

AN ABSTRACT OF THE THESIS OF

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Racial/ethnic minority individuals are unable to escape the realities of everyday discrimination in the United States: at least 87% of African American adolescents and 50% of Hispanic/Latinx young adults report experiencing discrimination within the past year (Neblett, Rivas-Drake, & Umaña-Taylor, 2012; Pérez, Fortuna, & Alegria, 2008; Seaton, Caldwell, Sellers, & Jackson, 2008). Despite the many negative effects of discrimination (Alfaro et al., 2009; Benner & Graham, 2013; Borders & Liang, 2011; Borrell et al., 2006; DeGarmo & Greene et al., 2006; Hartshorn et al., 2012; Martinez, 2006; Seaton & Yip, 2009; Simons et al., 2003), some adolescents respond to discriminatory experiences through prosocial means such as engaging in community volunteering (Brittian et al. 2012; Davis et al., 2016; Flanagan et al., 2009; Lozada, Jagers, Smith, Bañales, & Hope, 2016). Individual and contextual factors can influence adolescents' ability to positively adapt to discriminatory contexts (Brown & Tylka, 2011; DeGarmo & Martinez, 2006; Greene et al., 2006; Harris-Britt et al., 2007; Hope, Velez, Offidani-Bertrand, Keels, & Durkee 2017; Simons et al., 2006; Umaña-Taylor

& Updegraff, 2007; Wong et al., 2003). Control beliefs (i.e. the expectations individuals have about whether they can obtain desired outcomes) and proactive coping (i.e. intentional behaviors that a person takes to improve self-esteem) may represent a few unexplored individual factors that explain why certain adolescents respond to discrimination through prosocial means. In general, strong control beliefs act as a buffer against adversity, for instance by moderating the associations between income and health/well-being and between stress and depression (Herman-Stahl & Petersen, 1999; Lachman & Weaver, 1998). Similarly, proactive coping protects individuals from declines in self-esteem when confronted with discrimination (Umaña-Taylor, Vargas-Chanes, Garica, & Gonzales-Backen, 2008). When discrimination is viewed as a threat to self-esteem, stronger self-esteem control beliefs and proactive coping skills could therefore promote adaptive responses to discrimination such as prosociality.

Discriminatory experiences vary across racial and ethnic lines, and although African American and Hispanic/Latinx individuals both experience high levels of discrimination in the U.S., their experiences may be fundamentally different (Rosenbloom & Way, 2004; Fisher, Wallace, & Fenton, 2000; Greene et al., 2006; Phinney & Chavira, 1995; Romero & Roberts, 1998). The existing literature suggests the impact of discrimination is complex, meaning discrimination may affect individuals differentially depending on unique mitigating factors and, in turn, may have a catalytic effect on prosocial responses. Despite these initial findings, more research on the topic is warranted.

The present study investigates the following research questions: 1. Does experiencing racial/ethnic discrimination predict short-term and long-term increases in

prosociality among African American and Latinx early adolescents? 2. How do self-esteem control beliefs and proactive coping influence the association between experiencing racial/ethnic discrimination and subsequent prosociality? 3. Does race/ethnicity interact with discrimination to predict prosociality? To address these questions, I analyzed data from the 387 participants in Waves 6, 7, and 8 of the Chicago Trial of Positive Action who identified as African American (64.35%) or Latinx (35.65%). Data were collected at the beginning of 7th grade, end of 7th grade, and end of 8th grade ($M = 12.38$, $S.D. = .55$). Results indicated that experiencing at least one instance of discrimination leads to greater short-term prosocial behaviors. Discrimination did not predict any long-term increases in prosociality, however. Higher self-esteem control beliefs, but not proactive coping, strengthened the effect of discrimination on short-term increases in prosociality. Race/ethnicity interacted with discrimination to predict short-term increases in prosociality: African American adolescents reported significant increases in short-term prosociality after experiencing discrimination whereas Latinx adolescents did not. Future research should further investigate how to best foster individual strengths that promote prosocial responses to discrimination among racial/ethnic minority adolescents.

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Navigating Racial/Ethnic Discrimination in Early Adolescence:
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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Corine P. Tyler, Author

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Racial/ethnic minority youth are marginalized within the societal structure of the United States and therefore experience unique obstacles that threaten their potential to thrive. Discrimination is one such obstacle that often leads to reduced levels of positive functioning and development such as self-esteem (Alfaro, Umaña - Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009; Benner & Graham, 2013; Borders & Liang, 2011; Borrell, Kiefe, Williams, Diez-Roux, Gordon-Larsen, 2006; Hartshorn, Whitbeck, & Hoyt, 2012; Seaton & Yip, 2009; Simons, Chen, Stewart, & Brody, 2003). Low self-esteem in adolescence not only impacts mental health, but it also leads to worse physical health, poorer educational and employment outcomes, and increased criminal activity (Trzesniewski et al., 2006). Despite these broad negative associations, individual and contextual strengths enable some youth to bypass the normative negative trajectories associated with exposure to discrimination by endowing them with resources that support indicators of positive functioning such as prosociality (DeGarmo & Martinez, 2006; Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007; Simons et al., 2006; Umaña-Taylor & Updegraff, 2007; Wong, Eccles, & Sameroff, 2003).

Prosociality refers to acting in ways that benefit others or society as a whole and can be viewed as both an indicator of current positive functioning and a pathway towards future positive functioning. Prosociality is especially related to other aspects of thriving such as self-esteem, and research indicates a directional association where

prosociality promotes higher self-esteem among adolescent populations (Laible, Carlob, & Roesch, 2004; Lerner, Dowling, & Anderson, 2003). Cognitive factors and behavioral orientations to self-esteem might also be connected to prosociality in unexplored ways. Self-esteem control beliefs (i.e. beliefs about whether one can maintain self-esteem) and proactive coping styles (i.e. intentional behaviors that a person takes to improve self-esteem) might be individual strengths that promote prosociality in the context of discrimination, for instance. These factors could support individual attempts to maintain adequate levels of self-esteem. Research, however, has yet to explore how discrimination influences changes in prosociality for adolescents with differing levels of self-esteem control beliefs and proactive coping skills.

This paper examines the longitudinal associations between discrimination and prosociality based on varying personal strengths and racial/ethnic group membership among early adolescent African American and Latinx individuals.¹ I begin by introducing my theoretical frame, where I draw on relational developmental systems metatheory (RDS) and self-esteem enhancement theory (SET). I describe the current literature as it relates to discrimination, prosociality, self-esteem control beliefs, and proactive coping skills then connect these concepts to adolescence as a developmental time period. Next, I present the current study, where I describe the methods, analyses,

¹ The term “Latinx” is a gender-neutral alternative to “Latino” (Ramirez & Blay, 2016)

and results. Lastly, I highlight the study limitations and suggest potential future research directions.

Theoretical Framework

The relational developmental systems metatheory describes development as an interactional person-content process where individuals engage in bidirectional person↔context feedback loops (Overton, 2015). These feedback loops are known as developmental regulations and can be adaptive if they are mutually beneficial (i.e. benefit both person and context; Lerner et al., 2003), or maladaptive if they are harmful. As part of these co-occurring interactions, both the individual and the context impose constraints and affordances that impact development. Contextual constraints and affordances might be highly visible or relatively invisible to individuals at any point in time. Similarly, personal factors that promote or limit positive development might be present in the consciousness of individuals or might be beyond personal awareness.

The whole-system focus of RDS highlights two theoretical principles especially germane to the present study: embodiment and multifinality. Embodiment acknowledges that individuals carry their compounded lived experiences in their bodies, both physically and cognitively, meaning each lived experience necessarily reflects the experience of an individual with a unique set of physical and cognitive characteristics. The concept of multifinality, then, builds on the notion of embodied experiences to highlight the many ways in which individuals with similar

characteristics at birth can diverge and end up on drastically different developmental trajectories (Overton, 2015).

RDS as a metatheory sets a frame for broadly understanding how individual ontogeny unfolds within diverse contexts. Likewise, the concepts of embodiment and multifinality help describe why experiences of racial/ethnic discrimination can lead to different developmental outcomes by sensitizing researchers to the key factors that underlie the different responses to, and the outcomes associated with, discrimination. The creation of factors such as cultural background, belief systems, or personal skills and the meaning assigned to factors such as skin color are derived from the environment in which an individual is situated. These factors, in turn, might be more or less supported by a given environment and therefore lead to multifinality by canalizing opportunities.

Self-esteem enhancement theory can be viewed as nested within the larger RDS metatheoretical frame because it describes the nuanced person↔context processes involved in forming and maintaining an individual's self-esteem. This theory provides a specific model for how context, individual strengths, and race/ethnicity result in diverging outcomes for those who experience discrimination (DuBois, Flay, & Fagen, 2009). SET asserts that contextual factors create and restrict the opportunities and available strategies individuals have to develop and maintain self-esteem (DuBois et al., 2009). When discrimination is viewed as a contextual

obstacle, individuals might respond via adaptive or maladaptive means, depending on personal strengths and characteristics.

SET assumes that maintaining self-esteem is a universal need that individuals address through a number of different strategies, both consciously and unconsciously (DuBois et al., 2009; Lewis et al., 2013). Because RDS perspectives view adaptive regulations as those through which both the person and context benefit, adaptive self-esteem maintenance strategies, then, must benefit both the person and context. These strategies benefit the individual through being self-protective and self-enhancing. For example, a strategy might be individually beneficial if it allows the actor to postpone making devaluing judgements about themselves or creates more opportunities for positive self-evaluations to occur (DuBois et al., 2009; Kaplan, 1986). A strategy might be contextually beneficial if it improves developmental outcomes for others embedded in that context, or if it sustains or improves the functioning of larger systems and institutions. Maladaptive strategies, in contrast, might benefit the immediate needs of the individual but harm the context or the individual's long-term development (e.g. aggression).

This study draws on the RDS concepts of person-context coactions, embodiment, and multifinality and applies the SET model for self-esteem formation and maintenance processes to explore outcomes associated with discrimination. Racial/ethnic minority adolescents implement self-esteem maintenance strategies when faced with threats to self-esteem that are unique to their experiences as

members of a marginalized group. Discrimination operates as a threat to self-esteem among racial/ethnic minority adolescents, and prosociality is one potential adaptive self-esteem maintenance strategy that individuals might employ in this context.

Adolescents who have more internal resources are better equipped to apply an adaptive self-esteem maintenance strategy when faced with discrimination. Control beliefs and proactive coping are internal resources that might explain differential responses to discrimination. These individual strengths and racial/ethnic group membership are manifestations of embodiment by representing past lived experience and can lead to multifinality through creating diverging developmental pathways.

Literature Review

Non-Hispanic White individuals comprise 63.7% of the U.S. population (U.S. Census Bureau, 2010), and the dominant cultural narrative in the U.S. emphasizes Eurocentric ideals. Consequently, U.S. social structures inherently accommodate those who fit within the bounds of the dominant racial and cultural group by idealizing their physical characteristics and presentation, normalizing their interpersonal communication styles, providing them with adequate public representation, and valuing their belief systems and needs over those of other groups (Hill, 2008). These structural accommodations do not adequately consider the demographic heterogeneity in the U.S. and place racial/ethnic minority groups at a steep disadvantage. The two largest racial/ethnic minority groups in the U.S. are African Americans (12.6%), and Hispanic/Latinx (16.3%) individuals. The

percentage of these minority groups has increased over the past years, and their demographic presence in the U.S. will likely continue to rise (U.S. Census Bureau, 2010). This proportional increase is due largely to increases in the number of racial/ethnic minority individuals under the age of 18 (Child Trends Databank, 2016). Because of this demographic trend, it is especially important to understand how African American and Latinx adolescents respond to contexts and experiences that are qualitatively different from the experiences of youth who represent the dominant racial and cultural group.

Discrimination

In the U.S., youth from racial/ethnic minority groups must face the daily realities of discrimination, which I define in this study as instances and experiences of unfair treatment based on one's racial or ethnic group membership. From an RDS perspective, discrimination occurs when racial/ethnic minority youth are situated in unsupportive external contexts that restrict opportunities based on a perception of differing cultural/physical characteristics. In these cases, contextual factors hinder the potential for positive person ↔ context relations. At least 87% of African American adolescents and 50% of Latinx young adults report experiencing discrimination within the past year (Neblett, Rivas-Drake, & Umaña-Taylor, 2012; Pérez, Fortuna, & Alegria, 2008; Seaton, Caldwell, Sellers, & Jackson, 2008). Due to the high prevalence of discrimination experienced by young people within these groups, it is essential to understand how these experiences might uniquely impact development.

The impacts of discrimination might vary based on severity, frequency, and the individual's interpretation of the event. Researchers have measured discrimination in a variety of ways, ranging from daily microaggressions, (e.g. being made to feel intellectually inferior) to discriminatory acts that directly affect an individual's economic security (e.g. not being hired for a job) or physical safety (e.g. being hassled by the police) (Alfaro et al., 2009; Keels, Durkee, & Hope, 2017; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). Regardless of the measure or type of discrimination considered, researchers consistently find detrimental effects on development and functioning. Discrimination is associated with decreased physical health, well-being, academic wellbeing, psychological resiliency, self-esteem, and sense of community connection (Alfaro et al., 2009; Benner & Graham, 2013; Borrell et al., 2006; DeGarmo & Martinez, 2006; Greene et al., 2006; Seaton & Yip, 2009). In addition, discrimination is associated with higher levels of depression, anger, aggression, conflictual behaviors, and delinquency (Hartshorn et al., 2012; Borders & Liang, 2011; Simons et al., 2003). Boys often experience more discrimination, and the negative effects of discrimination on academic well-being and self-esteem appear to be especially impactful for boys (Alfaro et al., 2009; Cassidy, O'Connor, Howe, & Warden, 2004; Seaton et al., 2008).

Discriminatory experiences can also vary across racial and ethnic lines, where some racial/ethnic minority youth are more likely to experience certain forms of discriminations than are others. For instance, African American youth report

experiencing more discrimination from adults in comparison to other racial/ethnic minority youth, and both Hispanic and African American youth experience greater institutional discrimination than other minority groups (Fisher, Wallace, & Fention, 2000; Greene et al., 2006; Phinney & Chavira, 1995; Romero & Roberts, 1998). Latinx individuals must manage additional interracial tensions surrounding issues of language, immigration, and assimilation that African American individuals do not report (Rosenbloom & Way, 2004). These trends highlight that, although African American and Latinx individuals both experience high levels of discrimination in the U.S., their experiences might be fundamentally different. Consequently, their individual reactions to discrimination and the effects that discrimination has on functioning and development might not easily generalize across racial and ethnic lines.

Although experiencing discrimination has been linked to decreased positive functioning, self-esteem, and well-being, research also suggests that some individuals are more resilient to discrimination than others (Fergus & Zimmerman, 2005). In other words, some racial/ethnic minority individuals are able to avoid some of the negative outcomes typically associated with experiencing discrimination. Individual factors such as ethnic identity, political activism appear to buffer against discrimination and protect individuals from declines in psychological and academic well-being while also dampening the association between discrimination and problem behaviors (Greene et al., 2006; Hope, Velez, Offidani-Bertrand, Keels, & Durkee

2017; Umaña-Taylor & Updegraff, 2007; Wong et al., 2003). Individual factors that protect youth from the effects of discrimination can function differently depending on gender. For example, cultural orientation protects Latinx boys from declines in self-esteem and depression, but does not have the same effect among Latinx girls (Umaña-Taylor & Updegraff, 2007). Larger contextual factors such as social support, parental support, and racial socialization also appear to protect individuals against the increases in violence and declines in self-esteem and well-being associated with experiencing discrimination (Brown & Tylka, 2011; DeGarmo & Martinez, 2006; Harris-Britt et al., 2007; Simons et al., 2006). Beyond avoiding negative outcomes, research has also found that positive racial socialization equips African American students with responses to discrimination that promote academic success (Sanders, 1997). These buffering factors justify further investigation into how to best optimize person-context fit among racial/ethnic minority youth in discriminatory contexts.

Prosocial Responses to Discrimination

A growing body of evidence shows that some individuals who experience discrimination respond by displaying higher levels of prosocial behaviors. Latinx individuals engage in more prosocial behaviors in comparison to other racial/ethnic groups, in part due to cultural values of familism, respect, and religiosity that promote prosociality (Brittian et al., 2013). Prosocial behaviors are actions that are designed to benefit others or society and can reflect multifinality through placing similar

individuals on distinct developmental trajectories. That is, differing levels of prosocial behaviors might place otherwise similar individuals on markedly different developmental trajectories because prosociality promotes contextual and individual indicators of adaptive regulations (Bukowski & Sippola, 1996; Carlo et al., 1999; Eisenberg & Fabes, 1998; Laible et al., 2004; Lerner et al., 2003).

Prosociality is one way adolescents can agentially modify their context by engaging in behaviors that extend beyond “the self”, such as helping a hurt peer or comforting someone who is upset (Damon, Menon, & Cotton Bronk, 2003). Along these same lines, community action and volunteering are prosocial behaviors that serve a broader audience. Prosociality can be viewed as an adaptive strategy for responding to discrimination according to SET because it insulates racial and ethnic minorities from the harmful effects of discrimination on self-esteem and positively promotes contextual change. Although prosociality buffers against some of negative outcomes associated with discrimination, it is important to note that youth who exhibit higher prosociality in response to discrimination might also simultaneously experience negative effects of discrimination as well. In this sense, prosocial outcomes and negative outcomes associated with discrimination can exist in tandem with one another.

Links between discrimination and aspects of prosociality can be grouped into two meaningful categories: within-group prosociality and general prosociality. Within-group prosociality refers to forms of prosociality that are specifically geared

toward fostering and promoting the success of one's racial/ethnic group (White-Johnson, 2012). For example, a growing body of literature has found that, among African American individuals, discrimination is associated with greater civic engagement, political action, and participation in political-social justice groups (Brittian et al. 2012; Davis et al., 2016; Flanagan, Syvertsen, Gill, Galloway, & Cumsille, 2009; Hope & Jagers, 2014; Mattis et al., 2004). Among Latinx adolescents, experiencing prejudice is indirectly associated with stronger beliefs about supporting and improving one's ethnic group by increasing adolescents' ethnic awareness (Flanagan et al., 2009). These findings suggest discrimination might prompt behaviors that promote within-group success and alter dominant cultural narratives.

A smaller body of research suggests that some individuals also respond to discrimination by engaging in general prosociality, which refers to prosocial behaviors that are not specifically geared toward supporting one's racial/ethnic group. For example, discrimination predicts year-later increases in public prosocial behaviors among recent Latinx immigrant adolescents and is associated with greater levels of volunteer community work among African American youth (Davis et al., 2016; Hope & Jagers, 2014). There is some evidence that suggests that gender impacts that way discrimination and prosociality are associated with one another. Although discrimination is associated with lower levels of anonymous helping among girls, this negative association is not present among boys (Brittian et al., 2012). Additionally,

discrimination is positively associated with general prosocial behaviors specifically among Black adolescent boys (Lozada et al., 2016). These findings extend previous research on within-group prosociality by suggesting that discrimination might cultivate prosociality in multiple domains for some youth and lower prosociality for others. Taken together, these studies imply that, as opposed to withdrawing or isolating themselves, some adolescents respond to discrimination by increasing helping and sharing behaviors.

Although these findings are promising, it is important to consider the directionality of the association between discrimination and prosocial behaviors. Most research to date has depended on cross-sectional data, making it impossible to draw directional inferences. Past research has theorized that the positive associations between discrimination and prosociality are due to discrimination causing increases in prosociality, however, all but one study (Davis et al., 2016) has been unable to test the directionality of this association. Past research has also been unable to examine individual strengths that might support the development of prosociality as a response to discrimination. As such, it is unclear if a reciprocal or bidirectional association between discrimination and prosociality exists and whether there are individual differences in the type of association that occurs between discrimination and prosociality.

Self-Esteem Control Beliefs

The literature suggests that discrimination leads to prosocial behaviors among some individuals, but less work has explored factors that lead certain individuals to respond to discrimination in prosocial ways. Control beliefs might be one such variable. Control beliefs refer to the expectations individuals have about whether they can obtain desired outcomes (Skinner, Chapman, & Baltes, 1988). Control beliefs are manifestations of embodiment according to RDS because they are carried within individuals' mental landscape and are derived from their past lived experiences. In general, strong control beliefs act as a buffer against adversity, for instance by moderating the association between income and health/well-being and the negative effect of stress on later depression (Herman-Stahl & Petersen, 1999; Lachman & Weaver, 1998). Consequently, a strong sense of control might allow individuals to apply adaptive coping strategies when confronted with adversity.

SET introduces the idea of self-esteem control beliefs, which are similar to Skinner's (1988) general conceptualization in that they denote the degree to which individuals believe they can obtain or maintain positive self-esteem. Strong self-esteem control beliefs indicate that individuals are confident in their ability to maintain positive feelings about themselves regardless of external forces. As such, self-esteem control beliefs might underlie many of the neutral outcomes or positive responses associated with discrimination. Although having weaker beliefs about personal control might be somewhat realistic for racial/ethnic minority individuals

living in discriminatory contexts, it nonetheless could be detrimental to their overall well-being. Those individuals who feel they have no control over their circumstances can experience heightened feelings of helplessness, which could in turn perpetuate inaction and poor mental health (Brown & Tylka, 2011; Hammack, 2003; Uomoto, 1986). In contrast, stronger control beliefs could promote adaptive responses to discrimination, especially when these control beliefs are related to internal perceptions of the self (as is the case of self-esteem). It remains unclear, however, what specific role self-esteem control beliefs play in individual responses to discrimination.

Proactive Coping Skills

Coping skills, another manifestation of embodiment, might similarly influence how individuals respond to discrimination. Overall, coping refers to the type of actions that individuals take to manage stressors and can be classified generally as approach-oriented or avoidance-oriented (Compas et al., 2001; Lazarus & Folkman, 1984). Proactive coping skills related to self-esteem support approach-oriented coping and can be especially useful for racial/ethnic minority adolescents because discriminatory experiences act as a pervasive stressor that predicts decreases in self-esteem (Harris-Britt et al., 2007). In this study, I conceptualize proactive coping skills as actions that individuals knowingly take to increase their self-esteem. Proactively coping with discrimination is associated with higher self-esteem among adolescents, whereas engaging in avoidant coping leads to lower self-esteem (Dumont & Provost,

1998; Umana-Taylor, Vargas-Chanes, Garica, and Gonzales-Backen, 2008; Phinney & Chavira, 1995). Though proactive coping has been shown to promote positive mental health for adolescents who experience discrimination, no research to date has addressed how proactive coping skills might influence individuals' likelihood of adopting a prosocial response to discrimination.

The literature therefore suggests that the effects of discrimination are complex. Discrimination impacts individuals differently depending on unique mitigating factors and, in turn, might have a catalytic effect on specific forms of prosociality. Despite these findings, more research on the topic is warranted. Previous studies addressing discrimination and self-esteem have focused largely on general measures of self-esteem as opposed to belief systems and coping styles surrounding self-esteem (Harris-Britt et al., 2007; Umaña-Taylor, & Updegraff, 2007). Research on the association between discrimination and prosociality has likewise focused on specific racial/ethnic subgroups or on a narrow operationalization of prosociality and have been almost exclusively cross-sectional in design. Consequently, there is a need to expand this work in multiple directions. Research in this area will be particularly beneficial when it targets developmental periods such as adolescence during which discrimination is especially influential (Fabes, Carlo, Kupanoff, & Laible, 1999; Steinberg, 2005; Steinberg, 2008; Sebastian et al., 2008).

Early Adolescence

The accelerated neurocognitive development that occurs during adolescence causes individuals to become increasingly aware of, and influenced by, discrimination. Early adolescents exhibit a higher proficiency in perspective-taking than children, which enables them to better recognize how others perceive and react to individuals based on racial/ethnic group membership (Fabes, Carlo, Kupanoff, & Laible, 1999; Steinberg, 2005; Sebastian et al., 2008). Changes in oxytocin receptors during early and middle adolescence influence individuals' cognitive interpretations of social stimuli as well, increasing internal drives to seek out and foster interpersonal connections (Steinberg, 2008). These changes exacerbate adolescents' attention to social feedback and increase the value they place on peer relationships (Steinberg, 2005; Sebastian et al., 2008). The resulting heightened awareness of others' perceptions put adolescents who experience rejection in an especially vulnerable position.

Adolescents are uniquely susceptible to discrimination because social and legal power hierarchies limit the amount of agency they can exert in their daily lives (Steinberg, 2005). Laws regulate adolescents' ability to assert control over situations that are central to their lives, often delegating control to families, authority figures, or other adults. Although adolescents directly influence their families, communities, and schools, the amount of influence they exert might not equal the amount of influence

projected onto them by adults and institutions of authority. In contrast, racial/ethnic identity formation processes can serve as an avenue for adolescents to exhibit agency by cognitively aligning themselves with their racial/ethnic group and developing a sense of belonging and attachment to that group. Racial/ethnic discrimination might threaten individuals' self-esteem and destabilize individuals' self-concept during this sensitive period for identity formation. Adolescents in these contexts might feel they have little control over discriminatory experiences, except in their responses to them.

Many of the cognitive changes that occur in the second decade of life also supply adolescents with internal resources for managing discrimination. For example, adolescents show greater levels of prosocial tendencies as compared to children (Carlo, Fabes, Laible, & Kupanoff, 1999). In turn, prosociality supports positive development in the face of adversity (Bukowski & Sippola, 1996; Carlo et al., 1999; Eisenberg & Fabes, 1998; Laible et al., 2004; Lerner et al., 2000).

Adolescents' increased desire to exhibit agency and increased proficiency in perspective-taking might be connected to these recorded increases in prosociality. Perspective-taking capabilities in adolescence allows individuals to better identify others' needs and gives them a stronger understanding of how to engage in behaviors that meet these needs. Adolescents also appear to use prosociality in different ways than children, with many viewing it as a viable strategy for acquiring self-esteem (Batson & Powell, 2003). Children, on the other hand, do not use prosociality to

acquire self-esteem and primarily obtain self-esteem through social approval (Batson & Powell, 2003).

Control beliefs and coping skills are additional internal resources that are supported by adolescent cognitive development and might be especially pertinent to promoting positive outcomes among vulnerable groups. Developmentally, the cognitive structure of an individual's control-belief system becomes fully formed in middle childhood (Skinner et al., 1988). Subsequently, adolescents are better situated than children to base their control beliefs on actual experiences along their respective ability domains (Skinner et al., 1988). Adolescents' self-esteem control beliefs, then, are likewise more effectively based on an individual's experience with personal success or failure in maintaining self-esteem. As such, control beliefs give adolescents confidence in their abilities and can promote agency. Proactive coping skills provide adolescents with the ability to enact goal-directed, controlled, and purposeful efforts to mitigate stress (Lazarus & Folkman, 1984; Compas et al., 2001). Adolescents' developmentally improved problem-solving and emotion-recognition abilities allow for more effective coping (Skinner & Zimmer-Gembeck, 2007). Both control beliefs and coping skills might be highly malleable during this time period, however, and they therefore could be targeted and supported in order to promote adaptive self-esteem maintenance strategies.

The Present Study

The purpose of the present study is to advance the current understanding of how discrimination impacts early adolescent development. Using data from Waves 6, 7, and 8 of the Chicago trial of *Positive Action* (PA), the present research addresses three interrelated questions:

1. Does experiencing racial/ethnic discrimination predict short-term and long-term increases in prosociality among African American and Latinx early adolescents?
2. How do self-esteem control beliefs and proactive coping skills influence the association between experiencing racial/ethnic discrimination and subsequent prosociality?
3. Does race/ethnicity interact with discrimination to predict prosociality?

Based on past research, I anticipate that discrimination will positively predict prosociality (Brittian et al. 2012; Davis et al., 2016; Lozada et al., 2016), but that this predictive association will depend on the individual's level of self-esteem control beliefs. Previous research has found that control beliefs support positive functioning in light of adversity (Herman-Stahl & Petersen, 1999; Lachman & Weaver, 1998). SET similarly theorizes that self-esteem control beliefs support adaptive self-esteem maintenance strategies (DuBois et al., 2009). Specifically, for people with strong self-esteem control beliefs, I anticipate that discrimination will positively predict prosociality. For individuals with weak self-esteem control beliefs, I expect there will be no predictive association between discrimination and prosociality. I expect that the

association between discrimination and prosociality will also depend on an individual's level of proactive coping skills because proactive coping and prosociality are both action-oriented responses. Therefore, individuals who report holding higher proactive coping skills might be more likely to use prosocial behaviors as a mechanism for coping. I expect that those who report greater levels of proactive coping skills will have positive associations between discrimination and prosociality, whereas this association will not be present for individuals with lower levels of proactive coping. I further expect that race/ethnicity will influence how discrimination predicts prosociality, with Latinx individuals being more likely to respond to discrimination prosocially because of higher group-level prosociality overall, cultural values that promote prosociality, and differences in discriminatory experiences across racial/ethnic lines (Brittian et al., 2013; Fisher et al., 2000; Greene et al., 2006; Phinney & Chavira, 1995; Romero & Roberts, 1998; Rosenbloom & Way, 2004).

Method

Data came from the Chicago trial evaluation of the *Positive Action* (PA) program. The PA program is a school-level intervention that employs social-emotional learning to target student problem behaviors and academic performance (Flay, Allred, & Ordway, 2001; Flay & Allred, 2010). The Chicago trial of PA took place during 2004-2010 in seven matched pair Chicago Public Schools. These schools were drawn from 18 K-6 to K-8 Chicago Public Schools that met eligibility

requirements and agreed to participate. Of these 18 schools, the seven matched pairs were chosen based on: school-level racial/ethnic composition, academic achievement, attendance, truancy, free or reduced lunch, mobility, size, parental involvement, teacher credentials, and neighborhood crime rate (Lewis et al, 2016; Ji, DuBois, Flay, & Brechling, 2008; Schochet & Novak, 2003). Matched schools who agreed to participate were randomly assigned to the PA program or to the control (Ji et al., 2008). All schools were classified as high-risk: in all schools less than 50% of students passed the Illinois State Achievement Test and over 50% of students were enrolled in free lunch (Bavarian et al., 2013). Because the PA program was a school-level intervention, students who left the school were not followed and students who entered the school were added to the study. This study uses data from the last three waves—Waves 6, 7, and 8—because these waves were collected from participants as they entered into early adolescence and included all the measures of interest. Data from Waves 6, 7, and 8 were collected from participants at the beginning of 7th grade, the end of 7th grade, and the end of 8th grade, respectively.

Participants

In order to assess the impact of discrimination among racial/ethnic minority youth, this study only uses data from the 387 participants (52.36% female) who identified as either African American (64.35%) or Latinx (35.65%) at Wave 6, 7, or 8. The average age of participants at Wave 6 was 12.38 (SD .55). The overlap between waves is as follows: 90.59% of students who were present for Wave 6 were

also present for Wave 7, 78.50% of students who were present for Wave 7 were present for Wave 8, and 79.41% of students who were present for Wave 6 were present for Wave 8.

Measures

Data were collected through a paper-and-pencil student self-report questionnaire. Members of the research team read instructions out loud and explained complicated or confusing items to participants. Parental consent and student assent were obtained before students completed the questionnaires.

Discrimination. Discrimination was measured using five No/Yes items (See Appendix A for measures information; Gonzales, Gunnoe, Jackson, & Samaniego, 1995). Students indicated whether they had experienced a given situation since the end of the last school year, for example, “You were excluded from a group because of your race, ethnicity, or culture,” and “You were unfairly accused of something because of your race or ethnicity.” For the present study, I dichotomized the measure so that a score of 1 indicated a participant had no experiences of discrimination, and a score of 2 indicated that a participant had experienced at least one instance of discrimination.

Prosociality. Prosociality was measured using an 5-item Likert-type measure (See Appendix A; Solomon, Battistich, Watson, Schaps, & Lewis, 2000). Students reported the extent to which they experienced each given situation within the past two weeks using a four-point scale ranging from “Never” (0) to “All of the time” (3). An

example item includes, “At school or someplace else, I cheered up someone who was feeling sad” ($\omega=.73-.79$). This measure was created from conducting an exploratory factor analysis (EFA) of 8 items at all time points. I conducted an EFA because there was not acceptable model fit in every wave when all the items indicated a single latent factor. After examining eigenvalues and model fit, I removed three items from the original 8-item scale because they did not load on to the factor.

Self-Esteem Control Beliefs. Self-esteem control beliefs were measured by a single Likert-type item: “I am not able to control how I feel about myself as a person”. Students indicated the extent to which they agreed with this statement on a four-point scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (4). This item was reverse-coded so that higher values indicate higher levels of self-esteem control beliefs.²

Proactive Coping Skills. Proactive coping was measured using a three-item Likert-type measure (DuBois, 2004).³ Students indicated how much of the time each statement was true for them, ranging from “None of the time” (1) to “All of the time” (4). An example item includes, “I try to do things that help make me feel good about myself as a person” ($\omega=.84-.86$).

² This question came from a three-item control belief scale (DuBois, 2004); however, the three items were poorly correlated with one another at both Wave 6 and Wave 7 ($\alpha .24-.44$). Consequently, I chose the given item as the self-esteem control belief measure because it theoretically maps on to the definition of a control belief and captures a continuum of the belief: from feeling a firm sense of control to feeling a complete lack of control.

³ This scale was created from conducting an EFA in MPLUS. See Appendix B for a description of the EFA.

Race/Ethnicity. Race/ethnicity was measured using a single-item question: “What race/ethnicity are you?” Students were instructed to check all boxes that applied to them. Response options included: White, African American, Native American, Latino, Asian, and Other. Participants were included in the study if they marked only African American or only Latino. Participants who identified as Latino were coded as 1 and participants who identified as were coded as African American were coded as 2.

Control Variables. Gender was included as a control variable because past research suggests that girls exhibit higher levels of prosociality than boys and that boys perceive higher levels of discrimination than girls (Fabes et al., 1999; Seaton et al., 2008). Gender was measured using a single dichotomous item: “Are you a boy or a girl?” Positive action participation was included as a control variable because the intervention supported positive behaviors (Washburn et al., 2011). Positive action participation was recorded using a dichotomous single item. Self-esteem was included as a control variable to ensure that the regression pathways for control beliefs and proactive coping were not conflated with or explained by state-level self-esteem. Self-esteem was measured using a 4-item Likert-type composite measure (See Appendix A; DuBois, Felner, Brand, Phillips, & Lease, 1996). Students indicated if they agreed with the given statements about them, ranging from “NO!”

(1) to “YES!” (4). An example item includes, “I am happy with myself as a person” ($\alpha = .78 - .83$).⁴

Analyses

I conducted a series of cross-lagged panel models in MPLUS to address all research questions (see Figures 1-4 for conceptual models). I specified prosociality and proactive coping as latent factors and used maximum likelihood to account for missingness. I inspected the data for outliers by requesting Cooks, Mahalanobis, Loglikelihood, and Influence plots using the “OUTLIERS” command. When I detected an outlier, I tested models for robustness by deleting the case and comparing the results of the model with the deleted outlier to the model with the included outlier. To account for the nesting of children in schools, I used robust standard errors by specifying school as a cluster variable and using the “TYPE=COMPLEX” command. I ran multiple two-timepoint models (Wave 6-7 and Wave 7-8) and a three-timepoint model (Wave 6-7-8) for each research question. The categorical nature of the discrimination variable and level of missingness made it impossible to estimate all regression paths using a three-timepoint model in MPLUS. The three-timepoint model was not able to estimate regression paths unless prosociality was the only outcome and therefore could not account for full cross-lagged effects. I compared the results from the two-timepoint models and three-timepoint models for all research questions to ensure the estimated regression paths were similar. The significance of

⁴ Alphas are provided as opposed to omegas because self-esteem was modeled as a composite score and not a latent factor.

the regression paths predicting prosociality did not change from the three-timepoint models in comparison to the two-timepoint models. Therefore, I report the findings of my models using two timepoints each (Wave 6-7 and Wave 7-8) because the two timepoint model provides otherwise lost information about additional cross-lagged regression paths. I report the model fit of the three-timepoint models because each two-timepoint model includes a categorical variable and therefore MPLUS cannot provide model fit. If the interaction terms in any moderation model did not significantly predict a non-hypothesized outcome, I forced the respective regression path to zero to allow for more accurate regression estimates along significant pathways. The pathways that are forced to zero are indicated by a dash in all tables.

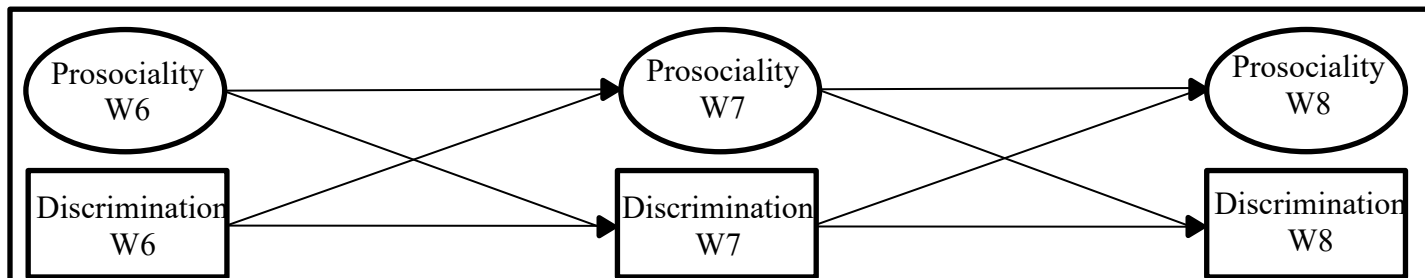
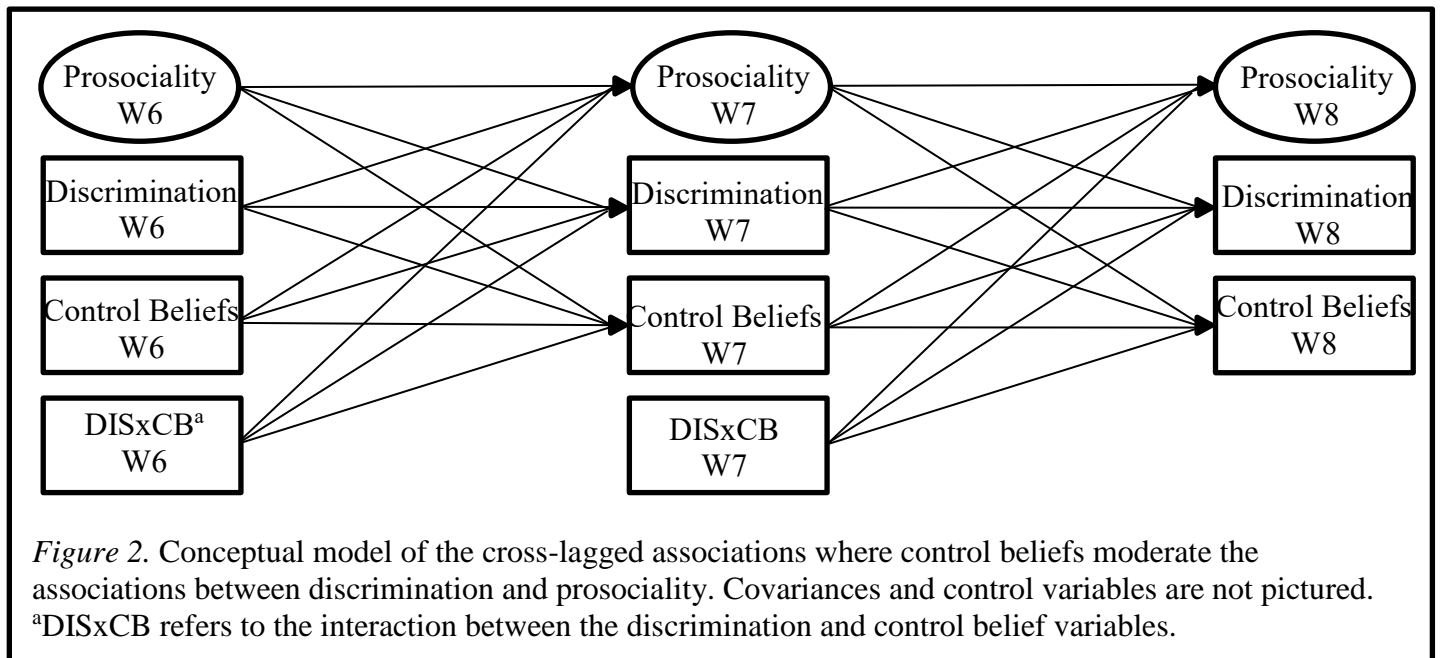
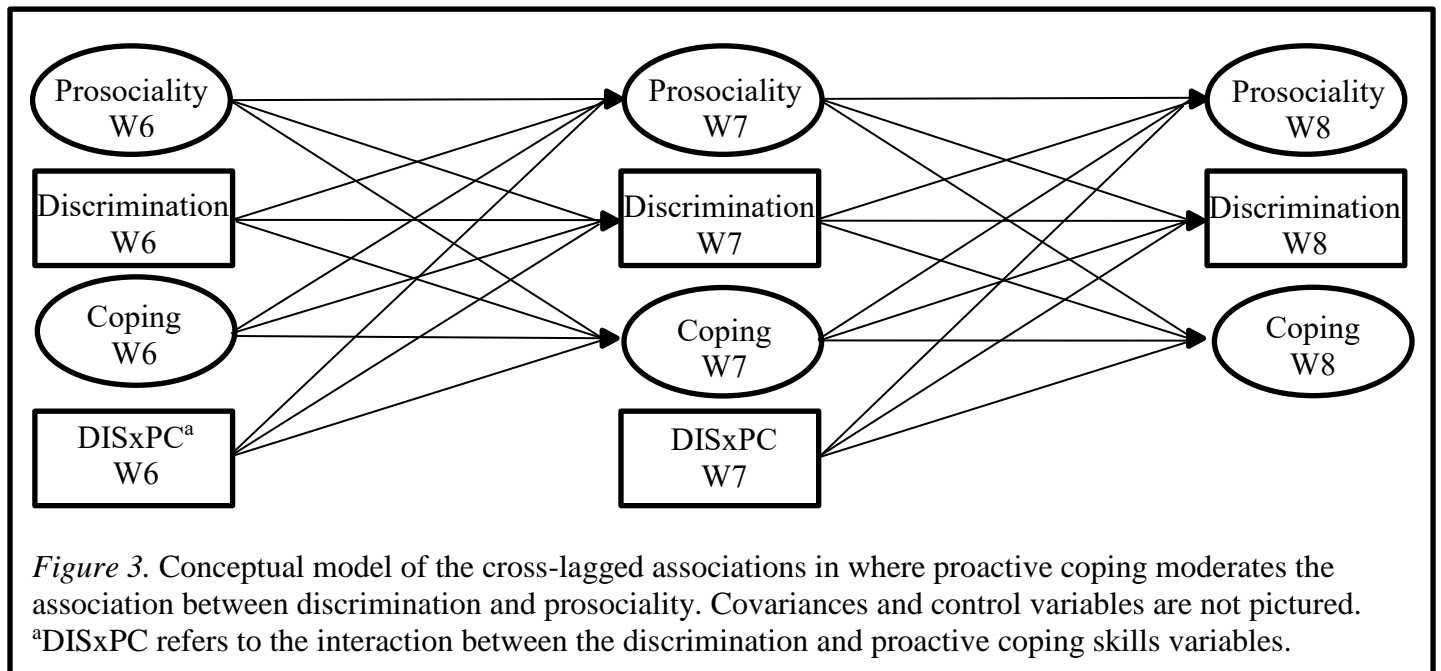
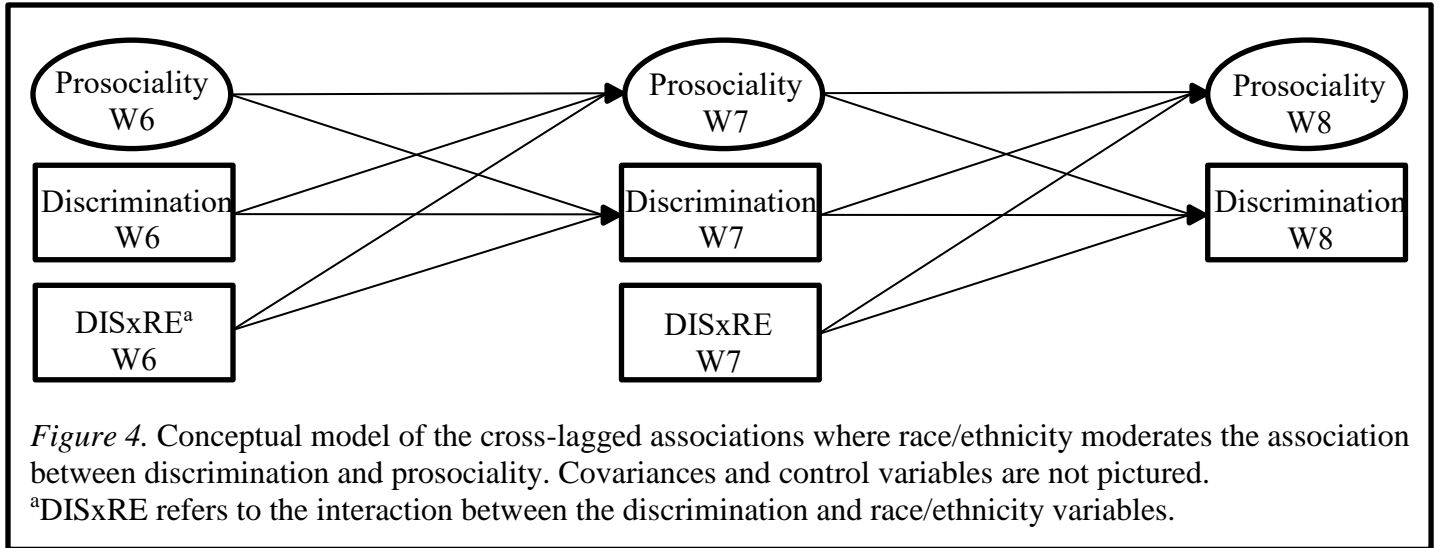


Figure 1. Conceptual model of the cross-lagged associations where discrimination predicts prosociality. Covariances and control variables are not pictured.







Results

Overall, most participants did not report experiencing discrimination; across the three waves between 66% and 68% of participants reported no experiences of discrimination. The most common reported experiences of discrimination across the three waves were “hearing jokes about your racial/ethnic group” (16-25%) and “being called a racial name that was a putdown” (14-15%). A chi-square test of independence indicated that the association between race/ethnicity and Wave 8 discrimination was significant, $\chi^2 (1, N=290) = 9.708, p < .01$. Latinx adolescents were more likely to report experiencing discrimination at Wave 8 than African American adolescents. Further inspection into each discrimination question revealed a few significant differences: a chi-square test of independence indicated that the association between race/ethnicity and hearing racist jokes at Wave 7 and 8 was significant, $\chi^2 (1, N=290) = 9.005, p < .05$; $\chi^2 (1, N=290) = 11.856, p < .01$, and the association between race/ethnicity and being unfairly accused of something based on race/ethnicity at Wave 8 was significant, $\chi^2 (1, N=290) = 4.075, p < .05$. Latinx adolescents were more likely to report hearing racist jokes made about their ethnic group than African American adolescents at both Wave 7 and 8 and were more likely to report being unfairly accused of something at Wave 8.

Mean levels of prosociality across the waves ranged from 1.23-1.20 (SD = .63-.70). Independent samples t-tests revealed that African American participants

reported significantly higher levels of prosociality (Means ranged from 1.31 to 1.41, SDs ranged from .59 to .68) in comparison to Latinx participants (Means ranged from 1.17 to 1.19, SDs ranged from .64 to .70) at all Waves; $t_{\text{Wave6}}(168)=-2.06, p<.05$; $t_{\text{Wave7}}(291)=-2.24, p<.05$; $t_{\text{Wave8}}(288)=-3.26, p<.01$. Mean levels of self-esteem control beliefs ranged from 2.85 to 3.14 (SDs ranged from .94 to 1.08) and African American and Latinx youth did not significantly differ on their ratings of self-esteem control beliefs ($p_{\text{Wave6}}=.40$; $p_{\text{Wave7}}=.60$; $p_{\text{Wave8}}=.53$). Mean levels of proactive coping across the three waves ranged from 2.94 to 3.02 (SDs ranged from .76 to .88). Independent samples t-tests of all three waves indicated that African American adolescents engaged in significantly more proactive coping (Means ranged from 3.09 to 3.19, SDs ranged from .70 to .85) than Latinx adolescents (Means ranged from 2.70 to 2.72, SDs ranged from .74 to .87) at all Waves; $t_{\text{Wave6}}(167)=-3.44, p<.01$; $t_{\text{Wave7}}(279)=-4.42, p<.01$; $t_{\text{Wave8}}(288)=-4.49, p<.01$. Due to these significant group differences, I controlled for race/ethnicity in all moderation models. Results from within-timepoint correlations indicate that proactive coping was positively associated with prosociality and self-esteem across all three waves (see Table 1).

The first hypothesis—that experiencing racial/ethnic discrimination would predict increases in short-term and long-term prosociality among African American and Latinx early adolescents—received partial support. The three-wave model that included only discrimination, prosociality, and covariates fit well, $\chi^2(168) = 232.352, p<.001$; RMSEA = .032, 90% C.I. [.021, .042]; CFI = .95; TLI=.93. Experiencing

discrimination at Wave 6 significantly predicted higher prosociality at Wave 7 (see Table 2). In contrast, experiencing discrimination at Wave 7 did not significantly predict prosociality at Wave 8 (see Table 3).

The second research question was: do self-esteem control beliefs and proactive coping influence the association between experiencing racial/ethnic discrimination and subsequent prosociality? The hypothesis that self-esteem control beliefs would moderate the association between discrimination and prosociality received partial support (see Tables 4 and 5). Self-esteem control beliefs interacted with discrimination at Wave 6 to predict prosociality at Wave 7. The three-wave model that included the interaction between self-esteem control beliefs and discrimination in addition to discrimination, self-esteem control beliefs, and covariates fit well, $\chi^2(255) = 331.355, p < .001$; RMSEA = .029, 90% C.I. [.019, .037]; CFI = .94; TLI = .92. I used model constraints and examined the raw coefficients to further probe this interaction. The results indicate that individuals who experienced discrimination and had very high levels of self-esteem control beliefs at Wave 6 engaged in significantly more prosocial behaviors at Wave 7. Individuals who experienced discrimination and had low levels of self-esteem control beliefs at Wave 6 did not report significant increases in prosociality at Wave 7 (see Table 6). Self-esteem control beliefs did not significantly moderate the association between discrimination at Wave 7 predicting prosociality at Wave 8. The hypothesis that proactive coping would interact with discrimination to predict prosociality received

no support (see Tables 7 and 8). Proactive coping did not interact with discrimination at Wave 6 or 7 to significantly predict prosociality at Wave 7 or 8. The three-wave model that included the interaction between proactive coping skills and discrimination in addition to discrimination, proactive coping skills, and covariates fit well, $\chi^2(305) = 407.191, p < .001$; RMSEA = .030, 90% C.I. [.022, .038]; CFI = .95; TLI = .93.

The last hypothesis—that race/ethnicity would interact with discrimination to predict prosociality—received partial support. The three-way model that included the interaction between race/ethnicity and discrimination in addition to discrimination and covariates had acceptable fit, $\chi^2(184) = 268.146, p < .001$; RMSEA = .038; 90% C.I. [.028, .048]; CFI = .92; TLI = .90. Race/ethnicity interacted with discrimination at Wave 6 to predict prosociality at Wave 7 (see Table 9). Race/ethnicity did not, however, significantly interact with discrimination at Wave 7 to predict prosociality at Wave 8 (see Table 10). I explored the significant interaction from Wave 6 to 7 by using model constraints and examining the raw coefficients. Results indicated that African American early adolescents who experienced discrimination reported significant increases in prosociality at Wave 7, whereas Latinx early adolescents who experienced discrimination did not report changes in prosociality (see Table 11).

Table 1

Correlations Between Variables

Variables	1	2	3	4
Wave 6				
1 Prosociality	-	-	-	-
2 Self-Esteem	0.259**	-	-	-
3 Discrimination	0.246*	0.065	-	-
4 Control Beliefs	-0.068	0.196*	0.015	-
6 Proactive Coping	0.452**	0.506**	-0.009	-0.110
Wave 7				
1 Prosociality	-	-	-	-
2 Self-Esteem	0.096	-	-	-
3 Discrimination	0.072	-0.116*	-	-
4 Control Beliefs	-0.072	0.116	-0.017	-
6 Proactive Coping	0.255**	0.544**	-0.055	-0.164*
Wave 8				
1 Prosociality	-	-	-	-
2 Self-Esteem	0.137	-	-	-
3 Discrimination	0.098	-0.179**	-	-
4 Control Beliefs	0.036	0.213*	-0.048	-
6 Proactive Coping	0.165*	0.455**	-0.104**	-0.010

Note. * $p < .05$, ** $p < .01$

Table 2
Standardized Estimates of Discrimination Predicting Prosociality

Variable	Wave 7					
	Prosociality		Discrimination		Self-Esteem	
	B	S.E.	β	S.E.	β	S.E.
Covariates						
Condition	0.046	0.068	-0.004	0.070	-0.037	0.078
Gender	-0.017	0.072	-0.037	0.097	0.056	0.049
Wave 6						
Prosociality	0.595**	0.098	-0.009	0.112	0.104	0.070
Self-Esteem	-0.026	0.058	-0.084	0.069	0.560**	0.090
Discrimination	0.135*	0.069	0.320**	0.089	-0.036	0.087

Note. * $p < .05$, ** $p < .01$

Table 3
Standardized Estimates of Discrimination Predicting Prosociality

Variable	Wave 8					
	Prosociality		Discrimination		Self-Esteem	
	β	S.E.	β	S.E.	β	S.E.
Covariates						
Condition	0.035	0.070	-0.008	0.095	-0.035	0.073
Gender	0.017	0.051	-0.003	0.065	0.061	0.065
Wave 7						
Prosociality	0.509**	0.087	0.188	0.107	0.111	0.064
Self-Esteem	0.047	0.075	-0.249**	0.070	0.552**	0.038
Discriminatio						
n	-0.042	0.111	0.399**	0.082	0.103	0.061

Note. * $p < .05$, ** $p < .01$

Table 4

Standardized Estimates for Control Belief Moderation

Variable	Wave 7							
	Prosociality		Discrimination		Self-Esteem		Control Beliefs	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Covariates								
Condition	0.078	0.069	-0.004	0.066	-0.058	0.059	-0.057	0.049
Gender	-0.047	0.071	-0.021	0.102	0.032	0.045	-0.075	0.046
Race/Ethnicity	0.123	0.068	-0.094	0.067	0.160**	0.061	0.008	0.058
Wave 6								
Prosociality	0.591**	0.106	0.005	0.109	0.093	0.069	-0.013	0.103
Self-Esteem	-0.085	0.062	-0.045	0.074	0.516**	0.096	-0.092	0.079
Discrimination	-0.358	0.231	0.316**	0.085	-0.037	0.086	-0.015	0.086
Control Beliefs	-0.482*	0.238	-0.073	0.107	-0.017	0.054	0.137	0.090
DISxCB ^a	0.713*	0.357	-	-	-	-	-	-

Note. * $p < .05$, ** $p < .01$

^aDISxCB refers to the interaction between discrimination and control beliefs.

Table 5

Standardized Estimates for Control Belief Moderation

Variable	Wave 8							
	Prosociality		Discrimination		Self-Esteem		Control Beliefs	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Covariates								
Condition	0.033	0.617	0.022	0.093	-0.031	0.069	-0.051	0.100
Gender	0.010	0.052	0.019	0.763	0.058	0.061	0.128*	0.057
Race/Ethnicity	0.090	0.205	-0.146*	0.069	0.047	0.069	-0.017	0.078
Wave 7								
Prosociality	0.501**	0.092	0.230*	0.106	0.102	0.064	0.094	0.059
Self-Esteem	0.008	0.089	-0.213**	0.069	0.521**	0.041	0.111	0.082
Discrimination	0.216	0.191	0.393**	0.080	0.101	0.059	0.015	0.092
Control Beliefs	0.335*	0.164	0.059	0.099	0.129*	0.024	0.160	0.095
DISxCB ^a	-0.355	0.236	-	-	-	-	-	-

Note. * $p < .05$, ** $p < .01$

^aDISxCB refers to the interaction between discrimination and control beliefs.

Table 6

Simple Slopes of Control Beliefs Moderation for Wave 6-7

Level of Control Belief	B	S.E.	<i>p</i>
1 Very Low	-0.572	0.449	0.203
2 Low	-0.125	0.260	0.631
3 High	0.322	0.198	0.105
4 Very High	0.768	0.340	0.024

Table 7

Estimates for Proactive Coping Moderation

Variable	Wave 7							
	Prosociality		Discrimination		Self-Esteem		Proactive Coping	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Covariates								
Condition	0.049	0.198	0.110	0.384	-0.143**	0.047	-0.015	0.197
Gender	-0.082	0.229	-0.499	0.464	0.056	0.073	0.278*	0.115
Race/Ethnicity	0.505*	0.243	-0.247	0.388	0.204**	0.056	0.369	0.226
Wave 6								
Prosociality	0.890**	0.185	-0.090	0.313	0.037	0.040	0.258	0.138
Self-Esteem	-0.008	0.165	-0.395*	0.197	0.454**	0.114	0.507*	0.204
Discrimination	0.316	0.220	1.396**	0.414	-0.011	0.111	0.093	0.248
Proactive Coping	-0.540	0.299	0.524*	0.213	0.056	0.321	0.137	0.195
DISxPC ^a	0.266	0.233	-	-	-	-	-	-

Note. * $p < .05$, ** $p < .01$

^aDISxPC refers to the interaction between discrimination and proactive coping skills

Table 8

Estimates for Proactive Coping Moderation

Variable	Wave 8							
	Prosociality		Discrimination		Self-Esteem		Proactive Coping	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Covariates								
Condition	0.141	0.161	-0.129	0.557	-0.081	0.069	0.123	0.121
Gender	-0.084	0.151	-0.219	0.261	0.064	0.066	0.061	0.132
Race/Ethnicity	0.147	0.138	-0.801*	0.371	-0.008	0.067	0.276**	0.090
Wave 7								
Prosociality	0.569**	0.116	0.329	0.266	0.050	0.032	-0.020	0.116
Self-Esteem	0.096	0.214	-1.011**	0.383	0.455**	0.046	-0.036	0.167
Discrimination	-0.070	0.229	1.81**	0.459	0.123	0.070	0.138	0.124
Proactive Coping	-0.428	0.318	0.384	0.212	0.081**	0.028	0.021	0.916
DISxPC ^a	0.341	0.220	-	-	-	-	0.424**	0.138

Note. * $p < .05$, ** $p < .01$

^aDISxPC refers to the interaction between discrimination and proactive coping skills

Table 9

Standardized Estimates for Race/Ethnicity Moderation

Variable	Wave 7							
	Prosociality		Discrimination		Self-Esteem		Control Beliefs	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Covariates								
Condition	0.054	0.061	-0.001	0.066	-0.054	0.058	-0.062	0.050
Gender	-0.022	0.080	-0.017	0.101	0.030	0.046	-0.075	0.046
Race/Ethnicity	-0.415*	0.184	-0.094	0.068	0.167**	0.058	0.005	0.059
Wave 6								
Prosociality	0.574**	0.089	0.004	0.112	0.089	0.073	-0.033	0.093
Self-Esteem	-0.071	0.075	-0.031	0.071	0.504**	0.095	-0.076	0.328
Control Beliefs	0.022	0.055	-0.076	0.111	-0.030	0.052	0.123	0.085
Discrimination	-0.487*	0.184	0.316**	0.083	-0.040	0.080	0.003	0.080
DISxRE ^a	0.845**	0.314	-	-	-	-	-	-

Note. * $p < .05$, ** $p < .01$

^aDISxRE refers to the interaction between discrimination and race/ethnicity

Table 10

Standardized Estimates for Race/Ethnicity Moderation

Variable	Wave 8							
	Prosociality		Discrimination		Self-Esteem		Control Beliefs	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Covariates								
Condition	0.032	0.070	0.022	0.093	-0.031	0.069	-0.051	0.100
Gender	0.004	0.053	0.018	0.062	0.058	0.061	0.128*	0.057
Race/Ethnicity	-0.012	0.246	-0.146*	0.069	0.047	0.069	-0.016	0.078
Wave 7								
Prosociality	0.497**	0.096	0.228*	0.105	0.102	0.064	0.092	0.060
Self-Esteem	0.004	0.088	-0.213**	0.069	0.521**	0.041	0.111	0.082
Control Beliefs	0.088	0.064	0.056	0.098	0.128*	0.057	0.161	0.095
Discrimination	-0.160	0.344	0.393**	0.080	0.102	0.059	0.016	0.093
DISxRE ^a	0.171	0.380	-	-	-	-	-	-

Note. * $p < .05$, ** $p < .01$

^aDISxRE refers to the interaction between discrimination and race/ethnicity

Table 11

Simple Slopes of Race/Ethnicity Moderation for Wave 6-7

	B	S.E.	<i>p</i>
Latinx	-0.290	0.299	0.333
African American	0.824	0.232	<.001

Discussion

The first goal of my study was to determine if experiencing discrimination leads to higher levels of prosociality. Results indicate that experiencing at least one instance of discrimination predicted higher prosocial behaviors six months later, however, this effect was not replicated when looking at year-later prosociality. This finding supports the SET model, where discrimination acts as a threat to self-esteem that some individuals attempt to address through engaging in prosocial behaviors. Short-term increases in prosociality might indicate an attempt to mitigate the immediate negative effects of discrimination by increasing the number of prosocial experiences that an individual can draw on for a positive self-evaluation. In contrast, long-term increases in prosociality might be unnecessary for adolescents who do not experience consistent levels of discrimination because their self-esteem might not be consistently threatened. Maturation effects and context might also explain the non-significant year-later effects. Additionally, the measure of discrimination in the six-month model tapped into a slightly different level of exposure than the measure of discrimination in the one-year model because students were instructed to report on discrimination using a different timeframe in Wave 6 (where students reported on discrimination over the past few months) in comparison to Wave 7 (where students reported on discrimination over the past year). These findings align with and expand on past research that has shown positive cross-sectional associations between

discrimination and prosociality among African American adolescents (Hope & Jagers, 2014; Lozada et al., 2016). Additionally, the current study provides new insight into the longitudinal associations between discrimination and prosociality among African American and Latinx adolescents who are situated specifically within high-risk contexts (all participants attended schools where less than 50% of students passed the Illinois State Achievement Test and over 50% of students were enrolled in free lunch).

The second aim of this study was to examine control beliefs and proactive coping as potential strengths that might enable individuals to be better prepared to engage in prosociality as an adaptive self-esteem maintenance strategy. Control beliefs emerged as an individual strength that promotes short-term prosocial responses to discrimination. This finding suggests that it is important for adolescents to feel a sense of agency and control over their self-esteem in order to engage in a prosocial response when their self-esteem is threatened. This result aligns with past research on control beliefs as an individual strength that promotes positive functioning for individuals experiencing adversity and expands on this research to include control beliefs' protective features in a discriminatory context (Herman-Stahl & Petersen, 1999; Lachman & Weaver, 1998). In contrast, proactive coping did not appear to influence the impact of discrimination on prosociality. Accordingly, it might not be important for adolescents to engage in behaviors with the specific goal of improving self-esteem for increased prosociality to occur. As indicated in RDS

perspectives, individuals are often unaware of the ways in which they promote and influence their own development. This finding indicates that adolescents can engage in prosocial responses to discrimination even if they are not consciously engaging in these behaviors to improve self-esteem. The results do, however, suggest that proactive coping is positively correlated with prosociality and self-esteem at each wave, and that proactive coping predicts increases in self-esteem a year later. Because proactive coping did not predict six-month later increases in self-esteem, the longitudinal pathway needs to be interpreted with caution. The results highlight that proactive coping skills, prosociality, and self-esteem might be connected to one another in a complex manner. No study had examined a similar association between proactive coping skills and prosociality, but this study replicates past research that indicates that proactive coping leads to increased self-esteem (Dumont & Provost, 1998; Umana-Taylor et al., 2008; Phinney & Chavira, 1995).

The third aim of this study was to explore how adolescents' race/ethnicity influences their response to discrimination. I initially anticipated that Latinx adolescents would be more likely than African American adolescents to exhibit prosocial responses for two reasons. First, Latinx individuals engage in more prosocial behaviors than other racial/ethnic groups, and second, the Latinx cultural values of familism, respect, and religiosity promote prosociality (Brittian et al., 2013). Surprisingly, a different effect emerged: African American adolescents were more likely to indicate short-term increases in prosociality than Latinx adolescents. This

finding aligns with RDS perspectives that emphasize embodiment where individuals' real-time experiences of discrimination interact with their embodied realities (e.g. skin color and cultural background). This interaction, in turn, influences the impact of discriminatory experiences on development. Otherwise similar individuals therefore might respond to discrimination in highly diverse ways due to having different embodied realities. This finding is somewhat aligned with past research that discovered positive associations between discrimination and public prosocial tendencies, but negative associations between discrimination and compliant, emotional, dire, and altruistic prosocial tendencies among Latinx adolescents (Brittian et al., 2012; Davis et al., 2016). Discriminatory experiences and school composition might explain these racial/ethnic differences. In this sample, African American and Latinx adolescents generally report comparable levels of discrimination, but, when there were significant differences in reports of discrimination, Latinx adolescents report higher levels. Individuals might become less able to respond to discrimination prosocially as they experience more frequent instances of discrimination. The racial/ethnic composition of the school might also have influenced this finding. The majority student racial/ethnic group in all the study schools was African American. Past studies have suggested that students who belong to the proximal majority racial/ethnic group are better able to manage issues surrounding discrimination (Greene et al., 2006). Past studies have also shown that having a larger racial/ethnic community leads to better developmental outcomes (Pickett & Wilkinson, 2008).

Limitations

Although these findings offer further empirical support for associations between discrimination and prosociality and provide new insight into potential individual assets to foster among racial/ethnic minority youth, several limitations must be considered. The largest limitation of this study relates to construct measurement. In the case of the discrimination measure, participants were not asked about how often discriminatory experiences occurred or the source of the discrimination (e.g. peers, authority figures). This lack of nuanced information makes it difficult to determine if control beliefs are protective for individuals who experience pervasive levels of discrimination in comparison to those who experience minimal levels of discrimination. The discrimination measure was also asked in such a way that participants at Wave 6 reported on experiences of discrimination within the past few months (during the summer), but participants at Wave 7 reported on experiences of discrimination over the course of an entire year. As such, reports of discrimination at Wave 6 are likely to be uniquely connected to the out-of-school contexts youth are situated in during summer months, whereas reports of discrimination at Wave 7 are likely connected to in-school contexts. Additionally, the timeframe between Waves 6 and 7 was approximately six months, whereas the timeframe between Waves 7 and 8 was approximately one year. As such, individuals who reported experiencing discrimination at Wave 6 might have qualitatively and quantitatively different discriminatory exposures than those who reported

experiencing discrimination at Wave 7. The predictive associations drawn from Wave 6 to 7, and from Wave 7 to 8, can therefore not be judged as being systematically comparable. In the case of the control belief measure, I was limited to using a single-item indicator. The results of this interaction must be interpreted with caution, then, as the single-item indicator could be accounting for additional variation unrelated control beliefs (i.e., error variance) that cannot be parsed apart without additional indicators. Future work should focus on examining control beliefs using multiple indicators. Lastly, prosociality and discrimination were measured using different time frames. Prosociality scores indicated how often participants engaged in a behavior over the past few weeks, whereas discrimination scores indicated if participants had ever experienced a given example of discrimination within the past few months to one year. As a result, this study might have been underpowered to detect some effects of discrimination. Future research should examine how recent experiences of discrimination and compounded life experiences of discrimination work together to influence prosociality.

Furthermore, this study included only African American and Latinx early adolescents because there were not enough participants who identified as other minority populations (e.g., Asian or Native American) to be included in the analysis. Therefore, the study findings might not apply to different racial/ethnic minority populations. I examined group-level differences by race/ethnicity and accounted for the main effect of gender on discrimination and prosociality. However, I did not

investigate how the effect of discrimination on prosociality might be different as a function of gender. As indicated by previous research, gender influences some of the ways that discrimination impacts development (Alfaro et al., 2009; Brittian et al., 2012; Umaña-Taylor & Updegraff, 2007). As such, boys and girls might experience discrimination through different developmental processes that cannot be accounted for by statistically controlling for gender. Additionally, experiences are likely different based on both race/ethnicity and gender. For example, the developmental process of African American boys might not only be unique in comparison to African American girls, but African American boys' developmental processes might also be unique in comparison to Latinx boys as well.

Future Directions

The current study has several meaningful implications for future research and practice. Most adolescents in this sample did not report experiencing discrimination, and those who reported experiencing discrimination also exhibited higher levels of prosociality six months later. The present findings therefore indicate that adolescents might engage in prosocial responses to discrimination and that some adolescents are better equipped to respond prosocially than others. Given the prevalence and pervasiveness of discrimination in the U.S., it is likely that the majority of adolescents in this sample experienced discrimination but were unable to identify or recall these experiences. Critical consciousness (i.e. the ability of marginalized individuals to evaluate social and political inequalities) could be an unexplored variable that

influences individuals' ability to identify discrimination and individuals' likelihood to exhibit higher prosocial behaviors (Freire, 1973). Research should examine how critical consciousness development promotes adolescents' awareness of discrimination and subsequent prosocial actions in relation to those experiences. Future research should also explore self-esteem control beliefs as a construct and the ontogeny of self-esteem control beliefs in adolescence, given that these beliefs support the emergence of prosociality in light of discrimination.

The study findings imply that racial/ethnic group differences in the U.S. might vary based on context. Future work should expand beyond attempts to make broad generalizations about racial/ethnic group differences and consider how factors such as the local demographic composition and the racial/ethnic climate of the school or neighborhood might influence developmental outcomes. Applied research should then further investigate how to best promote individual strengths among marginalized populations such as control beliefs and proactive coping skills in early adolescence. These individual strengths should be encouraged while concurrent efforts are taken to reduce contextual discrimination overall. For example, interventions that support marginalized adolescents' sociopolitical involvement might serve to promote control beliefs and proactive coping skills. Additionally, school-wide and community-wide interventions that focus on building adolescents' internal resources, fostering positive peer interactions, and creating a supportive but critically conscious environment might be especially effective.

Throughout this paper, I describe prosociality as a response to discrimination. This conceptualization allows for clarity, but it likely reduces the reality of the inseparability of person ↔ context influences. Individuals likely also engage in anticipatory coping behaviors when entering situations where threats to self-esteem, such as discrimination, might occur (Aspinwall & Taylor, 1997). Additionally, it is theoretically important to consider how discrimination and prosociality might dynamically influence one another. As such, future work should continue to move beyond cross-sectional analysis to better examine potential bidirectional influences and complex pathways. Longitudinal analyses might also be able to further examine if the predictive association between discrimination and prosociality persists beyond six months using a more parallel design.

Conclusion

As racial/ethnic minority early adolescents attempt to navigate maladaptive contexts, it is important for researchers to be cognizant of how experiences of marginalization shape developmental outcomes. This study advances the current understanding of prosocial development among racial/ethnic minority adolescents by examining how discrimination and individual strengths influence general prosociality. It supports and builds on theory related to adolescents' self-esteem formation and maintenance processes through pointing to discrimination as an example of a threat to self-esteem. By increasing this body of knowledge, researchers and practitioners will be able to better understand, define, and support the emergence of positive

developmental outcomes in racial/ethnic minority groups during sensitive periods such as early adolescence.

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APPENDICES

Appendix A

Discrimination

For the items listed below, please indicate whether each situation has happened to you since the end of last school year. (1=No, 2=Yes)

1. You were excluded from a group because of your race, ethnicity, or culture.
2. You were unfairly accused of something because of your race or ethnicity.
3. You heard other people making jokes about your ethnic or racial group.
4. You were called a racial name that was a putdown.
5. Someone put you down for practicing the traditions or customs of your race, ethnicity, culture, or religion

Prosociality

Below are some things that kids do from time to time. How often in the past couple of weeks has each happened to you? Think about what has really happened, not what could have happened but didn't. Your answers are private, and no one will see how you answered, not even you teacher. (0=Never, 1=Once or twice, 2=A few times, 3=Many times)

1. At school or someplace else, I helped someone who was hurt.
2. At school or someplace else, I cheered up someone who was feeling sad.
3. At school or someplace else, I helped someone who fell down.
4. At school or someplace else, I helped an older person.
5. At school or someplace else, I helped a younger child who was lost.

Proactive Coping

For this next set of questions, think about **HOW MUCH OF THE TIME** each of the following things are **TRUE FOR YOU**. (None of the time = 1, Some of the Time = 2, Most of the Time = 3, All of the Time = 4).

1. I work hard to feel good about myself as a person.
2. I try to do things that help me feel good about myself as a person.
3. I can do things to change how I feel about myself as a person.

Self-Esteem

This next section asks about YOU and how you feel about yourself. Please answer with your honest opinion. There are no right or wrong answers. DO YOU AGREE with the following statements about YOU? (1 = NO!, 2 = no, 3 = yes, 4 = YES!).

1. I am happy with myself as a person.
2. I am the kind of person I want to be.
3. I am as good a person as I want to be.
4. I like being just the way I am.

Appendix B

I conducted an exploratory factor analysis (EFA) using all items from DuBois' adaptive self-esteem formation, maintenance, motivation, and control scales using the "TYPE=EFA" command in MPLUS. I examined the eigenvalues of each potential factor solution based on the Kaiser-Guttman rule, visually inspecting the scree plot, and through parallel analysis. The results indicated that a 2-factor structure would be most appropriate. The control belief item "I cannot control how I feel about myself as a person" did not adequately load on to either factor. Because the results indicated that this item was unique in relation to the other items, I did not add any additional items on to the Self-Esteem Control variable in my analyses.

Next, I dropped the indicated control belief item, reran the EFA, and examined the eigenvalues of each potential factor solution. The second EFA results indicated that a 2-factor structure would be most appropriate. A 2-factor structure fit well, $\chi^2(43) = 64.809$, $p < .05$; RMSEA=.051; 90% C.I. [.022, .075]; CFI=.98; TLI=.97. The first factor included four items that loaded above a .30 and did not cross-load. These were:

1. I am good at figuring out what I need to do to improve myself
2. I work hard to develop my talents
3. I treat others the way I like to be treated
4. I keep trying at something even if I fail

The second factor included five items that loaded about a .30 and did not cross-load.

These were:

1. I work hard to feel good about myself as a person

2. One of my most important goals is to feel good about myself as a person
3. I try to do things that help me feel good about myself as a person
4. I can do things to change how I feel about myself as a person
5. How I feel about myself as a person is something I can control

The first factor was not theoretically relevant to the original research questions and hypotheses because it did not provide information about pathways towards self-esteem or components of self-esteem. Therefore, I determined that this factor should not be included in the models. The second factor, however, appeared to be theoretically relevant to my research questions. I dropped two items that seemed substantively different from the others. The items were: “One of my most important goals is to feel good about myself as a person” and “How I feel about myself as a person is something I can control”. The resultant factor included three items that contained information about proactive coping skills related to self-esteem.