceived racial discrimination, $t(93.59) = -2.02, p = .05$. Participants excluded from the study ($M = 1.78, SD = 0.53$) reported higher levels of perceived discrimination than those included ($M = 1.63, SD = 0.64$). Participants included in the data analyses reported significantly higher educational attainment at Wave 6, $t(648) = 3.55, p < .001, M = 13.05, SD = 1.74$, compared to those who were excluded from the study ($M = 12.35, SD = 1.5$). There was a marginal difference, $t(515) = 1.89, p = .06$, between target participants' level of education at Wave 7. Participants included in the present study reported an average level of education of $13.33, SD = 1.81$, and participants excluded reported an average level of $12.87, SD = 1.58$. There was a significant difference in the mean level of educational attainment for the primary caregivers, $t(635) = 2.05, p = .04$. Primary caregivers of participants included reported higher educational attainment ($M = 12.90, SD = 2.40$) than primary caregivers of participants excluded ($M = 12.30, SD = 1.65$) from the present study.

I conducted a chi-square test of independence to examine the relation between target participants sex and inclusion in the present study. The relation between these variables was significant, $X^2 (1, N = 710) = 8.46, p = .004$. Male participants were more likely than female participants to be excluded from the study.

Power Analysis

I conducted a power analysis using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) to determine the sample size needed to detect a small effect ($f^2 = .02$) of the interaction term between perceived discrimination and ERS meta-messages in the regression models detailed below with alpha = .05 and power = .80. Given these parameters, 395 participants would be needed to detect a small effect. The present study has a sample size of 627, which exceeds the minimum number of participants needed to detect a small effect.

Latent Profile Analysis (ERS Profiles)

The first goal of this study was to investigate ERS patterns for Wave 3 and Wave 4 using latent profile analysis (LPA). LPA is a statistical analysis that allows researchers to examine an unobserved (latent) construct based on respondents' observed response patterns (Berlin, Williams, & Parra, 2013; Denson & Ing, 2014). Using LPA, researchers can classify respondents into subgroups or latent classes of individuals who score similarly on a latent construct (Bartholomew 1987; Collins and Lanza 2010; Heinen 1996; Muthén 1992, 2001; Berlin et al., 2013; Denson & Ing, 2014). Each subgroup has different characteristics (e.g., mean scores on measure subscales) compared to other latent classes. Once latent classes are determined, researchers can investigate the relationship of group membership to covariate or outcome variables of interest (Berlin et al., 2013; Denson & Ing, 2014). For this study, I

assessed the association between latent class and several outcome variables, depressive symptoms, self-esteem, and educational attainment.

I conducted two LPAs (one for Wave 3 ERS messages and one for Wave 4 ERS messages) using MPLUS Version 7.2 software (Muthén & Muthén, 2012). Similar to the analyses conducted by Granberg and colleagues (2012), I analyzed subscales from the Racial Socialization Scale (Hughes & Johnson, 2001) to determine ERS class profiles. Therefore, the Cultural Education, Warnings about Discrimination, and Promotion of Mistrust subscales were included as indicator variables for the model. However, in contrast to Granberg and colleagues, I excluded the additional coping with discrimination subscale, as it was not collected at Wave 3 and an aim of the study was to investigate the stability of the ERS meta-messages across time and changes in class membership.

Scholars recommend using several different statistical criteria to evaluate the LPA model fit (Masyn, 2013; Nylund-Gibson, 2012). To determine the best model fit, I examined the Bayesian Information Criterion (BIC), Adjusted BIC (ABIC), Lo-Mendell-Rubin (LMR) Likelihood Ratio Test (Everitt et al. 2001; Muthén 2002), and the Bootstrap Likelihood Ratio Test (BLRT; Asparouhov and Muthén 2012; Nylund et al. 2007; Lo et al. 2001; Schwartz 1978; Vuong 1989). A solution with a lower BIC or ABIC is considered a better fit than a solution with a higher BIC or ABIC. Statistically significant LMR and BLRT are indicative that a more complex model (i.e., model with more classes) is a better fit than a simpler model (i.e., model with fewer classes). Lastly, entropy scores were used to assess whether the class groups are delineated from each other and that individuals were classified into each cluster accurately. Scores approaching 1 are indicative of separate and accurately stratified latent

classes (Celeux & Soromenho 1996; Berlin, Williams, & Parra, 2014). Table 4 displays summaries of the LPA fit indices for two to five latent classes.

For Wave 3, the BIC and ABIC fit indices were the lowest for the five-class solution, which suggests that a five-class model was the best model fit. In contrast, the LMR indicated that a three-class solution was the better fit. The BLRT was statistically significant for each class and thus, inconclusive in determining a best model fit. In addition to reviewing the model fit indices, I examined the distribution of individuals in each group for each class-solution (See Table 5). As the number of classes increased, at least one of the cluster groups had very few individuals. For instance, for the four-class solution, one group was comprised of only 6 people (approximately 1% of the sample). Therefore, the three-class solution was determined to be the best fit for the Wave 3 ERS message patterns. The entropy score for this solution approached 1, which indicates that individuals are likely to have been sorted into their true group and that the three groups are indeed different from each other.

The raw means for each indicator variable (i.e., ERS message) were evaluated for each latent class to describe and label the groups (see Table 6). The three cluster groups were labeled low-wariness, moderate-wariness, and high-wariness. Low-wariness was the largest group, made up of a total of 532 individuals (84.8 %). Youth in the low-wariness cluster had the lowest mean scores for warnings of discrimination and promotion of mistrust compared to those in the moderate-wariness and high-wariness groups. For individuals in this group, their mean score for cultural education was not significantly different from those in the moderate-wariness group but was statistically significantly lower than the mean score for individuals in the high-wariness group. The moderate-wariness group had mean scores close to the sample mean for both cultural education and warning of discrimination ($n = 83$;

13.2%). However, the mean score for promotion of mistrust was one standard deviation above the sample mean. The high-wariness group had the highest means for the promotion of mistrust and warnings of discrimination messages compared to the other two cluster groups. This group also had the smallest class count of the three classes ($n = 12$; 1.9%).

I conducted three generalized linear model analysis of variances (ANOVAs) to assess the relationship between Wave 3 ERS-class membership and each Wave 3 continuous ERS scale (i.e., Cultural Education, Warnings about Discrimination, and Promotion of Mistrust; see Table 5). The first ANOVA showed a significant main effect for, cultural education, $F(2, 624) = 5.50, p < .01$; partial eta-squared = .02. Post-hoc analyses using the Bonferroni correction indicated that individuals in the high-wariness group ($M = 3.30, SD = .90$) scored significantly higher on cultural education compared to those in the low-wariness group ($M = 2.48, SD = .92$). The difference between the high-wariness group ($M = 3.30, SD = .90$) and moderate-wariness group ($M = 2.64, SD = .94$) was not statistically significant but did approach significance ($p = .06$). For warnings about discrimination, there was a significant main effect on Wave 3 ERS class membership, $F(2, 624) = 25.71, p < .001$; partial eta-squared = .08. Participants in the high-wariness class ($M = 3.89, SD = .92$) scored significantly higher on warning about discrimination compared to the moderate-wariness ($M = 2.83, SD = .90$) and low-wariness ($M = 2.30, SD = .96$) classes. Also, participants in the moderate-wariness class ($M = 2.83, SD = .90$) scored significantly higher on the warnings about discrimination scale than participants in the low-wariness class ($M = 2.30, SD = .96$). Lastly, for the third ANOVA, there was a significant relationship between class membership and scores on the promotion of mistrust scale, $F(2, 624) = 1159.68, p < .001$; partial eta-squared = .79. Similar, to post-hoc tests for warnings about discrimination, individuals in the

high-wariness group ($M = 3.90, SD = .58$) had significantly higher scores for promotion of mistrust compared to the moderate-wariness ($M = 2.36, SD = .35$). and low-wariness ($M = 1.18, SD = .25$) groups. Also, participants in the moderate-wariness class ($M = 2.36, SD = .35$) scored significantly higher on the warnings about discrimination scale than participants in the low-wariness class ($M = 1.18, SD = .25$).

Next, I examined the model fit indices for the LPA conducted on the Wave 4 ERS messages. Similar to the previous LPA, the BIC and ABIC fit estimates suggested a five-class solution (see Table 7). However, the LMR indicated again, that the three-class model was a better fit for the data. The BLRT was significant for each class model and did not aid in determining a best model fit. Evaluation of the class counts for the three-class model compared to a four-class or five-class model, suggested that the three-class solution model was the best fit for the Wave 4 ERS patterns (See Table 8). However, the entropy score for the three-class solution was not as high relative to the four-class and five-class solutions. Therefore, individuals may not be as adequately sorted or delineated from each other compared to other classes.

I evaluated the raw means for each ERS subscale to a) describe and label the latent classes (see Table 9), and b) determine if the same ERS patterns emerge for both Wave 3 and Wave 4. Surprisingly, the latent classes for Wave 4 were different from the groups found in Wave 3. Because of the pattern making up the clusters, Wave 4 clusters were labeled *low-socialization, moderate-socialization, and high-socialization*. Youth in the low-socialization group had significantly lower mean scores on all three socialization messages compared to individuals in the moderate-socialization and high-socialization groups. The moderate-

socialization group was the largest group ($n = 335$; 53.4%) marked by mean scores that were close to the sample means for all three socialization variables. Moreover, all of the mean scores for the moderate-socialization were significantly lower than the mean scores for the high-socialization group. Lastly, individuals in the high-socialization group had significantly higher scores on each subscale compared to the other two groups.

Again, I conducted three generalized linear model ANOVAs to explore the relationship between Wave 4 ERS-class membership and each ERS continuous scale. Results showed a statistically significant main effect for cultural education, $F(2, 624) = 81.52, p < .001$; partial eta-squared = .21. Follow-up test using the Bonferroni correction indicated that participants in the high-socialization group ($M = 2.88, SD = 1.07$) scored significantly higher on cultural education than participants in the moderate-socialization ($M = 2.39, SD = .89$) and low-socialization ($M = 1.65, SD = .60$) groups. Individuals in the moderate-socialization group ($M = 2.39, SD = .89$) had higher cultural education scores than individuals in the low-socialization group ($M = 1.65, SD = .60$). Warnings about discrimination had a significant main effect on group membership, $F(2, 624) = 226.87, p < .001$; partial eta-squared = .42. Similar to the post-hoc results for cultural education, those in the high-socialization class ($M = 3.73, SD = .94$) had significantly higher scores for warnings about discrimination compared to those in the moderate-socialization ($M = 2.68, SD = .92$) and low-socialization ($M = 1.50, SD = .58$) classes. Also, participants in the low-socialization group ($M = 1.50, SD = .58$) had significantly lower scores than the moderate-socialization group ($M = 2.68, SD = .92$). The last ANOVA indicated a significant main effect of promotion of mistrust on ERS-class composition, $F(2, 624) = 567.75, p < .001$; partial eta-squared = .65. Again, participants in the high-socialization group ($M = 3.46, SD = .76$) scored higher on promotion of mistrust

than individuals in the moderate-socialization group ($M = 1.45$, $SD = .46$) and low-socialization group ($M = 1.14$, $SD = .25$). Those in the low-socialization group ($M = 1.14$, $SD = .25$) had statically significantly lower scores than those in moderate-socialization group ($M = 1.45$, $SD = .46$). See Table 9.

A goal of the present study was to determine ERS meta-messages at Wave 3 and Wave 4 of data collection. Moreover, a goal was to explore whether the class-solutions at Wave 3 and Wave 4 are similar to the five-class model found by Granberg and colleagues. However, for both Wave 3 and Wave 4, the three-class solutions were found to be the best fit. Despite the differences in the number of classes in the solution, the three-class solution for both Wave 3 and Wave 4 were similar to the low-frequency, moderate-frequency, and very high-frequency clusters found by Granberg and colleagues. This is expected as this study and the Granberg et al. (2012) were conducted with similar samples from the FACHS longitudinal study. In particular, both studies conducted LPAs on ERS scales from Wave 4. The sample size for the present study ($n = 627$) was smaller than the sample size of Granberg and colleagues ($n = 714$), likely due to the exclusion of participants who did not complete the ERS measures for both Wave 3 and Wave 4.

Another goal of this study was to assess whether individuals remained in the same ERS group from Wave 3 to Wave 4. Because the ERS classes were different across waves, I did not conduct or report any chi-squared test results to examine the differences in group membership.

Dummy-coded variables were created to place each participant into their discrete groups of ERS meta-messages for both Wave 3 and Wave 4. Furthermore, these discrete

categories were used for the following data analyses instead of the ERS scales as a continuous variable.

Correlational Analyses

I conducted bivariate correlations among all the study variables as a preliminary step prior to conducting the regression analyses (see Table 10). As expected, all waves of depressive symptoms were significantly related to each other. The same pattern of significant and positive correlations was present for both self-esteem at each wave and educational attainment at each wave. Each wave of depressive symptoms had a significant inverse relationship with each wave of self-esteem. In contrast, depressive symptoms were not significantly related to each wave of educational attainment, with the exception of the negative association between Wave 5 depressive symptoms and Wave 6 educational attainment ($r = -.10, p < .05$). Self-esteem and educational attainment were not significantly related at any wave.

I predicted that perceived discrimination would be significantly related to each outcome variable, such that higher perceived racial discrimination would be related to higher depressive symptoms and lower self-esteem and educational attainment. This prediction was partially supported. Perceived discrimination had a statistically significant and positive correlation with depressive symptoms at each time point. Similarly, discrimination was significantly and inversely related to self-esteem at each time point. However, the discrimination and ERS meta-message groups. Perceived discrimination was only related to one ERS cluster, low-socialization ($r = -.10, p < .05$).

Next, I examined the association between the Wave 3 and Wave 4 ERS meta-messages groups and the outcome variables. Low-wariness was not significantly correlated

with any outcome variables except Wave 7 educational attainment ($r = .13, p < .01$).

Similarly, moderate-wariness was only significantly related to Wave 7 education attainment ($r = -.14, p < .01$). High-wariness was positively related to depressive symptoms at Wave 7 ($r = .13, p < .01$). In contrast, neither low-socialization nor moderate-socialization were significantly correlated to any of the outcome variables at any wave. However, high-wariness was significantly and positively related to depressive symptoms at each wave, except at Wave 7 ($r = -.01, p > .05$). High-wariness was also significantly and inversely related to self-esteem at each time point, except at Wave 7 ($r = -.03, p > .05$). Lastly, high-wariness was inversely correlated with educational attainment at both waves.

Regression Analyses

Despite the lack of correlation among the main study variables, I continued with the regression analyses as planned to specifically test my hypotheses. Therefore, I conducted 12 hierarchical multiple regression analyses (six including the Wave 3 ERS socialization class memberships, and six including the Wave 4 socialization class memberships) to predict the three main outcome variables (depression, self-esteem, and educational attainment) at two time points each. At Step 1, I entered primary caregivers' highest level of education, family income, parenting quality, and target sex as covariates. In addition, the Wave 5 measurement of the respective outcome variables were included as a covariate in each model, except for educational attainment. At Step 2, I entered perceived discrimination as a predictor variable. At Step 3, I entered the dummy coded ERS socialization class memberships. For regressions assessing Wave 3 ERS meta-messages, high-wariness was the reference group. For regressions including Wave 4 ERS meta-messages, high-socialization was the reference group. Lastly, at Step 4, I entered the interaction terms, which were a product of perceived

discrimination and ERS meta-message group. Because my primary focus was to assess ERS class membership as a moderator of the discrimination-outcome link, I will only report in the text the specific statistics from the multiple regressions that showed significant ERS meta-messages and discrimination by ERS interactions. Furthermore, I will only present Step 4 of the regressions in the results tables for these significant ERS meta-messages and discrimination by ERS interactions. For the complete hierarchical regression tables for each analysis see Appendix C.

Depressive Symptoms

Depression wave 6, ERS wave 3

I conducted a hierarchical multiple regression to investigate whether Wave 3 ERS meta-messages and the interaction terms between discrimination and ERS meta-messages (Wave 3) would significantly predict Wave 6 depressive symptoms. Results indicated that there was no significant relationship these predictor variables and depressive symptoms at Wave 6. Please see Table 11 (and Appendix C, Table C1) for details of the model.

Depression wave 7, ERS wave 3

A second hierarchical multiple regression was conducted to assess the same factors as predictors of depressive symptoms at Wave 7 (see Table 11; and Appendix C, Table C2). At Step 1, I entered the covariates. This step explained 14.1% of the variance in depressive symptoms, $F(5, 356) = 11.73, p < .001$. In particular, being a female, $\beta = .10, p < .05, 95\% \text{ CI} = [.001, .11]$, and previous depressive symptoms, $\beta = .33, p < .001, 95\% \text{ CI} = [.26, .49]$, were significantly related to depressive symptoms. Parental educational attainment and parenting quality were not significantly linked to depressive symptoms. At Step 2, I added perceived discrimination to the model, which did not significantly predict Wave 7 depressive

symptoms. Being a female, $\beta = .11, p < .05, 95\% \text{ CI} = [.01, .11]$, remained statistically significant as did previous depressive symptoms, $\beta = .36, p < .001, 95\% \text{ CI} = [.24, .48]$. Parental educational attainment and parenting quality remained nonsignificant predictors. At Step 3, I added the Wave 3 ERS meta-message groups. Results indicated that being in the low-wariness, $\beta = -.37, p < .01, 95\% \text{ CI} = [-.46, -.70]$, and moderate-wariness group, $\beta = -.41, p < .01, 95\% \text{ CI} = [-.51, -.11]$, were significant inverse predictors of depressive symptoms, $\Delta R^2 = .02, F (2, 351) = 4.60, p < .01$. Moreover, being a female, $\beta = .11, p < .05, 95\% \text{ CI} = [.01, .11]$, and depressive symptoms at Wave 5, $\beta = .32, p < .001, 95\% \text{ CI} = [.25, .49]$, continued to significantly predict later depressive symptoms. Parental educational attainment and parenting quality remained nonsignificant. Finally, at Step 4, I added the discrimination by ERS meta-message interaction terms. Results indicated that the interaction terms were not significant predictors of depressive symptoms. However, female sex, $\beta = .12, p < .05, 95\% \text{ CI} = [.01, .12]$, previous depressive symptoms, $\beta = .31, p < .001, 95\% \text{ CI} = [.23, .47]$, and membership in low-wariness, $\beta = -.69, p < .01, 95\% \text{ CI} = [-.93, -.10]$, and moderate-wariness, $\beta = -.65, p < .05, 95\% \text{ CI} = [-.96, -.03]$, remained significant. Parental educational attainment and parenting quality were not significant predictors.

Depression wave 6, ERS wave 4

A third regression analysis was conducted to assess Wave 4 ERS meta-messages and discrimination-ERS meta-messages (Wave 4) as statically significant predictors of depressive symptoms at Wave 6. Results indicated that there was no significant relationship between these variables and depressive symptoms (see Appendix C, Table C3).

Depression wave 7, ERS wave 4

Lastly, a fourth regression analysis was conducted to assess Wave 4 ERS meta-messages and the interaction between perceived discrimination and ERS meta-messages (Wave 4) as statically significant predictors of Wave 7 depressive symptoms. Results indicated that there was no significant relationship between these variables and depressive symptoms (see Appendix C, Table C4).

Summary

I hypothesized that for individuals who with ERS meta-message that are lower in promotion of mistrust, perceived discrimination will not be related to depressive symptoms at Wave 6 or Wave 7. I also predicted that for youth in ERS meta-message classes that are higher in cultural education, perceived discrimination will also not be related to the outcome variables at either time point. However, none of the ERS meta-message groups were found to be a statistically significant moderator of the discrimination-depressive symptom relationship. Therefore, my hypothesis was not supported.

Self-Esteem

Self-esteem wave 6, ERS wave 3

For the next set of multiple regression analyses I investigated whether model factors would significantly predict self-esteem at both Wave 6 and Wave 7. The first regression I conducted in this set examined Wave 3 ERS meta-messages and the interaction terms created as a product of perceived discrimination and ERS meta-message class as significant predictors of self-esteem at Wave 6. However, results indicated that these variables did not significantly predict self-esteem (see Appendix C, Table C5).

Self-esteem wave 7, ERS wave 3

The second regression I conducted examined the same variables as predictors of self-esteem at Wave 7. Similarly, results showed no significant relationship between Wave 3 ERS meta-message classes or the discrimination-ERS meta-message interaction terms (see Appendix C, Table C6).

Self-esteem wave 6, ERS wave 4

In the third regression, I investigated Wave 4 ERS meta-messages classes and interactions created as a product of discrimination and ERS meta-message group as predictors of self-esteem at Wave 6 (see Table 12; Appendix C, Table C7). At Step 1, I entered the demographics and previous self-esteem and covariates, parenting quality, $\beta = .09$, $p < .05$, 95% CI = [.01, .11], and previous self-esteem, $\beta = .53$, $p < .001$, 95% CI = [.39, .53], were significant predictors of self-esteem. This step explained 32.0% variance in later self-esteem, $F(5, 445) = 41.84$, $p < .001$. Parental educational attainment, family income, and being a female did not predict self-esteem. At Step 2, I entered perceived discrimination into the model, which was a significant negative predictor of self-esteem, $\beta = -.09$, $p < .05$, 95% CI = [.01, .11], and explained additional variance in self-esteem, $\Delta R^2 = .01$, $F (1, 444) = 4.42$, $p < .05$. Parenting quality remain statistically significant, $\beta = .08$, $p < .05$, 95% CI = [.001, .06], as did previous self-esteem, $\beta = .52$, $p < .001$, 95% CI = [.38, .52]. Parental educational attainment, family income, and being a female remained nonsignificant predictors. At Step 3, I entered the two Wave 4 ERS meta-message classes; results indicated that neither class significantly predicted self-esteem at Wave 6. Parental educational attainment, family income, and being a female remained nonsignificant predictors. However, parenting quality, $\beta = .09$, $p < .05$, 95% CI = [.01, .11], previous self-esteem, $\beta = .52$, $p < .001$, 95% CI = [.38,

.52], and perceived racial discrimination, $\beta = -.08, p < .05, 95\% \text{ CI} = [-.10, -.002]$, remained significant. In Step 4, I entered the discrimination by ERS meta-message interaction terms. This step was not statistically significant, but did approach significance, $\Delta R^2 = .01, F(2, 440) = 2.81, p = .06$. The discrimination-low-socialization interaction term was not a significant predictor of self-esteem. In contrast, the discrimination by moderate-socialization interaction term was statistically significant, $\beta = -.59, p < .05, 95\% \text{ CI} = [-.78, -.03]$. Using the MODPROBE (Hayes, 2017) macros in SPSS, I conducted further analysis of the interaction. Results showed that participants in the moderate-socialization group who differ by one unit in perceived racial discrimination are expected to differ by -.17 units in their levels of self-esteem, $t(519) = -3.86, p < .001$, (see Figure 5). On average, both socialization groups reported relatively high self-esteem, with an approximate mean of 4 on a 5 point-scale. Being a female, parental educational attainment, family income, and low-socialization class membership remained nonsignificant predictors of self-esteem. Parenting quality and perceived discrimination were not significant predictors at this step. In contrast, moderate-socialization membership became a significant predictor, $\beta = .63, p < .05, 95\% \text{ CI} = [.12, 1.48]$. Previous self-esteem remained a significant predictor of self-esteem at wave 6, $\beta = .51, p < .001, 95\% \text{ CI} = [.37, .51]$.

Self-esteem wave 7, ERS wave 4

The fourth regression analysis I conducted was to assess Wave 4 ERS meta-messages and the interaction between perceived discrimination and ERS meta-messages (Wave 4) as predictors of Wave 7 self-esteem. Results indicated that there was no significant relationship between these variables and depressive symptoms (see Table 12; and Appendix C, Table C8).

Summary

I predicted that for individuals who are in ERS meta-message clusters that are lower in promotion of mistrust (i.e., low-wariness), perceived discrimination will not be related to self-esteem at both Wave 6 or Wave 7. I also predicted that for those in ERS meta-message classes that are higher in cultural education (i.e., high-socialization), perceived discrimination will also not be related to self-esteem at either time point. However, ERS meta-message groups were not found to be a statistically significant moderator of the discrimination-self-esteem relationship, except for ERS meta-messages at Wave 4 and self-esteem at Wave 7. In this case, those higher in cultural socialization reported more self-esteem in the face of higher discrimination, whereas those in the moderate socialization cluster experience less self-esteem in response to discrimination. Therefore, my hypothesis was only partially supported.

Educational Attainment

Educational attainment wave 6, ERS wave 3

The third and final set of multiple regressions assessed predictors of educational attainment at Wave 6 and Wave 7. I conducted a regression testing Wave 3 ERS meta-messages and the interaction terms created by the product of perceived discrimination and ERS meta-message classes as predictors of self-esteem Wave 6 (see Table 11; and Appendix C, Table C9). Results indicated that these factors were not significant predictors of educational attainment.

Educational attainment wave 7, ERS wave 3

I conducted another regression with the same predictor variables to predict Wave 7 educational attainment (see Table 11; and Appendix C. Table C10). At Step 1, I entered demographic variables (i.e., sex, parental educational attainment, parenting quality, and

family income) as covariates. Results showed that being a female, $\beta = .11, p < .05, 95\% \text{ CI} = [.06, .76]$, and parental educational attainment, $\beta = .33, p < .001, 95\% \text{ CI} = [.17, .32]$, were significant predictors of educational attainment at Wave 7. In contrast, parenting quality and family income were not significant predictors. At Step 2, I entered perceived racial discrimination, which was not a significant predictor of educational attainment. Being a female, $\beta = .12, p < .01, 95\% \text{ CI} = [.02, .79]$, and parental educational attainment, $\beta = .32, p < .001, 95\% \text{ CI} = [.17, .32]$, continued to be significant predictors. Parenting quality and family income remained nonsignificant predictors. At Step 3, I entered two dummy-coded ERS class membership variables. Membership in the low-wariness group was not a significant predictor, but membership in the moderate-wariness cluster compared with the high-wariness cluster was a significant predictor of educational attainment, $\beta = -.27, p < .05, 95\% \text{ CI} = [-2.84, -.01]$. Being a female, $\beta = .13, p < .01, 95\% \text{ CI} = [.11, .81]$, and parental educational attainment, $\beta = .32, p < .001, 95\% \text{ CI} = [.17, .31]$, continued to be significant predictors. Parenting quality, family income and perceived discrimination remained nonsignificant predictors. At Step 4, I entered the two discrimination by ERS meta-message class interaction terms in the model; neither was a significant predictor of educational attainment at Wave 7. Being a female, $\beta = .12, p < .01, 95\% \text{ CI} = [.08, .78]$, and parental educational attainment, $\beta = .32, p < .001, 95\% \text{ CI} = [.17, .31]$ maintained their significance. Moderate-wariness class membership became nonsignificant at this Step. Parenting quality, family income, discrimination, and low-wariness class membership remained nonsignificant predictors.

Educational attainment wave 6, ERS wave 4

I conducted a third regression testing Wave 4 ERS meta-messages and the interaction terms created by the product of perceived discrimination and ERS meta-message classes as predictors of self-esteem Wave 6 (see Appendix C, Table C11). Results indicated that these factors were not significant predictors of educational attainment.

Educational attainment wave 7, ERS wave 4

I conducted a fourth regression investigating the same factors as predictors of self-esteem Wave 7. Results indicated that these factors were not significant predictors of educational attainment (see Appendix C, Table C12).

Summary

Similar to the predictions for depressive symptoms and self-esteem, I predicted that for individuals who are in ERS meta-message clusters that are lower in promotion of mistrust (i.e., low-wariness), will mitigate the relationship between perceived discrimination and educational attainment at Wave 6 or Wave 7. I also predicted that for those in ERS meta-message classes that are higher in cultural education (i.e., high-socialization), perceived discrimination will also not be related to educational attainment at either time point. However, ERS meta-message groups were not found to be a statistically significant moderator of the discrimination-educational relationship

Additional Analyses

Due to the lack of significant correlations between the ERS meta-messages groups (both Wave 3 and Wave 4) with the outcome variables, I conducted the bivariate correlations between the variables at earlier points. The correlation table with these results can be found in Appendix E. The associations between the meta-message groups and outcome variables

remained nonsignificant, with a few exceptions. Low-socialization group membership was significantly related to depressive symptoms at Wave 3, $r = -.10$, $p < .05$, and at Wave 4, $r = -.14$, $p < .01$. Membership in the moderate-socialization group had a positive association with depressive symptoms at Wave 4, $r = .08$, $p < .05$.

In addition, I also conducted another set of 12 hierarchical multiple regression analyses using the original racial socialization subscales (Cultural Education, Promotion of Mistrust, and Warnings of Discrimination as developed by Johnson and Hughes, 2001), rather than the meta-messages latent profile classes as predictors. At Step 1, I entered primary caregivers' highest level of education, family income, parenting quality, and target sex as covariates. In addition, the Wave 5 measurement of the respective well-being outcome variables were included as a covariate in each model, except for educational attainment. At Step 2, I entered perceived discrimination as a predictor variable. At Step 3, I entered the original ERS subscales into the model, each as continuous variables. Lastly, at Step 4, I entered the interaction terms, which were a product of perceived discrimination and the respective ERS subscale. Results indicated that the original ERS subscales were not statically significant predictors for depressive symptoms or self-esteem at either Wave 6 or 7. However, in two of the regression models predicting educational attainment they were significant predictors. See Appendix D for all 12 of the regression tables.

The first of these regressions examined Wave 3 ERS subscales and the interaction terms produced from perceived discrimination and ERS subscales as predictors of Wave 7 educational attainment. At Step 1, I entered demographic variables (i.e., sex, parental educational attainment, parenting quality, and family income) as covariates, which explained 11.8% of the variance in educational attainment, $F(4, 365) = 12.26$, $p < .001$. Results showed

that being a female, $\beta = .11, p < .05, 95\% \text{ CI} = [.06, .76]$, and parental educational attainment, $\beta = .33, p < .001, 95\% \text{ CI} = [.17, .32]$, were significant predictors of educational attainment at Wave 7. In contrast, parenting quality and family income were not significant predictors. At Step 2, I entered perceived racial discrimination, which was not a significant predictor of educational attainments. Being a female, $\beta = .12, p < .01, 95\% \text{ CI} = [.08, .79]$, and parental educational attainment, $\beta = .32, p < .001, 95\% \text{ CI} = [.17, .32]$, continued to be significant predictors. Parenting quality and family income remained nonsignificant predictors. (These are identical to the results reported earlier because the first two steps were identical to the models reported above.) At Step 3, I entered the three original ERS subscales, which did not explain any additional variance in educational attainment, but approached significance, $\Delta R^2 = .02, F(3, 361) = 2.48, p = .06$. Results indicated that only promotion of mistrust was a significant predictor of educational attainment, $\beta = -.14, p < .01, 95\% \text{ CI} = [-.77, -.10]$. In contrast, cultural education and warnings of discrimination were not significant predictors. Being a female, $\beta = .12, p < .01, 95\% \text{ CI} = [.07, .78]$, and parental educational attainment, $\beta = .30, p < .001, 95\% \text{ CI} = [.15, .30]$, remained significant predictors. Parenting quality became nonsignificant, family income and perceived discrimination remained nonsignificant predictors. At Step 4, I entered the interaction terms between discrimination and the ERS subscales, which accounted for an additional 2.5% of the variance. The overall model explained 16.4% of the variance in educational at Wave 7, $F(3, 358) = 15.85, p < .01$. The discrimination by warnings of discrimination, $\beta = -.53, p < .05, 95\% \text{ CI} = [-.73, -.02]$, and discrimination by promotion of mistrust, $\beta = .51, p < .01, 95\% \text{ CI} = [.18, 1.10]$, interaction terms were significant predictors of educational attainment at Wave 7. Follow-up analyses of the interaction indicated that greater racial discrimination is related to poorer

educational attainment, regardless of receiving low or high levels of discrimination warnings. However, the relationship between perceived discrimination and educational attainment is weaker for youth reporting low warnings of discrimination (see Figure 6). Follow-up analyses of the interaction indicated that for youth higher in promotion of mistrust, each one unit increase in racial discrimination educational attainment increased by .25 units, $t(433) = 2.36, p < .01$ (see Figure 7). In contrast, for individuals lower in promotion of mistrust, perceived discrimination is not related to educational attainment. Being a female, $\beta = .10, p < .05, 95\% \text{ CI} = [.02, .72]$, and parental educational attainment, $\beta = .30, p < .001, 95\% \text{ CI} = [.15, .30]$, promotion of mistrust, $\beta = -.51, p < .01, 95\% \text{ CI} = [-2.45, -.69]$, remained significant predictors. Warnings of discrimination became a significant predictor, $\beta = .48, p < .05, 95\% \text{ CI} = [.20, 1.50]$. Family income, parenting quality, perceived discrimination, cultural education, and the discrimination by cultural education interaction term remained nonsignificant predictors.

The second regression assessed Wave 4 ERS scales and the interaction terms between perceived discrimination and ERS scales as predictors of Wave 6 educational attainment. At Step 1, I entered demographic variables (i.e., sex, parental educational attainment, parenting quality, and family income) as covariates, which explained 17.0% of the variance in educational attainment, $F(4, 446) = 22.87, p < .001$. Results showed that being a female, $\beta = .12, p < .01, 95\% \text{ CI} = [.13, .74]$, parental educational attainment, $\beta = .39, p < .001, 95\% \text{ CI} = [.22, .34]$, and parenting quality, $\beta = .13, p < .01, 95\% \text{ CI} = [.07, .37]$, were significant predictors of educational attainment at Wave 6. Family income was not a significant predictor. At Step 2, I entered perceived racial discrimination, which was not a significant predictor of educational attainments. Being a female, $\beta = .12, p < .01, 95\% \text{ CI} = [.13, .74]$,

parental educational attainment, $\beta = .39, p < .001, 95\% \text{ CI} = [.22, .34]$, and parenting quality, $\beta = .13, p < .01, 95\% \text{ CI} = [.07, .37]$, continued to be significant predictors. Family income remained a nonsignificant predictor. (Again, these are identical to the results reported earlier because the first two steps were identical to the models containing ERS meta-messages previously reported.) At Step 3, I entered the three ERS subscales. Results indicated that none of the ERS subscales were significant predictors of educational attainment. Being a female, $\beta = .12, p < .01, 95\% \text{ CI} = [.11, .72]$, parental educational attainment, $\beta = .38, p < .001, 95\% \text{ CI} = [.22, .34]$, and parenting quality, $\beta = .11, p < .01, 95\% \text{ CI} = [.04, .35]$, continued to be significant predictors. Family income and perceived discrimination remained nonsignificant predictors. At Step 4, I entered the interaction terms between discrimination and ERS scales, which accounted for an additional 1.9% of the variance, $\Delta R^2 = .02, F(3, 439) = 3.45, p < .01$. The overall model explained 19.9% of the variance in educational attainment at Wave 6. The discrimination by cultural education, $\beta = .42, p < .05, 95\% \text{ CI} = [.03, .73]$, and discrimination by warnings of discrimination, $\beta = -.58, p < .01, 95\% \text{ CI} = [-.68, -.13]$, interaction terms were significant predictors of educational attainment at Wave 6. The discrimination by promotion of mistrust interaction term was not a significant predictor. Follow-up analyses of the interaction indicated that for youth higher in cultural education, greater experiences of perceived discrimination were associated with higher educational attainment (see Figure 8). For those low in cultural education, regardless of higher or lower levels of perceived discrimination, educational attainment did not differ on average. Regardless of level of discrimination warnings, higher perceived discrimination is linked with lower educational attainment. However, this effect is more severe for youth higher in warnings of discrimination (see Figure 9). Being a female, $\beta = .11, p < .01, 95\% \text{ CI} = [.09,$

70], parental educational attainment, $\beta = .37, p < .001$, 95% CI = [.21, .33], and parenting quality, $\beta = .12, p < .01$, 95% CI = [.05, .35], continued to be significant predictors.

Warnings of discrimination, $\beta = .40, p < .05$, 95% CI = [.14, 1.16] and promotion of mistrust were significant predictors, $\beta = -.35, p < .05$, 95% CI = [-1.65, -.06]. Family income, perceived discrimination, and cultural education remained nonsignificant predictors.

Tables and Figures

Table 2. *Descriptive Statistics for Targets' Ages (in years) for Wave 3 through Wave 7*

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	Range
Wave 3	627	15.52	.86	13.0 -18.0
Wave 4	627	18.79	.90	16.0 -21.0
Wave 5	559	21.51	.86	19.0 -25.0
Wave 6	562	23.53	.87	21.0 -26.0
Wave 7	455	28.75	.85	27.0 -31.0

Table 3. *Descriptive Statistics of Study Variables Reported by the Targets*

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	Range	
				Actual	Potential
Ethnic Racial Socialization					
Cultural Education					
<i>Wave 3</i>	627	2.5	.93	1.0-5.0	1.0-5.0
<i>Wave 4</i>	627	2.1	.90	1.0-5.0	1.0-5.0
Warnings about Discrimination					
<i>Wave 3</i>	627	2.4	.99	1.0-5.0	1.0-5.0
<i>Wave 4</i>	627	2.3	1.06	1.0-5.0	1.0-5.0
Promotion of Mistrust					
<i>Wave 3</i>	627	1.4	.60	1.0-5.0	1.0-5.0
<i>Wave 4</i>	627	1.5	.71	1.0-5.0	1.0-5.0
Predictor Variable^a					
Perceived Racial Discrimination	559	1.6	.53	1.0-3.69	1.0-4.0
Outcome Variables					
Depressive Symptoms					
<i>Wave 5</i>	559	.26	.23	0.0-.94	0.0-1.0
<i>Wave 6</i>	561	.21	.24	0.0-1.0	0.0-1.0
<i>Wave 7</i>	446	.21	.27	0.0-1.0	0.0-1.0
Self-Esteem					
<i>Wave 5</i>	559	4.1	.72	1.0-5.0	1.0-5.0
<i>Wave 6</i>	562	4.3	.62	1.5-5.0	1.0-5.0
<i>Wave 7</i>	445	4.2	.75	1.2-5.0	1.0-5.0
Educational Attainment					
<i>Wave 6</i>	562	13.1	1.7	3.0-17.0	1.0-17.0
<i>Wave 7</i>	455	13.3	1.8	3.0-17.0	1.0-17.0
Covariates^b					
Parenting Quality	625	6.3	.67	4.1-8.0	1.0-8.0
PC Education	576	12.76	2.34	1.0-20.0	

Note. ^aThe predictor variable, Perceived Racial Discrimination, was measured at Wave 5. ^bThe covariates were measured at Wave 3. PC Education = Primary Caregiver Educational Attainment.

Table 4. *Latent Profile Analysis Model Fit Estimates for Wave 3*

Number of Classes	BIC	ABIC	LMR	BLRT	Entropy
2	4177.69	4126.90	274.66*	-2177.69***	0.95
3	4062.46	3998.97	135.72*	-2037.31***	0.95
4	3970.44	3894.24	113.39	-1966.82***	0.95
5	3959.47	3870.57	25.90	-1903.01*	0.87

Note. BIC = Bayesian Information Criterion; ABIC = adjusted Bayesian Information Criterion; LMR = Lo-Mendell-Rubin test; BLRT = Bootstrap Likelihood Ratio Test; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $N = 627$.

Table 5. *Participant Counts for Latent Classes for Wave 3 Latent Profile Analysis*

Total Number of Classes	Class 1	Class 2	Class 3	Class 4	Class 5
2	567	60	--	--	--
3	532	83	12	--	--
4	94	488	39	6	--
5	439	50	6	43	89

Table 6. *Means of Racial Socialization Subscales at Wave 3 by Ethnic-Racial Socialization Class ($N = 627$)*

Ethnic-Racial Socialization Subscale	Low-Wariness	Moderate-Wariness	High-Wariness
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Cultural Education	2.48 (.92) _a	2.64 (.94) _{ab}	3.32 (.90) _b
Warnings about Discrimination	2.30 (.96) _a	2.83 (.90) _b	3.89 (.92) _c
Promotion of Mistrust	1.18 (.25) _a	2.36 (.35) _b	3.90 (.58) _c
<i>n (%)</i>	532 (84.8)	83 (13.2)	12 (1.9)

Table 7. Latent Profile Analysis Model Fit Estimates for Wave 4

Number of Classes	BIC	ABIC	LMR	BLRT	Entropy
2	4305.75	4254.95	284.20**	-2246.60***	0.96
3	4154.41	4090.92	170.48***	-2101.35***	0.72
4	4140.14	4063.95	75.74	-2031.98***	0.88
5	3995.38	3906.49	64.22***	-1940.88***	0.91

Note. BIC = Bayesian Information Criterion; ABIC = Adjusted Bayesian Information Criterion; LMR = Lo-Mendell-Rubin test; BLRT = Bootstrap Likelihood Ratio Test; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $N = 627$.

Table 8. Participant Counts for Latent Classes for Wave 4 Latent Profile Analysis

Total Number of Classes	Class 1	Class 2	Class 3	Class 4	Class 5
2	584	43	--	--	--
3	44	335	248	--	--
4	476	70	69	12	--
5	407	49	123	36	12

Table 9. Means of Racial Socialization Subscales at Wave 4 by Ethnic-Racial Socialization Class ($N = 627$)

Ethnic-Racial Socialization Subscale	Low-Socialization <i>M</i> (<i>SD</i>)	Moderate-Socialization <i>M</i> (<i>SD</i>)	High-Socialization <i>M</i> (<i>SD</i>)
Cultural Education	1.65 (.60) _a	2.39 (.89) _b	2.88 (1.07) _c
Warnings about Discrimination	1.50 (.58) _a	2.68 (.92) _b	3.73 (.94) _c
Promotion of Mistrust	1.14 (.25) _a	1.45 (.46) _b	3.46 (.76) _c
<i>n</i> (%)	248 (39.6)	335 (53.4)	44 (7.0)

Table 10. *Correlations among Study Variables*

	1	2	3	4	5	6	7	8	9	10
1. Dep. Sx. W5	--									
2. Dep. Sx. W6	.52**	--								
3. Dep. Sx. W7	.36**	.50**	--							
4. SE W5	-.47**	-.36**	-.31**	--						
5. SE W6	-.35**	-.41**	-.35**	.54**	--					
6. SE W7	-.35**	-.41**	-.51**	.50**	.57**	--				
7. Edu. W6	-.10*	-.06	-.03	.12**	.14**	.05	--			
8. Edu. W7	-.09	-.02	.00	.12*	.12*	.04	.76**	--		
9. RD W5	.24**	.22**	.13*	-.10*	-.17**	-.18**	.00	.07	--	
10. Low-Wari.	-.04	-.02	-.01	.06	.05	-.00	.08	.13**	-.04	--

Notes. Dep. Sx. = Depressive Symptoms; SE = Self-esteem; Edu. = Educational Attainment; RD = Perceived Racial Discrimination; Low-Wari. = Low-Wariness; * = $p < 0.05$, ** = $p < 0.01$; The correlation table continues below on the next page.

Table 10. continued

	1	2	3	4	5	6	7	8	9	10	11
11. Mod.-Wari.	.04	.01	-.05	-.04	-.05	.01	-.08	-.14**	.04	-.92**	--
12. High-Wari.	.00	.04	.13**	-.07	-.01	-.02	.00	-.01	.01	-.33**	-.06
13. Low -Soc.	-.08	-.03	.07	.01	.03	.01	.02	-.01	-.10*	.11**	-.10**
14. Mod.- Soc.	.03	-.03	-.06	.03	.02	.01	.03	.06	.08	-.01	.01
15. High- Soc.	.09*	.11*	-.01	-.08*	-.10*	-.03	-.09*	-.10*	.04	-.20**	.19**
16. Female	.20**	.10*	.17**	-.11*	-.01	-.08	.11*	.09*	-.11**	.03	-.03
17. PC Edu.	.04	.05	.00	-.04	-.09*	-.09	.35**	.31**	.13**	.08	-.05
18. Parent Qual.	-.15**	-.15**	-.08	.24**	.19**	.14**	.15**	.11*	-.05	-.03	.03
19. Income	-.05	-.01	-.00	-.05	-.03	-.02	-.00	.01	.04	.01	.01

Notes. Mod.-Wari. = Moderate-Wariness; High-Wari. = High-Wariness; Low-Soc. = Low-Socialization; Mod.-Soc. = Moderate-Socialization; High-Soc. = High-Socialization; PC Edu. = Primary Caregiver Educational Attainment; Parent Qual. = Parenting Quality; Income = Family Income; * = $p < 0.05$, ** = $p < 0.01$; The correlation table continues to the right on the next page.

Table 10. continued

	12	13	14	15	16	17	18
12. High-Wari.	--						
13. Low –Soc.	-.04	--					
14. Mod.- Soc.	.01	-.87**	--				
15. High- Soc.	.05	-.22**	-.29**	--			
16. Female	-.00	-.06	.06	-.01	--		
17. PC Edu.	-.06	-.03	.04	-.02	-.00	--	
18. Parent Qual.	-.01	-.10*	.11**	-.03	.04	-.05	--
19. Income	-.06	.04	-.04	.01	.01	.02	-.00

Notes. High-Wari. = High-Wariness; Low-Soc. = Low-Socialization; Mod.-Soc. = Moderate-Socialization; High-Soc. = High-Socialization; PC Edu. = Primary Caregiver Educational Attainment; Parent Qual. = Parenting Quality; Income = Family Income; * = $p < 0.05$, ** = $p < 0.01$.

Table 11. Hierarchical Linear Regression with Wave 3 ERS Classes Predicting Depressive Symptoms

Predictors	Wave 6 (N = 450)					Wave 7 (N = 362)				
	R ²	ΔR ²	b (SE)	β	95% CI	R ²	ΔR ²	b (SE)	β	95% CI
<i>Step 4</i>	.30	.00				.17	.01			
Parenting Qual.			-.02* (.01)	-.09	[-.04, -.00]			-.01 (.01)	-.05	[-.04, .01]
Family Income			.01 (.01)	.02	[-.02, .03]			.01 (.02)	.02	[-.03, .04]
Female			.00 (.02)	.00	[-.04, .04]			.07** (.03)	.12	[.01, .12]
PC Edu.			.00 (.00)	.00	[-.01, .01]			-.01 (.01)	-.04	[-.02, .01]
Dep. Sx. W5			.51***	.48	[.42, 61]			.35*** (.06)	.31	[.23, .47]
			(.05)							
RD			-.02 (.04)	-.08	[-.10, .06]			-.05 (.05)	-.21	[-.15, .05]
Low-Wari.			-.19 (.17)	-.29	[-.52, .14]			-.52** (.21)	-.72	[-.93, -.10]
Mod. -Wari.			-.16 (.19)	-.24	[-.53, .20]			-.49* (.24)	-.65	[-.96, -.03]
RD x Low-Wari.			.09 (.08)	.28	[-.08, .25]			.14 (.10)	.40	[-.06, .34]
RD x Mod.-Wari.			.06 (.10)	.16	[-.12, .25]			.09 (.12)	.21	[-.14, .33]

Notes. Parent Qual. = Parenting Quality; PC Edu. = Primary Caregiver Educational Attainment; Dep. Sx. = Depressive Symptoms; RD = Perceived Racial Discrimination; Low-Wari = Low-Wariness; Mod.-Wari. = Moderate-Wariness; RD x Low-Wari. = Perceived Racial Discrimination x Low-Wariness; RD x Mod.-Wari. = Perceived Racial Discrimination x Moderate-Wariness; * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table 12. Hierarchical Linear Regression with Wave 4 ERS Classes Predicting Self-esteem

Predictors	Wave 6 (N = 450)					Wave 7 (N = 362)				
	R ²	ΔR ²	b (SE)	β	95% CI	R ²	ΔR ²	b (SE)	β	95% CI
<i>Step 4</i>	.34	.01				.28	.01			
Parenting Qual.			.05* (.03)	.08	[.00, .10]			.01 (.04)	.01	[-.07, .08]
Family Income			-.01 (.04)	-.01	[-.08, .06]			-.02 (.05)	-.00	[-.10, .10]
Female			.07 (.05)	.06	[-.03, .17]			-.05 (.07)	-.03	[-.20, .09]
PC Edu.			-.02 (.01)	-.06	[-.04, .01]			-.01 (.02)	-.02	[-.04, .02]
SE W5			.44***	.51	[.37, .51]			.52*** (.05)	.49	[.42, .62]
				(.04)						
RD			.12 (.10)	.19	[-.07, .31]			.13 (.13)	.17	[-.13, .39]
Low-Soc.			.55 (.35)	.43	[-.14, 1.25]			.60 (.48)	.39	[-.34, 1.54]
Mod. -Soc.			.80* (.35)	.63	[.12, 1.48]			.62 (.47)	.40	[-.30, 1.54]
RD x Low-Soc.			-.26 (.20)	-.33	[-.64, .13]			-.41 (.27)	-.45	[-.95, .13]
RD x Mod.-Soc.			-.40* (.19)	-.59	[-.78, -.03]			-.37 (.27)	-.45	[-.89, .15]

Notes. Parent Qual. = Parenting Quality; PC Edu. = Primary Caregiver Educational Attainment; SE = Self-esteem; RD = Perceived Racial Discrimination; Low-Soc. = Low-Socialization; Mod.-Soc. = Moderate-Socialization; RD x Low-Wari. = Perceived Racial Discrimination x Low-Socialization; RD x Mod.-Wari. = Perceived Racial Discrimination x Moderate- Socialization; * = p < .05, *** = p < 0.001.

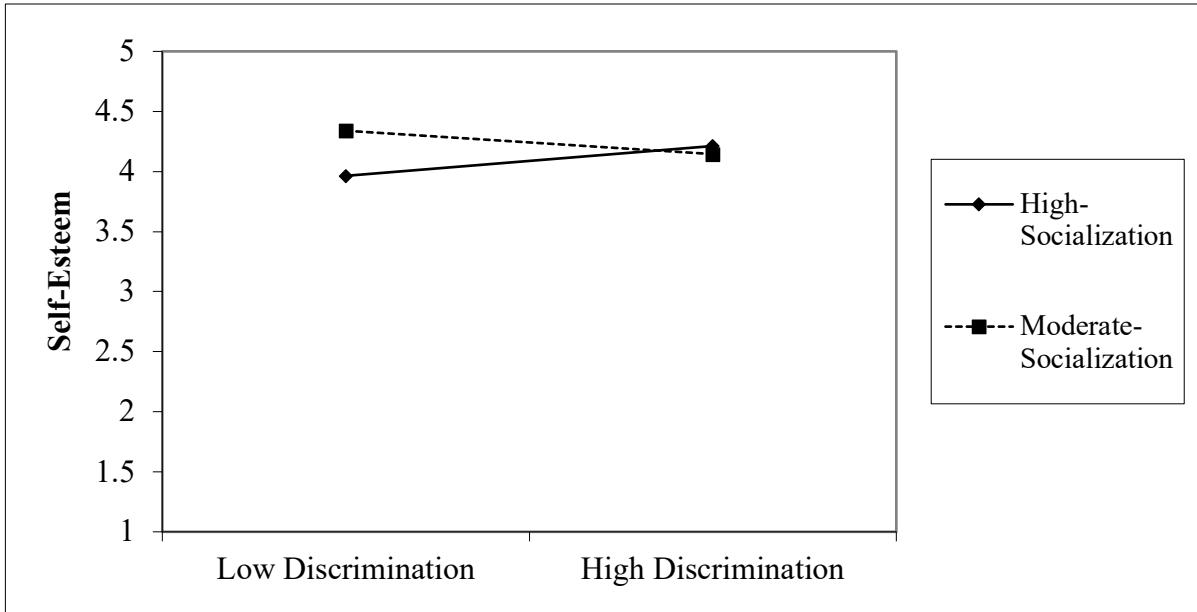


Figure 5. Interaction between Moderate-Socialization and Perceived Discrimination.

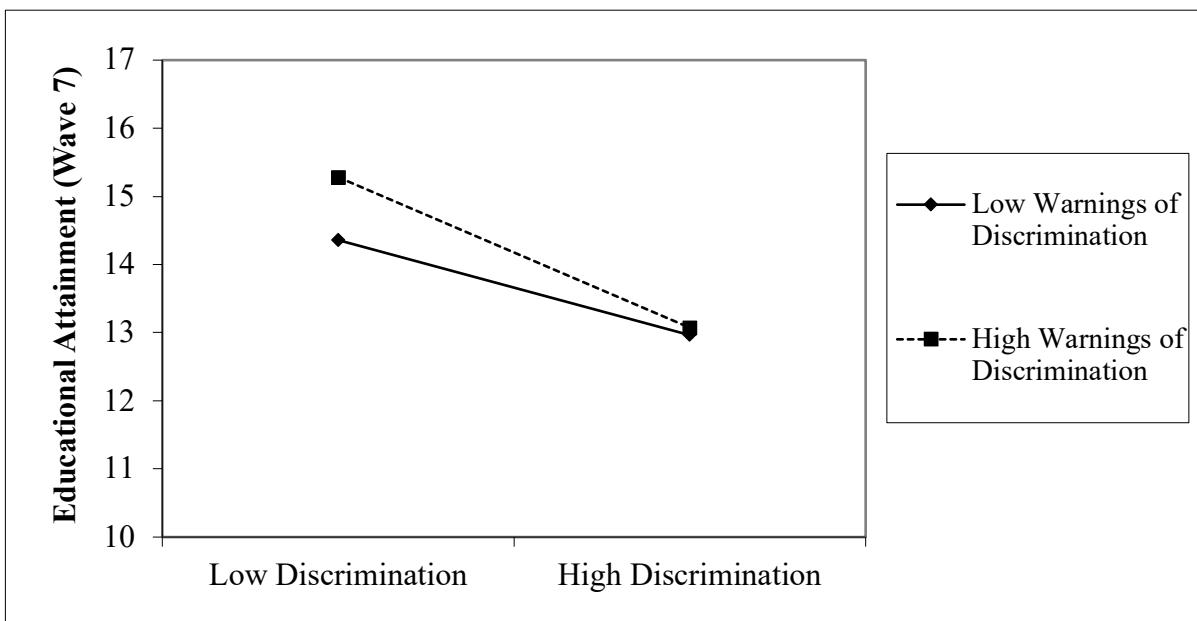


Figure 6. Interaction between Warnings of Discrimination (Wave 3) and Perceived Discrimination

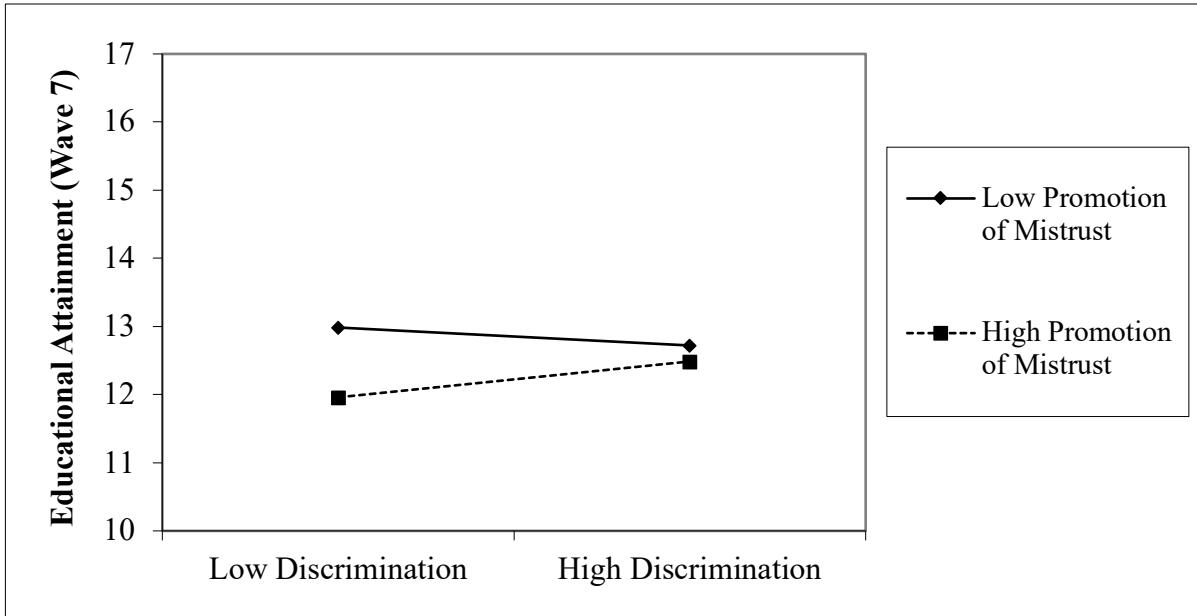


Figure 7. Interaction between Promotion of Mistrust (Wave 3) and Perceived Discrimination.

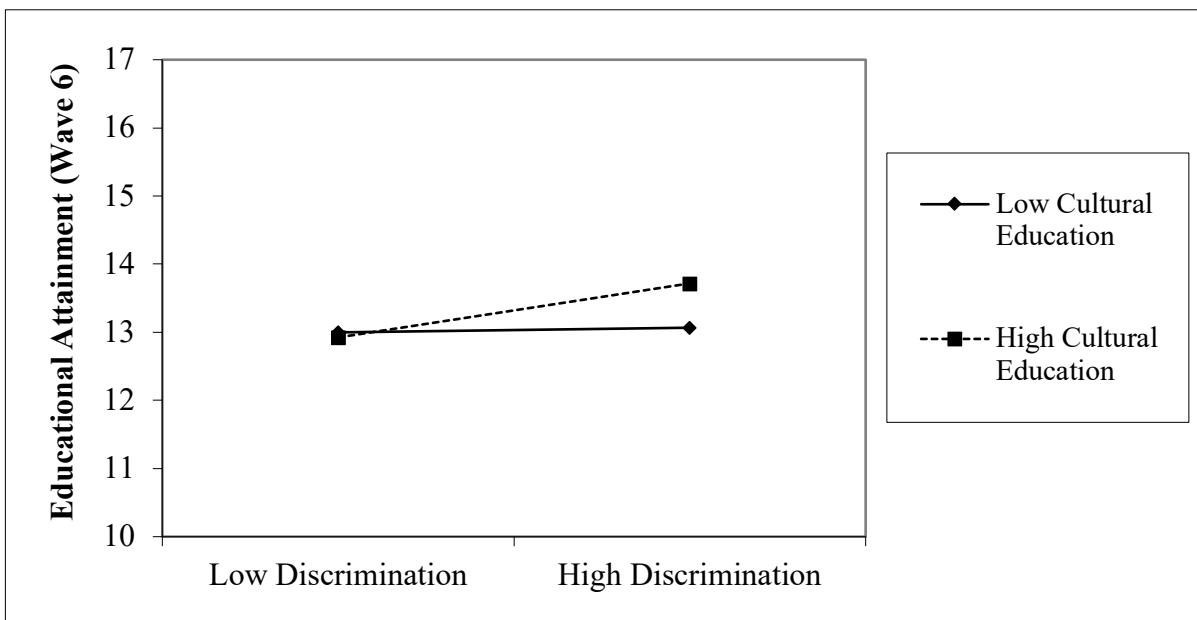


Figure 8. Interaction between Cultural Education (Wave 4) and Perceived Discrimination.

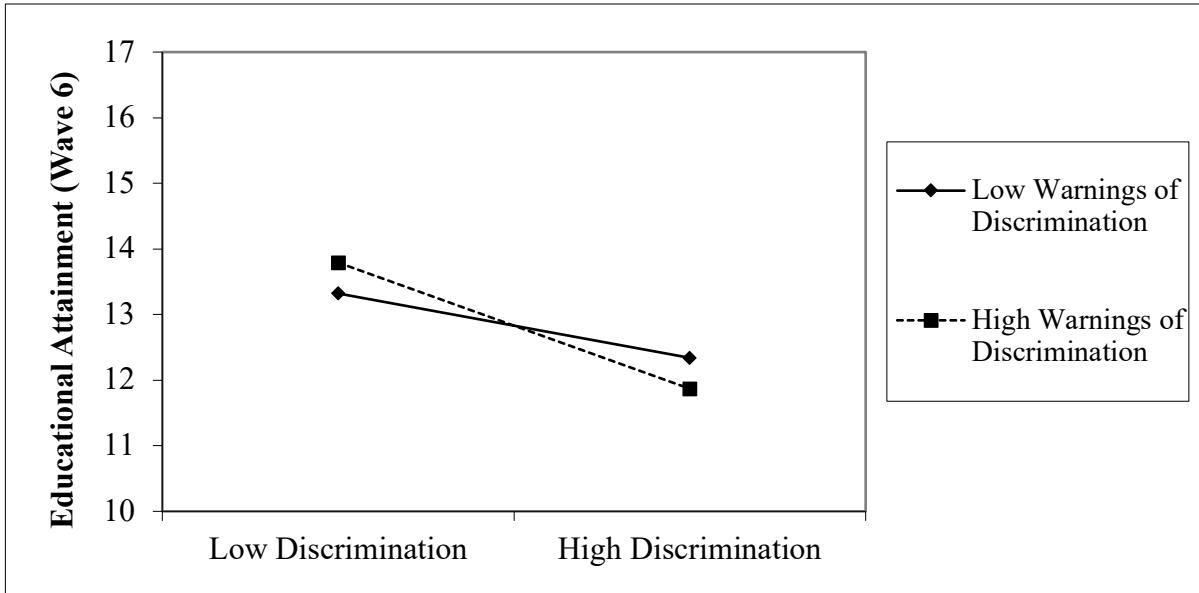


Figure 9. Interaction between Warnings of Discrimination (Wave 4) and Perceived Discrimination.

CHAPTER 5. DISCUSSION

In the present study I investigated ERS meta-message patterns longitudinally in a sample of African American youth across various time points. Also, I explored the relationship between perceived racial discrimination at 22 years old and wellbeing and functioning outcomes (i.e., depressive symptoms, self-esteem, and educational attainment) during their mid to late twenties. In addition, I examined whether ERS meta-message group membership moderated the relationship between perceived racial discrimination and depression, self-esteem, and educational attainment.

Ethnic-Racial Socialization Meta-Messages

ERS meta-messages are believed to reflect racial socialization as it occurs in families, in which parents transmit a combination of socialization messages to their offspring instead of only one specific type of message (Neblett et al., 2008; Neblett, et al., 2009; Granberg et al., 2012). Results of this study indicated three different ERS meta-message groups at age 16 years and three different ERS meta-message groups for ERS at age 18 years. At 16 years old, the groups were labeled low-wariness, moderate-wariness, and high-wariness, as the primary difference between groups was the mean levels of promotion of mistrust (i.e., fostering unease about interracial interactions; Hughes et al., 2006; Priest et al., 2014; Saleem et al., 2016). In contrast, at 18 years old, ERS meta-messages groups, low-socialization, moderate-socialization, and high-socialization, reflected the frequency of all three ERS messages (i.e., cultural education, warnings of discrimination, and promotion of mistrust).

The differences in meta-message groupings may be indicative of the changes in ERS message transmission overtime. Previous research shows that parents provide cultural education messages across a wide range of ages (Hughes & Chen, 1997). However, parents

are more likely to provide warnings of discrimination and promotion of mistrust messages as children mature (Hughes & Chen, 1997).

In regard to meta-message cluster content, the Wave 4 classes (i.e., low-socialization, moderate-socialization, and high-socialization) were similar to some of the classes found by Granberg and colleagues (2012), which is expected since similar samples of the FACHS longitudinal study were assessed. In particular, this three-class solution appeared similar to the three frequency-based classes found in Granberg and colleagues' investigation, although the authors found two additional classes (guarded and empowered socialization) that were not found in this study. Other meta-message research has found ERS clusters that describe the frequency of socialization (Nebblett et al., 2008; Nebblett et al., 2009) and whether the socialization means are higher for positive (e.g., racial pride, and cultural education) or negative (e.g., racial barriers, and promotion of mistrust; Nebblett et al., 2008; Nebblett et al., 2009) socialization messages. Despite these shared characteristics there is not much consistency between meta-message classes across studies. Some of this may be explained by the use of different ERS questionnaires. However, if the surveys are truly tapping into the latent variable of ERS, more consistency amongst ERS meta-messages is expected.

Racial Discrimination and Outcomes over Time

I predicted that perceived racial discrimination would have a significant and positive relationship with depressive symptoms at both time points. I also expected for perceived discrimination to have a significant inverse relationship with self-esteem and educational attainment during participants mid and late twenties. These hypotheses are based on previous research linking discrimination with wellbeing and academic outcomes (Lee & Ahn, 2011; Paradies et al., 2015; Carter, Lau, Johnson, & Kirkinis, 2017; Benner et al., 2018). However,

few of these studies assessed the associations over time. Results of this study showed that perceived discrimination (at average age 22 years) significantly predicted both depressive symptoms and self-esteem at 24 years old. However, discrimination (experienced at 22) was not a significant predictor of depressive symptoms and self-esteem at 29 years old. Moreover, perceived discrimination did not significantly predict educational attainment at either 24 or 29 years old. These results partially support my predictions of the relationship between perceived racial discrimination and psychological well-being and academic outcomes.

The nonsignificant relationship between discrimination at the of age 22 years and outcomes at 29 years old, may be explained by the seven-year gap between the predictor and outcome variables. The relationship between the outcomes may be significant when the two variables are closer together in time. In regard to the lack of significant association between perceived discrimination and educational attainment may be that discrimination indirectly relates to educational attainment through other academic outcomes. Past research has shown a significant relationship between discrimination and academic self-concept (Graham, 1994; Steele & Aronson, 1995), academic achievement, persistence, and curiosity (Benner et al., 2018), which are likely related to pursuing and completing academic studies. Therefore, it would be beneficial to empirically explore that relationship between perceived discrimination, the above academic variables, and educational attainment. Moreover, despite the results showing an achievement gap between African Americans and their European American counterparts (McKinsey & Company, 2009; Harris & Graham, 2014), there is little research on the direct association between perceived racial discrimination and educational attainment.

Ethnic-Racial Socialization as a Moderator

Scholars propose that families use ERS as a tool to ready African American youth for managing racial-stressors as a racial-ethnic minority (Barnes, 1980; Peters, 1985; Spencer, 1983). However, there are mixed results in the literature about the relationship between ERS and youth outcomes (psychological and academic). For instance, some research has found ERS to be correlated with decreased depressive symptoms (Stevenson, Reed, Bodinson, & Bishop, 1997) and increased self-esteem (Constantine and Blackmon, 2002). In contrast, other studies have found no significant link between ERS and self-esteem (Fatimilehin, 1999).

There are several possible causes for the inconsistent relationship between ERS and variables, including a child's sex and age (Lesane-Brown, 2006; Priest et al., 2014), as there are changes in parental transmission of ERS messages based on these demographics. Moreover, researchers have analyzed ERS from different two different approaches, meta-messages (grouped patterns of messages) and discrete messages (with scores on a continuous scale).

Meta-message research is a developing area within ERS studies, and there are mixed results about meta-messages groups (i.e., number of classes) and labels, which reflect the type of message combinations. For instance, one hand, two studies of meta-messages found four-class model solutions (Neblett et al., 2008; Neblett et al., 2009), in which the clusters were characterized by the frequency of message transmission and if the messages emphasized pleasant (e.g., cultural pride) or unpleasant aspects (e.g., potentially encountering racial barriers) of navigating life as a racial or ethnic minority. On the other hand, another study found a five-class model of ERS meta-messages (Granberg et al., 2012).

In addition to the differences in the latent variable models, there are inconsistencies concerning meta-messages being a significant predictor of outcome variables and moderator of the relationship between perceived discrimination and outcome variables.

In the present study, I expected that for individuals who are in ERS meta-message clusters that are lower in promotion of mistrust (i.e., low-wariness), perceived discrimination will not be related to outcome variables at both Wave 6 or Wave 7. I also predicted that for those in ERS meta-message classes that are higher in cultural education (i.e., high-socialization), perceived discrimination will also not be related to outcomes at either time point. However, ERS meta-message groups were not found to be a statistically significant moderator of the discrimination-outcome relationship, except for ERS meta-messages at Wave 4 and self-esteem at Wave 7. These results are consistent with previous studies that did not find ERS meta-messages to influence the association of discrimination with outcomes significantly (Neblett et al., 2008; Neblett et al., 2009; Granberg et al., 2012).

In contrast, follow-up analyses showed significant moderation effects with the continuous study variables, which matches other research using continuous ERS scales (Harris-Britt et al., 2007; Brown & Tylka, 2011). Data explaining the moderating effects of ERS may be lost when the construct is analyzed as a latent profile instead of on a continuous scale.

Limitations

The results of this study provide a better understanding of the relationships between perceived discrimination, ERS meta-messages, and outcome variables over various time points among a sample of African American youth. However, there are some limitations that should be noted. First, this research only addressed the experiences of African American

youth and so should be applied to other groups only with great caution. Patterns of ERS messages may vary across different racial and ethnic groups in content and frequency (Priest et al., 2014). In addition, the role of ERS meta-messages on the relationship between discrimination and outcomes may differ across race and ethnicity.

Second, the timeframe for the longitudinal assessments were quite large. Although a strength of this study was the ability to assess the relationships among these variables across time, a limitation was the large gaps in time between data collections. Data was collected every two to three years, with participants answering questionnaires about experiences that occurred within the past year. Participants may experience difficulties accurately recalling details from the past year (Althubaiti, 2016). Furthermore, the effects that racial discrimination from four or six years prior have on the outcomes of interest may be too small. This does not mean that racial discrimination may not have an effect. Perhaps more current assessments of racial discrimination, for example, degree and frequency of discrimination within the last six months, would have more proximal and likely stronger effects on the outcomes. This might also translate into stronger moderating effects of racial socialization. These are limitations to the current study that could be explored in more detail in future research.

Lastly, in regard to the LPAs conducted in this study, some of the latent class groups were small (e.g., including approximately 1.0% of the sample). This may be capturing the true patterns of ERS occurring in the sample. However, this is perhaps a sign that investigating ERS meta-messages via LPA may not be the most effective way to conduct these procedures. Moreover, there are mixed results about meta-messages as moderators on the link between discrimination and various outcomes (Neblett et al., 2008; Neblett et al.,

2009; Granberg et al., 2012). In the current study, the racial socialization subscales themselves seemed to provide more evidence for a moderating effect of racial socialization.

Future Research and Implications

This study is one of the first to examine ERS meta-messages over time. Therefore, the findings of this research may be important to both research and clinical practice. In particular, these findings provide partial support for the relationship between perceived racial discrimination and psychological and academic functioning. Also, this research provides additional perspective of ERS meta-messages across time and their potential role as a moderator variable on the discrimination-outcome link.

Future Research

Understanding the role of ERS on wellbeing and functioning outcomes can better help to design future research studies on perceived racial discrimination. For instance, researchers can further investigate ERS meta-message patterns and their relationships with various outcome variables. This can lead to the development of new ERS-related racial discrimination interventions. In addition, results from this study may help to inform us of the overall influence of racial discrimination on individuals' lives over time.

Building on this study, researchers have many potential avenues to pursue. For example, much of the racial socialization research has been conducted with African Americans. Furthermore, all of the known meta-message research had been conducted with African Americans. Therefore, investigating ERS meta-message patterns among other racial groups is valuable. Racial and ethnic groups vary in regard to culture and values (Sue & Sue, 2013), therefore, it is reasonable to believe that ethnic-racial socialization processes may differ across such groups.

A primary function of ERS is to provide youth with the tools to recognize and cope with discrimination and develop a healthy sense of self (Barnes, 1980; Peters, 1985; Spencer, 1983). Therefore, ERS may be a type of adaptive coping response that is applied to alleviate the distress caused by racial discrimination. Continued longitudinal exploration of the impacts of racial socialization would help to illuminate the effects of ERS over time. Moreover, ERS processes change as youth age (Brown, Tanner-Smith, Lesane-Brown, Ezell, 2007). Therefore, it is essential to be cognizant of these changes and how this may alter the relationship between discrimination and various outcomes.

Clinical Implications

Clinical application of the research can help in providing more effective, research informed, and multiculturally-sensitive therapy interventions to support individuals who are exploring concerns related to their racial/ethnic experiences. Clinicians can inform clients of color about the associations between greater experiences of perceived discrimination and psychological and academic difficulties, which may aid in normalizing clients' lived experiences. Also, clinicians can help individuals explore their own racial socialization processes and the potential relationship of these processes to their presenting concerns. Furthermore, clinicians may aid clients in navigating the process of engaging in their own racial socialization process, if appropriate. Often therapy interventions include aiding clients in developing healthy and adaptive coping strategies to manage distress (American Psychological Association, 2019); racial socialization may be one of those strategies. The clinical field emphasizes the importance of understanding and supporting differences of world views and lived experiences, which includes race/ethnic-related identities.

Incorporating racial socialization can be a method in pursuing this goal and increase culturally competent clinical work.

Conclusion

The role of perceived discrimination on psychological wellbeing and academic functioning is important. Ethnic-racial socialization (ERS) provides an example of how African American families prepare their children to navigate the life as a racial minority and the subsequent stress they may experience. The present study results help to provide an understanding of the relationship between discrimination and outcomes overtime. Also, the results help to better understand ERS as a potential moderator of the discrimination-outcome link. Researching and broadening the field's understanding of the moderating effects of ERS has the potential to change how researchers approach future perceived discrimination research. Additionally, these findings may impact the way in which clinicians approach racism-stress related interventions.

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APPENDIX A. MEASURES

Depressive Symptoms

Adapted from the Diagnostic Interview Schedule for Children, Version 4 (DISC; Shaffer et al., 1993)

1 = Yes 0 = No

“In the last year was there a time when . . .”

1. You often felt sad or depressed?
2. Nothing was fun for you and you just weren't interested in anything?
3. You often felt grouchy or irritable and often in a bad mood, when even little things would make you mad?
4. You lost weight?
5. You lost your appetite or often felt less like eating?
6. You gained a lot of weight?
7. You felt much hungrier than usual or when you ate a lot more than usual?
8. You had trouble sleeping, that is, trouble falling asleep, staying asleep, or waking up too early?
9. You slept more during the day than you usually do?
10. You often felt slowed down . . . like you walked or talked much slower than you usually do?
11. You often felt restless . . . like you just had to keep walking around?
12. You had less energy than you usually do?
13. Doing even little things made you feel really tired?
14. Your arms and legs felt heavy, like you were weighed down by them?
15. You often blamed yourself for bad things that happened?
16. You felt you couldn't do anything well or that you weren't as good-looking or as smart as other people?
17. You couldn't think as clearly or as fast as usual?
18. You often had trouble keeping your mind on your schoolwork, work or other things?
19. It was often hard for you to make up your mind or to make decisions?
20. You often thought about death or about people who had died or about being dead yourself?
21. You thought seriously about killing yourself?

Adapted from the University of Michigan Composite International Diagnostic Interview (UM-CIDI; Kessler, 1994)

1 = Yes 0 = No

“In the past year, was there ever a two week period when you:”

1. Felt sad, empty or depressed?
2. Lost interest in things?
3. Woke up at least two hours before you wanted to?
4. Slept too much almost every day?
5. Couldn't sit still and paced up and down or couldn't keep your hands still when sitting?
6. Felt worthless nearly every day?
7. Felt guilty?
8. Felt you were not as good as other people?
9. Had so little self-confidence that you wouldn't try to have your say about anything?
10. Lost interest in sex?
11. Lost the ability enjoy it when good things happened?
12. Thought about death?
13. Thought about committing suicide?
14. Attempted suicide?
15. Took medication for depression?
16. Were unable to do your job, take care of your house or family, or take care of yourself?

Self-Esteem

(Adapted from Roseberg, 1965)

1 = Strongly agree 2 = Agree 3 = Neutral or mixed 4 = Disagree 5 = Strongly disagree

1. I feel that I'm a person of worth, at least on an equal level with others. Do you...
2. I feel that I have a number of good qualities. Do you...
3. All in all, I am inclined to feel that I'm a failure. Do you...
4. I am able to do things as well as most other people. Do you...
5. I feel I do not have much to be proud of. Do you...
6. I take a positive attitude toward myself. Do you...
7. On the whole, I am satisfied with myself. Do you...
8. I certainly feel useless at times. Do you...
9. I wish I could have more respect for myself. Do you...
10. At times I think I am no good at all. Do you...

Educational Attainment

“What is the highest level of education you have completed?”

1-11 = Grade level completed below 12th

12 = High school grad or GED

13 = 1-year college, vocational, or tech training

- 14 = 2 years of college
 15 = 3 years of college
 16 = Bachelor's degree
 17 = Graduate training or more

Ethnic-Racial Socialization

(Adapted from Hughes and Johnson, 2001)

1 = Never 2 = 1-2 Times 3 = 3-5 Times 4 = 5-10 Times 5 = 10 or More times

“How often within the past year have the adults in your family:”

Cultural education

1. Celebrated cultural holidays of your racial group?
2. Talked to you about important people or events in the history of your racial group?
3. Taken you to places or events that reflect your racial heritage?
4. Encouraged you to read books concerning the history or traditions of your racial group?
5. Said or done anything to encourage you to do something to learn about the history or traditions of your racial group?

Discrimination warnings

1. Indicated that people might limit you because of your race?
2. Indicated that some people might treat you badly or unfairly because of your race?
3. Indicated that you will have to be better than other people your age to get the same rewards because of your race?
4. Talked with you about discrimination or prejudice against your racial group?
5. Explained how something you saw on TV showed poor treatment of your racial group?
6. Talked to someone else about discrimination or prejudice against your racial group while you were present?

Promotion of mistrust

1. Talked to you about how you can't trust people your age from other racial or ethnic groups?
2. Encouraged you to keep your distance from people your age of a race or ethnicity that differs from yours?
3. Told you to be careful around people your age or adults of a certain race or ethnicity?
4. Talked about the negative qualities that people of other races or ethnicities possess?

Coping with discrimination

1. Talked about ways of overcoming prejudice and discrimination?

2. Indicated that prejudice and discrimination should not prevent you from being a success in life?
3. Encouraged you to form relationships with people from other races or ethnicities besides your own?

Perceived Racial Discrimination

(Adapted from Landrine & Klonoff, 1996)

1 = Never 2 = Once or twice 3 = A few times 4 = Frequently

“In the last year, how often:”

1. Has someone said something insulting to you just because of your race or ethnic background?
2. Has a store-owner, sales clerk, or person working at a place of business treated you in a disrespectful way just because of your race or ethnic background?
3. Have the police hassled you just because of your race or ethnic background?
4. Has someone ignored you or excluded you from some activity just because of your race or ethnic background?
5. How often has someone suspected you of doing something wrong just because of your race or ethnic background?
6. Has someone yelled a racial slur or racial insult at you just because of your race or ethnic background?
7. Has someone threatened to harm you physically just because of your race or ethnic background?
8. Have you encountered people who are surprised that you, given your race or ethnic background, did something really well?
9. Have you been treated unfairly just because of your race or ethnic background?
10. Have you encountered people who didn't expect you to do well just because of your race or ethnic background?
11. Has someone discouraged you from trying to achieve an important goal just because of your race or ethnic background?
12. Have your close friends been treated unfairly just because of their race or ethnic background?
13. Have members of your family been treated unfairly just because of their race or ethnic background?

APPENDIX B. IRB DETERMINATION LETTER



Institutional Review Board
 Office for Responsible Research
 Vice President for Research
 2420 Lincoln Way, Suite 202
 Ames, Iowa 50014
 515 294-4566

Date: 03/18/2019

To: Jennifer Major Nathaniel Wade

From: Office for Responsible Research

Title: **Racial Discrimination, Ethnic-Racial Socialization, Depression, and Educational Attainment in a Longitudinal Study of African American Youth**

IRB ID: **19-119**

Submission Type: Initial Submission **Determination Date:** 03/18/2019

The project referenced above has been reviewed and the following determination has been made. The project:

Is research that does not involve human subjects according to federal regulations.

Accordingly, this project does not need IRB approval and you may proceed at any time. We do, however, urge you to protect the rights of your participants in the same ways you would if IRB approval were required. For example, best practices include informing participants that involvement in the project is voluntary and maintaining confidentiality as appropriate. Additionally, approval from other entities may be needed depending on your project. This IRB determination in no way implies or guarantees that permission from these other entities will be granted.

If you modify the project, we recommend communicating with the IRB staff to ensure that the modifications do not change this determination such that IRB approval is required.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or

IRB@iastate.edu.

APPENDIX C. HIERARCHICAL REGRESSIONS WITH ERS CLASSES PREDICTING OUTCOME VARIABLES

Table C1. *Hierarchical Linear Regression with Wave 3 ERS Classes Predicting Wave 6 Depressive Symptoms*

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02** (.01)	-.10	-.02* (.01)	-.09	-.02* (.01)	-.09	-.02* (.01)	-.09
Family Income	.01 (.01)	.03	.01 (.01)	.02	.01 (.01)	.02	.01 (.01)	.02
Female	-.01 (.02)	-.02	-.00 (.02)	-.00	-.00 (.02)	-.00	.00 (.02)	.00
PC Educational Attainment	.00 (.00)	.01	.00 (.00)	.00	.00 (.00)	.00	.00 (.00)	.00
Depressive Symptoms W5	.55*** (.04)	.52	.52*** (.05)	.49	.52*** (.05)	.49	.51*** (.05)	.48
Racial Discrimination W5			.02* (.01)	.10	.02* (.01)	.10	-.02 (.04)	-.08
Low-Wariness					-.04 (.08)	-.06	-.19 (.17)	-.29
Moderate -Wariness					-.05 (.08)	-.07	-.16 (.19)	-.24
Discrimination x Low-Wariness							.09 (.08)	.28
Discrimination x Moderate-Wariness							.06 (.10)	.16
Constant	.06 (.05)		.07 (.06)		.11 (.10)		.12 (.10)	
R^2	.29*		.30*		.30		.30	
ΔR^2			.01*		.00		.00	

Notes. N = 450, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table C2. Hierarchical Linear Regression with Wave 3 ERS Classes Predicting Wave 7 Depressive Symptoms

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02 (.01)	-.06	-.01 (.01)	-.05	-.01 (.01)	-.05	-.01 (.01)	-.05
Family Income	.00 (.02)	.01	.00 (.02)	.01	.01 (.02)	.02	.01 (.02)	.02
Female	.05* (.03)	.10	.06* (.03)	.11	.06* (.03)	.11	.07** (.03)	.12
PC Educational Attainment	-.00 (.01)	-.04	-.01 (.01)	-.05	-.01 (.01)	-.04	-.01 (.01)	-.04
Depressive Symptoms W5	.37*** (.06)	.33	.36*** (.06)	.31	.37*** (.06)	.32	.35*** (.06)	.31
Racial Discrimination W5			.01 (.01)	.05	.01 (.01)	.04	-.05 (.05)	-.21
Low-Wariness					-.26** (.10)	-.37	-.52** (.21)	-.72
Moderate -Wariness					-.31** (.10)	-.41	-.49* (.24)	-.65
Discrimination x Low-Wariness							.14 (.10)	.40
Discrimination x Moderate-Wariness							.09 (.12)	.21
Constant	.13 (.07)		.14 (.08)		.40** (.12)		.43*** (.12)	
R^2	.14****		.14		.17		.17	
ΔR^2			.00		.02**		.01	

Notes. N = 362, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table C3. Hierarchical Linear Regression with Wave 4 ERS Classes Predicting Wave 6 Depressive Symptoms

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02** (.01)	-.10	-.02* (.01)	-.09	-.02* (.01)	-.09	-.02* (.01)	-.08
Family Income	.01 (.01)	.03	.01 (.01)	.02	.01 (.01)	.02	.01 (.01)	.02
Female	-.01 (.02)	-.02	-.00 (.02)	-.00	.00 (.02)	.00	.00 (.02)	.00
PC Educational Attainment	.00 (.00)	.01	.00 (.00)	.00	.00 (.00)	.01	.00 (.00)	.01
Depressive Symptoms W5	.55*** (.04)	.52	.52*** (.05)	.49	.53*** (.05)	.49	.52*** (.05)	.49
Racial Discrimination W5			.02* (.01)	.10	.02** (.01)	.10	-.00 (.04)	.00
Low- Socialization					-.02 (.04)	-.03	-.08 (.13)	-.16
Moderate - Socialization					-.05 (.04)	-.11	-.15 (.13)	-.31
Discrimination x Low- Socialization							.03 (.08)	.12
Discrimination x Moderate- Socialization							.06 (.07)	.22
Constant	.06 (.06)		.07 (.06)		.10 (.06)		.10 (.06)	
R^2	.29***		.30		.30		.31	
ΔR^2			.01*		.01		.00	

Notes. N = 450, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table C4. Hierarchical Linear Regression with Wave 4 ERS Classes Predicting Wave 7 Depressive Symptoms

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02 (.01)	-.06	-.01 (.01)	-.05	-.01 (.01)	-.04	-.01 (.01)	-.05
Family Income	.00 (.02)	.01	.00 (.02)	.01	.00 (.02)	.01	.00 (.02)	.01
Female	.05* (.03)	.10	.06* (.03)	.11	.06* (.03)	.11	.06* (.03)	.12
PC Educational Attainment	-.00 (.01)	-.04	-.01 (.01)	-.05	-.01 (.01)	-.04	-.01 (.01)	-.05
Depressive Symptoms W5	.37*** (.06)	.33	.36*** (.06)	.31	.38*** (.06)	.34	.38*** (.06)	.34
Racial Discrimination W5			.01 (.01)	.05	.02 (.01)	.07	.03 (.05)	.10
Low-Socialization					.08 (.05)	.15	.06 (.17)	.11
Moderate-Socialization					.00 (.05)	.00	.07 (.17)	.13
Discrimination x Low-Socialization							.02 (.10)	.05
Discrimination x Moderate-Socialization							-.04 (.10)	-.14
Constant	.13 (.07)		.14 (.08)		.10 (.08)		.10 (.08)	
R^2	.14***		.14		.17		.17	
ΔR^2			.00		.02**		.00	

Notes. N = 362, * = $p < .05$, *** = $p < 0.001$.

Table C5. Hierarchical Linear Regression with Wave 3 ERS Classes Predicting Wave 6 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.06* (.03)	.09	.06* (.03)	.09	.06* (.03)	.10	.06* (.03)	.09
Family Income	-.01 (.04)	-.01	-.01 (.04)	-.01	-.01 (.04)	-.01	-.01 (.04)	-.01
Female	.08 (.05)	.06	.07 (.05)	.05	.07 (.05)	.05	.07 (.05)	.05
PC Educational Attainment	-.02 (.01)	-.06	-.01 (.01)	-.05	-.01 (.01)	-.06	-.02 (.01)	-.06
Self-Esteem W5	.46*** (.04)	.53	.45*** (.04)	.52	.45*** (.04)	.52	.45*** (.04)	.51
Racial Discrimination W5			-.05* (.03)	-.08	-.05* (.03)	-.08	.00 (.11)	.01
Low-Wariness					.01 (.20)	.01	.24 (.44)	.14
Moderate -Wariness					-.07 (.21)	-.04	-.11 (.49)	-.06
Discrimination x Low- Wariness							-.13 (.22)	-.16
Discrimination x Moderate-Wariness							.03 (.25)	.03
Constant	2.55***		2.50****		2.58***		2.58***	
	(.21)		(.21)		(.28)		(.28)	
R^2	.32***		.33		.33		.33	
ΔR^2			.01*		.00		.00	

Notes. N = 450, * = $p < .05$, *** = $p < 0.001$.

Table C6. Hierarchical Linear Regression with Wave 3 ERS Classes Predicting Wave 7 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.02 (.04)	.02	.01 (.04)	.01	.01 (.04)	.01	.01 (.04)	.01
Family Income	-.01 (.05)	-.00	-.01 (.05)	-.01	-.01 (.05)	-.01	-.01 (.05)	-.01
Female	-.04 (.07)	-.02	-.06 (.07)	-.04	-.06 (.07)	-.04	-.06 (.07)	-.04
PC Educational Attainment	-.01 (.02)	-.02	-.00 (.02)	-.01	-.00 (.02)	-.01	-.00 (.02)	-.01
Self-Esteem W5	.53*** (.05)	.51	.52*** (.05)	.49	.52*** (.05)	.50	.52*** (.05)	.50
Racial Discrimination W5			-.06 (.04)	-.08	-.06 (.04)	-.08	-.06 (.14)	-.08
Low-Wariness					.00 (.27)	.00	-.03 (.59)	-.01
Moderate -Wariness					.04 (.29)	.02	.32 (.66)	.14
Discrimination x Low- Wariness							.02 (.28)	.02
Discrimination x Moderate-Wariness							-.17 (.33)	-.13
Constant	2.17***		2.20***		2.18***		2.17***	
	(.30)		(.30)		(.39)		(.39)	
R^2	.27***		.27		.27		.28	
ΔR^2			.01		.00		.00	

Notes. N = 362, *** = $p < 0.001$.

Table C7. Hierarchical Linear Regression with Wave 4 ERS Classes Predicting Wave 6 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.06* (.03)	.09	.06* (.03)	.09	.06* (.03)	.09	.05* (.03)	.08
Family Income	-.01 (.04)	-.01	-.01 (.04)	-.01	-.01 (.04)	-.01	-.01 (.04)	-.01
Female	.08 (.05)	.06	.07 (.05)	.05	.07 (.05)	.05	.07 (.05)	.06
PC Educational Attainment	-.02 (.01)	-.06	-.01 (.01)	-.05	-.01 (.01)	-.05	-.02 (.01)	-.06
Self-Esteem W5	.46*** (.04)	.53	.45*** (.04)	.52	.45*** (.04)	.52	.44*** (.04)	.51
Racial Discrimination W5			-.05* (.03)	-.08	-.05* (.03)	-.08	.12 (.10)	.19
Low-Socialization					.10 (.10)	.08	.55 (.35)	.43
Moderate -Socialization					.10 (.10)	.08	.80* (.35)	.63
Discrimination x Low- Socialization							-.26 (.20)	-.33
Discrimination x Moderate- Socialization							-.40* (.19)	-.59
Constant	2.55***		2.56***		2.49***		2.49***	
	(.21)		(.21)		(.22)		(.22)	
R^2	.32***		.33		.33		.34	
ΔR^2			.01*		.00		.01	

Notes. N = 450, * = $p < .05$, *** = $p < 0.001$.

Table C8. Hierarchical Linear Regression with Wave 4 ERS Classes Predicting Wave 7 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β	b (SE)	β	b (SE)	β	b (SE)	β
Parenting Quality	.02 (.04)	.02	.01 (.04)	.01	.01 (.04)	.01	.01 (.04)	.01
Family Income	-.01 (.05)	-.00	-.01 (.05)	-.01	-.00 (.05)	-.00	-.02 (.05)	-.00
Female	-.04 (.07)	-.02	-.06 (.07)	-.04	-.06 (.07)	-.04	-.05 (.07)	-.03
PC Educational Attainment	-.01 (.02)	-.02	-.00 (.02)	-.01	-.00 (.02)	-.01	-.01 (.02)	-.02
Self-Esteem W5	.53*** (.05)	.51	.52*** (.05)	.49	.52*** (.05)	.50	.52*** (.05)	.49
Racial Discrimination W5			-.06 (.04)	-.08	-.06 (.04)	-.09	.13 (.13)	.17
Low-Socialization					-.09 (.13)	-.06	.60 (.48)	.39
Moderate -Socialization					-.01 (.13)	-.01	.62 (.47)	.40
Discrimination x Low- Socialization							-.41 (.27)	-.45
Discrimination x Moderate- Socialization							-.37 (.27)	-.45
Constant	2.17***		2.20***		2.24***		2.25*** (.31)	
	(.30)		(.30)		(.31)			
R^2	.27***		.27		.28		.28	
ΔR^2			.01		.00		.01	

Notes. N = 362, *** = $p < 0.001$.

III

Table C9. Hierarchical Linear Regression with Wave 3 ERS Classes Predicting Wave 6 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.22** (.08)	.13	.22** (.08)	.13	.23** (.08)	.13	.22** (.08)	.13
Family Income	-.04 (.11)	-.02	-.04 (.11)	-.02	-.03 (.11)	-.01	-.03 (.11)	-.01
Female	.44** (.15)	.12	.43** (.16)	.12	.43** (.16)	.12	.43** (.16)	.12
PC Educational Attainment	.28*** (.03)	.39	.28*** (.03)	.39	.28*** (.03)	.39	.28*** (.03)	.38
Racial Discrimination W5			-.02 (.08)	-.01	-.01 (.08)	-.01	.25 (.34)	.15
Low-Wariness					-.57 (.62)	-.12	.53 (1.32)	.11
Moderate -Wariness					-.91 (.64)	-.18	-1.04 (1.48)	-.20
Discrimination x Low- Wariness							-.62 (.65)	-.27
Discrimination x Moderate-Wariness							.10 (.75)	.04
Constant	9.17***		9.17***		9.79***		9.71***	
	(.43)		(.43)		(.73)		(.73)	
R^2	.17***		.17		.18		.18	
ΔR^2			.00		.01		.01	

Notes. N = 450, ** = $p < 0.01$, *** = $p < 0.001$.

Table C10. Hierarchical Linear Regression with Wave 3 ERS Classes Predicting Wave 7 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.11 (.09)	.06	.12 (.09)	.07	.13 (.09)	.07	.13 (.09)	.07
Family Income	.02 (.13)	.01	.02 (.13)	.01	.03 (.12)	.01	.03 (.12)	.01
Female	.41* (.18)	.11	.43** (.18)	.12	.46** (.18)	.13	.43** (.18)	.12
PC Educational Attainment	.25*** (.04)	.33	.24*** (.04)	.32	.24*** (.04)	.32	.24*** (.04)	.32
Racial Discrimination W5			.08 (.09)	.05	.08 (.09)	.05	.51 (.35)	.30
Low-Wariness					-.76 (.69)	-.15	1.01 (1.46)	.20
Moderate -Wariness					-1.43* (.72)	-.27	-.93 (1.64)	-.18
Discrimination x Low- Wariness							-.96 (.69)	-.42
Discrimination x Moderate-Wariness							-.18 (.82)	-.06
Constant	9.85***		9.89***		10.74***		10.57***	
	(.51)		(.51)		(.83)		(.84)	
R^2	.12***		.12		.14		.15	
ΔR^2			.00		.02**		.01	

Notes. N = 369, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table C11. Hierarchical Linear Regression with Wave 4 ERS Classes Predicting Wave 6 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.22** (.08)	.13	.22** (.08)	.13	.22** (.08)	.13	.21** (.08)	.12
Family Income	-.04 (.11)	-.02	-.04 (.11)	-.02	-.04 (.11)	-.02	-.04 (.11)	-.02
Female	.44** (.15)	.12	.43** (.16)	.12	.44** (.16)	.12	.45** (.16)	.13
PC Educational Attainment	.28*** (.03)	.39	.28*** (.03)	.39	.28*** (.03)	.39	.28*** (.03)	.38
Racial Discrimination W5			-.02 (.08)	-.01	-.00 (.08)	-.00	.04 (.30)	.03
Low-Socialization					.56 (.30)	.16	.34 (1.07)	.10
Moderate -Socialization					.39 (.29)	.11	.81 (1.06)	.23
Discrimination x Low- Socialization							.15 (.61)	.07
Discrimination x Moderate- Socialization							-.25 (.59)	-.13
Constant	9.17***		9.17***		8.74***		8.76***	
	(.43)		(.43)		(.49)		(.50)	
R^2	.17***		.17		.18		.18	
ΔR^2			.00		.01		.00	

Notes. N = 450, ** = $p < 0.01$, *** = $p < 0.001$.

Table C12. Hierarchical Linear Regression with Wave 4 ERS Classes Predicting Wave 7 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β	b (SE)	β	b (SE)	β	b (SE)	β
Parenting Quality	.11 (.09)	.06	.12 (.09)	.07	.11 (.09)	.06	.11 (.09)	.06
Family Income	.02 (.13)	.01	.02 (.13)	.01	.03 (.13)	.01	.03 (.13)	.01
Female	.41* (.18)	.11	.43** (.18)	.12	.41* (.18)	.11	.42* (.18)	.12
PC Educational Attainment	.25*** (.04)	.33	.24*** (.04)	.32	.24*** (.04)	.32	.24*** (.04)	.32
Racial Discrimination W5			.08 (.09)	.05	.08 (.09)	.05	.10 (.34)	.06
Low-Socialization					.30 (.34)	.08	.25 (1.21)	.07
Moderate -Socialization					.42 (.33)	.12	.56 (1.19)	.16
Discrimination x Low- Socialization							.03 (.69)	.02
Discrimination x Moderate- Socialization							-.08 (.68)	-.04
Constant	9.85***		9.89***		9.60*** (.58)		9.61***	
	(.51)		(.51)				(.58)	
R^2	.12***		.12		.13		.13	
ΔR^2			.00		.00		.00	

Notes. N = 369, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

APPENDIX D. HIERARCHICAL REGRESSIONS WITH CONTINUOUS ERS SCALES PREDICTING OUTCOME VARIABLES

Table D1. *Hierarchical Linear Regression with Wave 3 Continuous ERS Scales Wave 6 Depressive Symptoms*

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02** (.01)	-.10	-.02* (.01)	-.09	-.03** (.01)	-.11	-.03** (.01)	-.12
Family Income	.01 (.01)	.03	.01 (.01)	.02	.01 (.01)	.02	.01 (.02)	.02
Female	-.01 (.02)	-.02	-.00 (.02)	-.00	-.00 (.02)	-.00	.00 (.02)	.00
PC Educational Attainment	.00 (.00)	.01	.00 (.00)	.00	.00 (.00)	-.00	.00 (.00)	.00
Depressive Symptoms W5	.55*** (.04)	.52	.52*** (.05)	.49	.52*** (.05)	.49	.51*** (.05)	.48
Racial Discrimination W5			.02* (.01)	.10	.02** (.01)	.10	.08** (.03)	.35
Cultural Education					.02 (.01)	.08	.03 (.04)	.11
Warnings of Discrimination					-.01 (.01)	-.04	.03 (.04)	.11
Promotion of Mistrust					-.01 (.02)	-.03	.04 (.05)	.10
Discrimination x Cultural Education							-.01 (.02)	-.04
Discrimination x Warn about Dis.							-.02 (.02)	-.22
Discrimination x Promo of Mistrust							-.03 (.03)	-.16
Constant	.06 (.05)		.07 (.05)		.06 (.06)		.05 (.06)	
R ²	.29***		.30		.30		.31	
ΔR ²			.01*		.01		.01	

Notes. N = 449, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = p < .05, ** = p < 0.01, *** = p < 0.001.

Table D2. Hierarchical Linear Regression with Wave 3 Continuous ERS Scales Predicting Wave 7 Depressive Symptoms

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02 (.01)	-.06	-.01 (.01)	-.05	-.02 (.01)	-.07	-.02 (.01)	-.07
Family Income	.00 (.02)	.01	.00 (.02)	.01	.00 (.02)	.01	.00 (.02)	.01
Female	.05* (.03)	.10	.06* (.03)	.11	.06* (.03)	.11	.06* (.03)	.12
PC Educational Attainment	-.00 (01)	-.04	-.01 (01)	-.05	-.01 (01)	-.04	-.00 (01)	-.03
Depressive Symptoms W5	.37*** (.06)	.33	.36*** (.06)	.31	.36*** (.06)	.31	.35*** (.06)	.30
Racial Discrimination W5			.01 (.01)	.05	.01 (.01)	.06	.10* (.04)	.38
Cultural Education					.02 (.02)	.06	.09 (.05)	.33
Warnings of Discrimination					-.01 (.01)	-.04	-.01 (.05)	-.02
Promotion of Mistrust					.00 (.03)	.01	.04 (.07)	.09
Discrimination x Cultural Education							-.05 (03)	-.38
Discrimination x Warn about Dis.							-.00 (.03)	.03
Discrimination x Promo of Mistrust							-.02 (.04)	-.10
Constant	.13 (.07)		.14 (08)		.11 (.09)		.09 (.09)	
R^2	.14***		.14		.15		.16	
ΔR^2			.00		.00		.01	

Notes. N = 361, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = $p < .05$, *** = $p < 0.001$.

Table D3. Hierarchical Linear Regression with Wave 4 Continuous ERS Scales Predicting Wave 6 Depressive Symptoms

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02** (.01)	-.10	-.02* (.01)	-.09	-.02* (.01)	-.09	-.02* (.01)	-.09
Family Income	.01 (.01)	.03	.01 (.01)	.02	.01 (.01)	.02	.01 (.01)	.02
Female	-.01 (.02)	-.02	-.00 (.02)	-.00	.00 (.02)	.00	.00 (.02)	.00
PC Educational Attainment	.00 (.00)	.01	.00 (.00)	.00	.00 (.00)	.01	.00 (.00)	.01
Depressive Symptoms W5	.55*** (.04)	.52	.52*** (.05)	.49	.52*** (.05)	.49	.52*** (.05)	.49
Racial Discrimination W5			.02* (.01)	.10	.02* (.01)	.10	.02 (.03)	.10
Cultural Education					-.00 (.01)	-.02	-.01 (.04)	-.03
Warnings of Discrimination					-.01 (01)	-.03	-.03 (.03)	-.13
Promotion of Mistrust					.02 (.02)	.06	.06 (.05)	.18
Discrimination x Cultural Education							.00 (.02)	.02
Discrimination x Warn about Dis.							.01 (.02)	.13
Discrimination x Promo of Mistrust							-.02 (.03)	-.16
Constant	.06 (.05)		.07 (.05)		.06 (.06)		.06 (.06)	
R^2	.29***		.30		.30		.30	
ΔR^2			.01*		.00		.00	

Notes. N = 449, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table D4. Hierarchical Linear Regression with Wave 4 Continuous ERS Scales Predicting Wave 7 Depressive Symptoms

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	-.02 (.01)	-.06	-.01 (.01)	-.05	-.01 (.01)	-.04	-.01 (.01)	-.04
Family Income	.00 (.02)	.01	.00 (.02)	.01	.00 (.02)	.01	.00 (.02)	-.01
Female	.05* (.03)	.10	.06* (.03)	.11	.06* (.03)	.11	.06 (.03)	.12
PC Educational Attainment	-.00 (.01)	-.04	-.01 (.01)	-.05	-.01 (.01)	-.05	-.00 (.01)	-.04
Depressive Symptoms W5	.37*** (.06)	.33	.36*** (.06)	.31	.37*** (.06)	.32	.37*** (.06)	.32
Racial Discrimination W5			.01 (.01)	.05	.02 (.01)	.08	.05 (.04)	.18
Cultural Education					.01 (.02)	.02	.09 (.05)	.33
Warnings of Discrimination					-.03 (.02)	-.12	-.07 (.04)	-.31
Promotion of Mistrust					-.01 (.02)	-.01	-.01 (.07)	-.02
Discrimination x Cultural Education							-.05 (.03)	-.42
Discrimination x Warn about Dis.							.03 (.02)	.26
Discrimination x Promo of Mistrust							.00 (.04)	.02
Constant	.13 (.07)		.14 (.08)		.20** (.08)		.19* (.08)	
R^2	.14***		.14		.16		.17	
ΔR^2			.00		.01		.01	

Notes. N = 361, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table D5. Hierarchical Linear Regression with Wave 3 Continuous ERS Scales Predicting Wave 6 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.06* (.03)	.09	.06* (.03)	.09	.06* (.03)	.09	.06* (.03)	.09
Family Income	-.01 (.04)	-.01	-.01 (.04)	-.01	-.02 (.04)	-.02	-.02 (.04)	-.02
Female	.08 (.05)	.06	.07 (.05)	.05	.06 (.05)	.05	.05 (.05)	.04
PC Educational Attainment	-.02 (.01)	-.06	-.01 (.01)	-.05	-.02 (.01)	-.07	-.02 (.01)	-.07
Self-Esteem W5	.46*** (.04)	.53	.45*** (.04)	.52	.44*** (.04)	.51	.43*** (.04)	.50
Racial Discrimination W5			-.05* (.03)	-.08	-.07** (.03)	-.11	-.23** (.08)	-.37
Cultural Education					-.03 (.03)	-.04	-.12 (.09)	-.18
Warnings of Discrimination					.09** (.03)	.13	.06 (.09)	.10
Promotion of Mistrust					-.08 (.05)	-.08	-.23 (.14)	-.20
Discrimination x Cultural Education							.06 (.06)	.20
Discrimination x Warn about Dis.							.02 (.05)	.06
Discrimination x Promo of Mistrust							.08 (.07)	.17
Constant	2.55***		2.56***		2.65***		2.71***	
	(.21)		(.21)		(.22)		(.22)	
R^2	.32***		.33		.34		.335	
ΔR^2			.01*		.01*		.01	

Notes. N = 450, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table D6. Hierarchical Linear Regression with Wave 3 Continuous ERS Scales Predicting Wave 7 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.02 (.04)	.02	.01 (.04)	.01	.01 (.04)	.02	.01 (.04)	.01
Family Income	-.01 (.05)	-.00	-.01 (.05)	-.01	-.01 (.05)	-.01	-.00 (.05)	-.00
Female	-.04 (.07)	-.02	-.06 (.07)	-.04	-.06 (.07)	-.04	-.05 (.07)	-.03
PC Educational Attainment	-.01 (.02)	-.02	-.00 (.02)	-.01	-.00 (.02)	-.01	-.01 (.02)	-.02
Self-Esteem W5	.53*** (.05)	.51	.52*** (.05)	.50	.52*** (.05)	.50	.53*** (.05)	.50
Racial Discrimination W5			-.06 (.04)	.04	-.06 (.04)	-.08	-.14 (.12)	-.19
Cultural Education					-.02 (.04)	-.03	-.01 (.14)	-.02
Warnings of Discrimination					.02 (.05)	.02	-.19 (.13)	-.25
Promotion of Mistrust					.02 (.07)	.01	.20 (.18)	.15
Discrimination x Cultural Education							-.00 (.08)	-.01
Discrimination x Warn about Dis.							.12 (.07)	.40
Discrimination x Promo of Mistrust							-.11 (.10)	-.20
Constant	2.17***		2.20***		2.19***		2.18***	
	(.30)		(.30)		(.32)		(.33)	
R^2	.27***		.27		.27		.28	
ΔR^2			.01		.00		.01	

Notes. N = 362, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, *** = $p < 0.001$.

Table D7. Hierarchical Linear Regression with Wave 4 Continuous ERS Scales Predicting Wave 6 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.06* (.03)	.09	.06* (.03)	.09	.06* (.03)	.09	.06* (.03)	.09
Family Income	-.01 (.04)	-.01	-.01 (.04)	-.01	-.01 (.04)	-.01	-.01 (.04)	-.01
Female	.08 (.05)	.06	.07 (.05)	.05	.06 (.05)	.05	.06 (.05)	.04
PC Educational Attainment	-.02 (.01)	-.06	-.01 (.01)	-.05	-.02 (.01)	-.06	-.02 (.01)	-.06
Self-Esteem W5	.46*** (.04)	.53	.45*** (.04)	.52	.45*** (.04)	.51	.44*** (.04)	.51
Racial Discrimination W5			-.05* (.03)	-.08	-.05 (.03)	-.08	-.12 (.08)	-.19
Cultural Education					.01 (.03)	.01	-.11 (.10)	-.15
Warnings of Discrimination					.01 (.03)	.01	.13 (.09)	.22
Promotion of Mistrust					-.06 (.04)	-.07	-.25 (.13)	-.28
Discrimination x Cultural Education							.07 (.06)	.21
Discrimination x Warn about Dis.							-.07 (.05)	-.28
Discrimination x Promo of Mistrust							.11 (.07)	.27
Constant	2.55***		2.56***		2.66***		2.70***	
	(.21)		(.21)		(.22)		(.22)	
R^2	.32***		.33		.33		.34	
ΔR^2			.01*		.00		.01	

Notes. N = 450, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = $p < .05$, *** = $p < 0.001$.

Table D8. Hierarchical Linear Regression with Wave 4 Continuous ERS Scales Predicting Wave 7 Self-Esteem

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β	b (SE)	β	b (SE)	β	b (SE)	β
Parenting Quality	.02 (.04)	.02	.01 (.04)	.01	.00 (.04)	.00	-.00 (.04)	-.00
Family Income	-.01 (.05)	-.00	-.01 (.05)	-.01	-.00 (.05)	-.00	-.00 (.05)	-.00
Female	-.04 (.07)	-.02	-.06 (.07)	-.04	-.07 (.07)	-.04	-.08 (.07)	-.05
PC Educational Attainment	-.01 (.02)	-.02	-.00 (.02)	-.01	-.01 (.02)	-.02	-.01 (.02)	-.02
Self-Esteem W5	.53*** (.05)	.51	.52*** (.05)	.50	.51*** (.05)	.49	.51*** (.05)	.48
Racial Discrimination W5			-.06 (.04)	-.08	-.07 (.04)	-.09	-.23 (.11)	-.31
Cultural Education					.04 (.05)	.04	-.26 (.14)	-.31
Warnings of Discrimination					.02 (.04)	.03	.05 (.12)	.06
Promotion of Mistrust					-.03 (.06)	-.03	.03 (.19)	.02
Discrimination x Cultural Education							.18 (.08)	.48
Discrimination x Warn about Dis.							-.01 (.06)	-.05
Discrimination x Promo of Mistrust							-.03 (.11)	-.07
Constant	2.17***		2.20***		2.16***		2.21*** (.32)	
	(.30)		(.30)		(.32)			
R^2	.27**		.27		.28		.29	
ΔR^2			.01		.00		.01	

Notes. N = 362, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, *** = $p < 0.001$.

Table D9. Hierarchical Linear Regression with Wave 3 Continuous ERS Scales Predicting Wave 6 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β	b (SE)	β	b (SE)	β	b (SE)	β
Parenting Quality	.23** (.08)	.13	.22** (.08)	.13	.20** (.08)	.11	.20** (.08)	.11
Family Income	-.04 (.11)	-.02	-.04 (.11)	-.02	-.06 (.11)	-.03	-.06 (.11)	-.03
Female	.44** (.15)	.12	.43** (.16)	.12	.41** (.15)	.12	.39** (.15)	.11
PC Educational Attainment	.28*** (.03)	.39	.28*** (.03)	.39	.26*** (.03)	.36	.26*** (.03)	.36
Racial Discrimination W5			-.02 (.08)	-.01	-.07 (.08)	-.04	-.39 (.26)	-.23
Cultural Education					-.06 (.09)	-.03	-.22 (.29)	-.12
Warnings of Discrimination					.33** (.10)	.18	.46 (.29)	.26
Promotion of Mistrust					-.34* (.15)	-.11	-1.00** (.41)	-.32
Discrimination x Cultural Education							.10 (.17)	.12
Discrimination x Warn about Dis.							-.08 (.16)	-.11
Discrimination x Promo of Mistrust							.37 (.22)	.30
Constant	9.17***		9.17***		9.27***		9.32***	
	(.43)		(.43)		(.49)		(.49)	
R^2	.17***		.17		.19		.20	
ΔR^2			.00		.02**		.01	

Notes. N = 450, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, ** = $p < 0.01$, *** = $p < 0.001$.

Table D10. Hierarchical Linear Regression with Wave 3 Continuous ERS Scales Predicting Wave 7 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β	b (SE)	β	b (SE)	β	b (SE)	β
Parenting Quality	.11 (.09)	.06	.12 (.09)	.07	.11 (.09)	.06	.11 (.09)	.06
Family Income	.02 (.13)	.01	.02 (.13)	.01	-.01 (.12)	-.00	-.00 (.12)	-.00
Female	.41* (.18)	.11	.43** (.18)	.12	.43** (.18)	.12	.37* (.18)	.10
PC Educational Attainment	.25*** (.04)	.33	.24*** (.04)	.32	.23*** (.04)	.30	.23*** (.04)	.30
Racial Discrimination W5			.08 (.09)	.05	.07 (.09)	.04	-.41 (.29)	-.24
Cultural Education					-.01 (.11)	-.00	-.61 (.35)	-.32
Warnings of Discrimination					.20 (.11)	.11	.86** (.33)	.48
Promotion of Mistrust					-.43** (.17)	-.14	-1.57** (.45)	-.51
Discrimination x Cultural Education							.36 (.20)	.44
Discrimination x Warn about Dis.							-.37* (.18)	-.53
Discrimination x Promo of Mistrust							.64** (.23)	.51
Constant	9.85***		9.89***		10.23***		10.34***	
	(.51)		(.51)		(.59)		(.58)	
R^2	.12***		.12		.14		.16	
ΔR^2			.00		.02		.03**	

Notes. N = 369, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table D11. Hierarchical Linear Regression with Wave 4 Continuous ERS Scales Predicting Wave 6 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.22** (.08)	.13	.22 ** (.08)	.13	.19** (.08)	.11	.20** (.08)	.12
Family Income	-.04 (.11)	-.02	-.04 (.11)	-.02	-.02 (.11)	-.01	-.02 (.11)	-.01
Female	.44*** (.15)	.12	.43** (.16)	.12	.42** (.16)	.12	.39** (.16)	.11
PC Educational Attainment	.28*** (.03)	.39	.28*** (.03)	.39	.28*** (.03)	.38	.27*** (.03)	.37
Racial Discrimination W5			-.02 (.08)	-.01	-.00 (.08)	-.00	-.21 (.24)	-.12
Cultural Education					.18 (.10)	.09	-.45 (.31)	-.23
Warnings of Discrimination					-.05 (.09)	-.03	.65** (.26)	.40
Promotion of Mistrust					-.19 (.12)	-.08	-.85* (.41)	-.35
Discrimination x Cultural Education							.38* (.18)	.42
Discrimination x Warn about Dis.							-.40** (.14)	-.58
Discrimination x Promo of Mistrust							.38 (.22)	.36
Constant	9.17***		9.17***		9.24***		9.37***	
	(.43)		(.43)		(.48)		(.47)	
R^2	.17***		.17		.18		.20	
ΔR^2			.00		.01		.02**	

Notes. N = 450, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, ** = $p < 0.01$, *** = $p < 0.001$.

Table D12. Hierarchical Linear Regression with Wave 4 Continuous ERS Scales Predicting Wave 7 Educational Attainment

Variable	Model 1		Model 2		Model 3		Model 4	
	b (SE)	β						
Parenting Quality	.11 (.09)	.06	.12 (.09)	.07	.07 (.09)	.04	.06 (.09)	.03
Family Income	.02 (.13)	.01	.02 (.13)	.01	.04 (.12)	.01	.04 (.12)	.02
Female	.41* (.18)	.11	.43** (.18)	.12	.37* (.18)	.10	.35 (.18)	.10
PC Educational Attainment	.25*** (.04)	.33	.24*** (.04)	.32	.23*** (.04)	.31	.23*** (.04)	.30
Racial Discrimination W5			.08 (.09)	.05	.09 (.09)	.05	-.18 (.27)	-.10
Cultural Education					.22 (.12)	.11	-.39 (.35)	-.20
Warnings of Discrimination					.08 (.10)	.05	.27 (.30)	.16
Promotion of Mistrust					-.44** (.14)	-.18	-.43 (.48)	-.17
Discrimination x Cultural Education							.37 (.20)	.43
Discrimination x Warn about Dis.							-.11 (.16)	-.16
Discrimination x Promo of Mistrust							-.01 (.26)	-.01
Constant	9.85***		9.89***		10.06***		10.12***	
	(.51)		(.51)		(.57)		(.57)	
R^2	.12***		.12		.15		.16	
ΔR^2			.00		.03**		.01	

Notes. N = 369, Warn of Dis. = Warnings about Discrimination, Promo of Mistrust = Promotion of Mistrust, * = $p < .05$, ** = $p < 0.01$, *** = $p < 0.001$.

APPENDIX E. ADDITIONAL CORRELATION MATRIX

Table E1. *Correlations among Study Variables with Continuous ERS Variables*

	1	2	3	4	5	6	7	8	9	10	11
1. Dep. Sx. W3	--										
2. Dep. Sx. W4	.30**	--									
3. Dep. Sx. W5	.35**	.33**	--								
4. Dep. Sx. W6	.26**	.28**	.52**	--							
5. De. Sx. W7	.17**	.22**	.36**	.50**	--						
6. SE W4	-.09*	-.18**	-.22**	-.19**	-.10*	--					
7. SE W5	-.19**	-.27**	-.47**	-.36**	-.31**	.40**	--				
8. SE W6	-.12**	-.17**	-.35**	-.41**	-.35**	.37**	.54**	--			
9. SE W7	-.16**	-.20**	-.35**	-.41**	-.51**	.34**	.50**	.57**	--		
10. Edu. W4	-.18*	.02	-.06	-.15*	.01	.00	.16*	.16*	.11	--	
11. Edu. W5	.00	.03	-.09*	-.03	.06	.09*	.08	.09*	-.07	.18*	--
12. Edu. W6	.04	-.01	-.10*	-.06	-.03	.13**	.12**	.14**	.05	.44**	.44**

Notes. Dep. Sx. = Depressive Symptoms; SE = Self-esteem; Edu. = Educational Attainment; * = $p < 0.05$, ** = $p < 0.01$.

Table E1. Continued

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	1	2	3	4	5	6	7	8	9	10	11
13. Edu. W7	.02	.01	-.09	-.02	.00	.17**	.12*	.12*	.04	.34**	.40**
14. RD	.09*	.06	.24**	.22**	.13*	-.04	-.10*	-.17	-.18	-.01	.00
15. Low-Wari.	.01	-.05	-.04	-.02	-.01	.08*	.06	.05	-.00	.05	.12**
16. Mod.-Wari.	-.01	.02	.04	.01	-.05	-.06	-.04	-.05	.01	-.05	-.11**
17. High-Wari.	-.02	.07	.00	.04	.13**	-.06	-.07	-.01	-.02	-.01	-.03
18. Low –Soc.	-.10*	-.14**	-.08	-.03	.07	.01	.01	.03	.01	-.05	.03
19. Mod.- Soc.	.07	.08*	.03	-.03	-.06	.05	.03	.02	.01	.07	.01
20. High- Soc.	.05	.12*	.09*	.11*	-.01	-.12**	-.08*	-.10*	-.03	-.04	-.08
21. Female	.16**	.18**	.20**	.10*	.17**	.07	-.11*	-.01	-.08	.02	.11**
22. PC Edu.	-.03	-.05	.04	.05	.00	-.00	-.04	-.09*	-.09	.12	.20**
23. Parent Qual.	-.15**	-.07	-.15**	-.15**	-.08	.16**	.24**	.19**	.14**	.03	.07
24. PC Income	-.01	.01	-.05	-.01	-.00	.02	-.05	-.03	-.02	-.05	-.01

Notes. Edu. = Educational Attainment; RD = Perceived Racial Discrimination; Low-Wari. = Low-Wariness; Mod.-Wari. = Moderate-Wariness; High-Wari. = High-Wariness; Low-Soc. = Low-Socialization; Mod.-Soc. = Moderate-Socialization; High-Soc. = High-Socialization; PC Edu. = Primary Caregiver Educational Attainment; Parent Qual. = Parenting Quality; PC Income = Primary Caregiver Income; * = $p < 0.05$, ** = $p < 0.01$.

Table E1. Continued

	12	13	14	15	16	17	18	19	20	21	22	23
13. Edu. W7	.76**	--										
14. RD	.00	.07	--									
15. Low-Wari.	.08	.13**	-.04	--								
16. Mod.-Wari.	-.08	-.14**	.04	-.92**	--							
17. High-Wari.	.00	-.01	.01	-.33**	-.06	--						
18. Low -Soc.	.02	-.01	-.10*	.11**	-.10**	-.04	--					
19. Mod.- Soc.	.03	.06	.08	-.01	.01	.01	-.87**	--				
20. High- Soc.	-.09	-10*	.04	-.20**	.19**	.05	-.22**	-.29**	--			
21. Female	.11*	.09*	-.11**	.03	-.03	-.00	-.06	.06	-.01	--		
22. PC Edu.	.35**	.31**	.13**	.08	-.05	-.06	-.03	.04	-.02	-.01	--	
23. Parent Qual.	.15**	.11*	-.05	-.03	.03	-.01	-.10*	.11**	-.03	-.01	-.05	--
24. PC Income	-.00	.01	.04	.01	.01	-.06	.04	-.04	.01	.01	.02	-.00

Notes. Edu. = Educational Attainment; RD = Perceived Racial Discrimination; Low-Wari. = Low-Wariness; Mod.-Wari. = Moderate-Wariness; High-Wari. = High-Wariness; Low-Soc. = Low-Socialization; Mod.-Soc. = Moderate-Socialization; High-Soc. = High-Socialization; PC Edu. = Primary Caregiver Educational Attainment; Parent Qual. = Parenting Quality; PC Income = Primary Caregiver Income; * = $p < 0.05$, ** = $p < 0.01$.