

Discrimination in Mexican American Adolescents: Examining Processes that
Minimize Negative Adjustment Outcomes

by

Megan O'Donnell

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Approved April 2014 by the
Graduate Supervisory Committee:

Mark Roosa, Chair
Larry Dumka
Nancy Gonzales
Manuel Barrera

ARIZONA STATE UNIVERSITY

May 2014

ABSTRACT

Recent reports have indicated that there are both mental health and educational disparities between Latino youth and their European American counterparts. Specifically, Latin youth are at a heightened risk for negative mental health outcomes in comparison to their non-Latino youth (e.g., Eaton et al., 2008). Further, 16.7% of Latino adolescents dropped out of high school compared to 5.3% of European American youth over the past several decades (1960-2011; U.S. Department of Education, 2013). Mexican American (M.A. youth in particular, have the lowest educational attainment among all Latino ethnic groups in the U.S. (U.S. Census Bureau, 2010). While these mental health and educational disparities have often been attributed to discrimination experiences that Latino youth encounter, there is also consistent empirical evidence linking discrimination with these maladjustment problems. These studies confirmed that discrimination directly related to depressive symptoms (e.g., Umana-Taylor et al., 2007), externalizing behaviors (Berkel et al., 2010), self-esteem (e.g., Zeiders et al., 2013), and academic outcomes (e.g., Umana-Taylor et al., 2012). Few studies to date have examined the underlying mechanisms (i.e., moderation and mediation) that help us to better understand resiliency paths for those Latino youth that display positive adjustment outcomes despite being faced with similar discrimination encounters that their maladjusted peers face. Therefore, the following two studies examined various mechanisms in which discrimination related to adjustment to better understand potential risk and resiliency processes in hopes of informing intervention research. Paper 1 explored cultural influences on the association between discrimination, active coping, and mental health outcomes in M.A. youth. Paper 2 examined how trajectories of discrimination across 5th, 7th, and 10th grades related to

cultural values, externalizing behaviors, and academic outcomes in M.A. youth. Taken together, these studies provide a culturally informed overview of adjustment processes in M.A. adolescents who face discrimination in addition to identifying critical directions for future research in efforts to gaining a more contextualized and comprehensive understanding of the dynamic processes involved in discrimination and adjustment in M.A. youth.

ACKNOWLEDGMENTS

Completing the PhD program and dissertation would not have been possible without the support of my advisor, family, and friends. First, I would like to thank my advisor, Mark Roosa for his patience, insight, and support throughout the long, winding road that finally led me to my dissertation defense. I would also like to thank my committee members, Nancy Gonzales, Larry Dumka, and Manuel Barrera who have provided me with encouragement and valuable feedback throughout the dissertation process. Lastly, I would like to thank Rich Lambert for introducing me to the world of research at UNCC as I would likely not have pursued a PhD without his influence.

I am also grateful for my friends and fellow 2007 SSFD cohort members (you know who you are). I truly cannot imagine going through the past (almost) 7 years without you – I am so happy that our paths crossed when they did. Special thanks to Norma, Chris, Jason, and Danyel for their varying roles in providing me support in many ways. Next, I would like to thank my mom, dad, Kelly, Mel, and Aunt Kathy for continuing to believe in me, despite this taking much longer than I (or they) ever anticipated. Lastly, I owe an extra special thanks to Veyla Laine, my little miracle of a niece whose strength has been a true inspiration to me in the past several months when I've needed it most.

TABLE OF CONTENTS

	Page
LIST OF TABLES	viii
LIST OF FIGURES	ix
INTRODUCTION	1
STUDY 1: DISCRIMINATION AND MENTAL HEALTH OUTCOMES IN MEXICAN AMERICAN YOUTH: EXAMINING THE MODERATING EFFECTS OF CULTURAL VALUES AND ACTIVE COPING	4
The Impact of Discrimination on Mental Health	5
Discrimination, Coping, and Mental Health	7
Cultural Values and Coping with Discrimination	8
The Role of Gender and Nativity	10
Current Study	12
Method.....	13
Participants	13
Procedure.....	14
Measures.....	15
Family Income	15
Perceived Discrimination.....	15
Active Coping	16
Cultural Values.....	16
Internalizing Behaviors	17
Externalizing Behaviors.....	17

	Page
Plan of Analysis	18
Results	19
Preliminary Analysis.....	19
Discrimination, Coping, Mexican American Values, and Adolescent Adjustment.....	19
Discrimination, Coping, Individualistic Values, and Adolescent Adjustment.....	20
Gender and Nativity Moderation.....	21
Discussion	21
Cultural Values, Active Coping, and Adjustment.....	22
Discrimination, Active Coping, and Adjustment.....	24
Discrimination, Individualistic Values, and Adjustment.....	25
Gender and Nativity Differences.....	26
Limitations and Future Directions.....	27
Conclusion.....	29

STUDY 2: A LONGITUDINAL EXAMINATION OF DISCRIMINATION, CULTURAL VALUES, EXTERNALIZING BEHAVIORS, AND ACADEMIC OUTCOMES IN MEXICAN AMERICAN ADOLESCENTS	31
Discrimination and Adjustment.....	32
Discrimination and Externalizing Behaviors	34
Discrimination and Academic Outcomes.....	34

	Page
Discrimination, Cultural Values, and Adjustment	35
Moderating Role of Gender and Nativity.....	39
Current Study	42
Method.....	43
Participants	43
Procedure.....	44
Measures.....	45
Perceived Discrimination.....	45
Cultural Values.....	45
Externalizing Behaviors.....	46
Academic Self-Efficacy.....	47
School Attachment.....	47
Academic Achievement.....	47
Results	47
Analytic Plan.....	47
Discrimination, Values, and Adjustment	49
Mediation Analysis	50
Discussion	51
Discrimination, Cultural Values, and Adjustment:	
Direct Effects.....	53
Indirect Effects	57
Limitations and Future Directions.....	58

	Page
Conclusion.....	60
DISSERTATION CONCLUSION	61
References.....	63

LIST OF TABLES

Table	Page
Study 1, Table 1. Summary of Paths Estimated in Models 1-4.....	75
Study1, Table 2. Correlations among Study Variables and Descriptives	76
Study 1, Table 3. Standardized Regression Estimates, Standard Errors, and Effect Sizes for Models 1 and 2	77
Study 1, Table 4. Standardized Regression Estimates, Standard Errors, and Effect Sizes for Models 3 and 4	78
Study 1, Table 5. Standardized Regression Estimates for Significant Nativity and Gender Moderation	79
Study 2, Table 1. Correlations among Study Variables and Descriptives	80
Study 2, Table 2. Quadratic Growth Curve Estimates.....	81

LIST OF FIGURES

Figure	Page
Study 1, Figure 1. Moderation Effects of Active Coping on the Association Between Discrimination and Internalizing Behaviors.....	82
Study 1, Figure 2. Moderation Effects of Active Coping on the Association Between Discrimination and Internalizing Behaviors.....	83
Study 1, Figure 3. Moderation Effects of Individualistic Values on the Association Between Discrimination and Externalizing Behaviors	84
Study 1, Figure 4. Moderation Effects of Active Coping on the Association Between Discrimination and Internalizing Behaviors.....	85
Study 1, Figure 5. Moderation Effects of Active Coping on the Association Between Discrimination and Externalizing Behaviors (U.S. Born)	86
Study 1, Figure 6. Moderation Effects of Active Coping on the Association Between Discrimination and Internalizing Behaviors (U.S. Born)	87
Study 1, Figure 7. Moderation Effects of Active Coping on the Association Between Discrimination and Internalizing Behaviors (Females)	88
Study 2, Figure 1. Standardized Coefficients are Presented for a Longitudinal Model of Discrimination, Mexican American Values, and Adolescent Adjustment	89

Study 2, Figure 2. Standardized Coefficients are Presented for a Longitudinal Model of
Discrimination, Individualistic Values,
and Adolescent Adjustment 90

INTRODUCTION

Recent reports have indicated that there are both mental health and educational disparities between Latino youth and their European American counterparts. Specifically, Latino youth are at a heightened risk for negative mental health outcomes in comparison to their European American counterparts (Bird et al., 2001; CDC, 2006; Eaton et al, 2008). Furthermore, 16.7% of Latino youth dropped out of high school compared to 5.3% of European American adolescents over the past several decades (1960-2011; U.S. Department of Education, 2013). Mexican American (M.A.) youth in particular, have the lowest educational attainment among all Latino ethnic groups in the U.S. (U.S. Census Bureau, 2010). While these mental health and educational disparities have often been theoretically attributed to discrimination experiences that Latino youth encounter, there is also consistent empirical evidence linking discrimination with negative mental health and educational outcomes. These studies have confirmed that discrimination directly relates to depressive symptoms (e.g., Umaña-Taylor & Updegraff, 2007; Toomey, Umaña-Taylor, Updegraff & Jahromi, 2013; Zeiders, Umaña-Taylor, & Derlan, 2013;), externalizing behaviors (e.g., Berkel et al., 2010; Umaña-Taylor, Wong, Gonzales, Dumka, 2012;), self-esteem (e.g., Umaña-Taylor & Updegraff, 2007; Toomey et al., 2013; Zeiders et al., 2013;), and academic outcomes (e.g., Berkel et al., 2010; Umaña-Taylor et al., 2012).

Despite the recent empirical advances in helping us understand these negative correlates of discrimination in Latino youth, there are still knowledge gaps when it comes to understanding the underlying processes that connect discrimination to these adjustment outcomes. Few studies to date have examined the underlying mechanisms (i.e.,

moderation and mediation) that help us to better understand resiliency paths for some Latino youth that display positive adjustment outcomes despite being faced with the same discriminatory experiences that some of their maladjusted peers face. Another current gap in the literature involves our understanding of how discrimination trajectories relate to various adjustment outcomes in Latino youth. These two studies sought to extend previous discrimination research in Latino adolescents by addressing both of these gaps in the current literature.

The first paper explored cultural influences (i.e., M.A. and individualistic values) on the relationships between discrimination, active coping, and mental health outcomes in M.A. youth. While a few studies have examined how Latino youth cope with discrimination (Brittian, Toomey, Gonzales, & Dumka, 2013; Edwards & Romero, 2008), recent findings suggest that the effectiveness of specific coping strategies in minimizing the negative effects of discrimination are likely influenced by cultural norms and values in ethnic minority youth (Brittian et al., 2013; Noh and Kasper, 2003). Given that M.A. youth are being raised in a dual cultural context, they likely possess both Mexican and U.S. cultural values (Knight et al., 2010) that could potentially influence the effectiveness of coping in curbing the negative mental health outcomes associated with discrimination. Furthermore, given that experiences with discrimination seem to vary between boys and girls (e.g., Brittian et al., 2013; Umaña-Taylor et al., 2012) as well as immigrants and non-immigrants (Edwards & Romero, 2008; Umaña-Taylor & Updegraff, 2007), this paper also explored whether the associations between discrimination, cultural values, active coping, and mental health were different by gender and nativity.

The second paper examined how trajectories of discrimination across 5th, 7th, and 10th grades related to cultural values (M.A. and individualistic cultural values), externalizing behaviors, and academic outcomes (e.g., academic self-efficacy, school attachment, and academic achievement) in M.A. youth. Recent studies have found that discrimination experiences increase over time in adolescents for various ethnic minority groups (e.g., Benner & Brody et al., 2006; Juang & Cookston, 2009). Further, there was recent evidence that discrimination was positively associated with M.A. cultural values cross sectionally (e.g., Berkel et al., 2010; Brittian, O'Donnell, Knight, Carlo, Umana-Taylor, & Roosa, 2013) in M.A. youth, while discrimination negatively related to U.S. cultural values in Chinese American adolescents (Juang & Cookston, 2008). In addition, studies have found that Mexican/Latino cultural values negatively related to externalizing behaviors cross sectionally (Berkel et al., 2010; Romero & Ruiz, 2007), while they were positively associated with academic outcomes (Berkel et al., 2010; Gonzalzes et al., 2008). U.S. cultural values, on the other hand, have been positively associated with externalizing behaviors (Pantin, Schwartz, Sullivan, Coatsworth, & Szapoznik, 2003), however, there has not been empirical work linking such values to academic outcomes. Given that Mexican American youth likely possess both M.A. and U.S. cultural values, both sets of values were tested as mediators between discrimination (initial levels in 5th grade and trajectories of discrimination) and both externalizing behaviors and academic outcomes in 10th grade.

**Study 1: Discrimination and Mental Health Outcomes in Mexican American Youth:
Examining the Moderating effects of Cultural Values and Active Coping**

Latinos are the largest ethnic minority group in the US. Furthermore, Mexican Americans comprise 10 percent of the U.S. population and 66% of the total Latino population residing in the country (US Census, 2010). Not only is the Latino youth population large, but it is also at a heightened risk for a variety of negative mental health outcomes in comparison to European American adolescents (Bird et al., 2001; CDC, 2006; Eaton et al, 2008; Hovey & King 1996; Umaña-Taylor & Updegraff, 2007). Discrimination has been identified as a potential underlying cause of these disparities and has been linked to depressive symptoms (e.g., Hovey & King, 1996; Romero & Roberts, 2003a, 2003b; Zeiders et al., 2013; Toomey et al., 2013) and externalizing behaviors (Berkel et. al, 2010; Umaña-Taylor et al., 2012) in Latino adolescents. Despite these established negative consequences of discrimination, studies have found that certain coping mechanisms (Clark et. al, 1999; Harrell, 2000) may lead to variability in the negative mental health outcomes associated with discrimination. Furthermore, it is thought that culture may influence the effectiveness of certain coping strategies on curbing these negative outcomes initiated by experiences with discrimination (e.g., Brittian et. al, 2013). It is essential that researchers develop a more comprehensive understanding of cultural influences on the relations between discrimination, coping, and mental health in efforts to increase our understanding of why some Latino youth are more resilient than others when faced with discrimination.

Guided by the integrative model of developmental competencies of minority children (García Coll et al., 1996) and cultural maintenance hypothesis (Noh et. al, 1999), the

current study examined how discrimination, cultural values (e.g., Mexican American and U.S. values), and active coping related to mental health in Mexican American adolescents. The integrative model emphasizes that to understand minority development, we must: 1) include cultural variables (e.g., discrimination and cultural values), 2) examine processes (i.e., moderation) rather than just direct relations between predictors and outcomes, and 3) assess intra-group variability (i.e., differences across gender and nativity), while the cultural maintenance hypothesis suggests that cultural norms and values may influence the types of coping strategies utilized to deal with stress. Although several studies have linked discrimination with negative mental health outcomes in Latino youth (e.g., Berkel et al., 2010; Toomey et al., 2013; Umaña-Taylor et al., 2012), research has also demonstrated that discrimination does not affect everyone in the same manner, which may be attributed at least in part to the use of specific coping strategies (Clark et al., 1999; Harrell, 2000). Furthermore, one study found that the relationship between discrimination, coping, and mental health varied depending on individual differences in *cultural orientation* (e.g., cultural behaviors, attitudes, and values; Juang & Alvarez, 2010). Therefore, the current study examined the relationships between discrimination, active coping, Mexican American and U.S. cultural values, and mental health in a heterogeneous sample of Mexican American adolescents.

The Impact of Discrimination on Mental Health

Discrimination is defined as the daily hassles associated with the lower status of minority groups, including negative stereotypes or prejudices, as well as negatively directed actions towards individuals based on their racial or ethnic group membership (Sellers & Shelton, 2003). Latino youth tend to describe discrimination experiences based

on English fluency, immigration concerns, negative stereotypes, poverty, and skin color (Fennelly et. al, 1998; Romero & Roberts, 2003b; Rosenbloom & Way, 2004). A recent study found that a large percentage of Mexican American adolescents reported experiencing discrimination, which was often associated with high levels of stress (Edwards & Romero, 2008). For example, the adolescents reported on which types of discrimination they experienced (e.g., “I do not like it when others put down people of my ethnic background” and “I feel uncomfortable when others make jokes about people of my ethnic background”) and also rated the stressfulness of each of these experiences on a scale of one to five. On average, adolescents reported experiencing five of 11 discrimination experiences and approximately 64% of the youth ranked at least one of the experiences at a level 3 (quite a bit stressful) or 4 (very stressful).

The stress associated with discrimination may be a contributor to the current mental health disparities between racial/ethnic minority groups and their European American counterparts across various domains of adjustment (e.g., Berkel et. al, 2009; Cocker et. al, 2009; Greene, Way, & Pahl, 2006). Studies in the past decade have found negative associations between discrimination and self-esteem (e.g., Toomey et al., 2013; Zeiders et al., 2013) while some have also found a positive link to depressive symptoms (e.g., Berkel et. al, 2010; Greene et. al, 2006; Umaña-Taylor & Updegraff, 2007) and externalizing behaviors (Berkel et al., 2010; Umaña-Taylor et al., 2012) in Latino youth. The current study examined the link between discrimination and both depressive and externalizing behaviors in Mexican American adolescents.

Discrimination, Coping, and Mental Health

Although research has linked discrimination to negative mental health outcomes in minority youth across several ethnic groups (e.g., Berkel et. al, 2010; Brody et. al, 2006), some minority youth tend to be more resilient than others when faced with discrimination (Clark et. al, 1999; Harrell, 20000). While some researchers attribute these differences to differences in choice of coping strategies (Clark et. al, 1999; Harrell, 2000), no research to date has identified which types of coping strategies are most effective in reducing the negative mental health outcomes associated with discrimination (Pascoe & Richman, 2009). Coping has been conceptualized as a mechanism linking stress to adaptation and involves cognitive or behavioral efforts to manage situations appraised as taxing or exceeding available resources (Lazarus & Fokman, 1984). Ayers and colleagues (1996) classified four specific types of coping in children: active, avoidance, distraction, and support-seeking. The current study focused on active coping, which is defined as problem-focused strategies that include doing something to solve the problem and seeking further understanding of the situation, as well as positive reframing strategies (i.e., reminding oneself of his/her ability to handle the situation at hand; Ebata & Moos, 1991). Some research has suggested that active coping strategies may buffer the negative effects of discrimination by enabling an individual to challenge the validity of discrimination experiences and minimize the negative feelings about the self, potentially decreasing the negative implications of discrimination on mental health (see Pascoe & Richman, 2009).

Only two studies to date have examined the relationships between discrimination, active coping, and mental health in Mexican American youth (Brittian et al., 2013;

Edwards & Romero, 2008). Edwards and Romero (2008) found that *primary-engagement coping* (e.g., direct coping with the stressor at hand or emotions associated with the stressor) minimized the negative relationship between discrimination and self-esteem in a small sample (n=73) of Mexican American early adolescents residing in mostly female headed, low socioeconomic households. Brittan and colleagues (2013) examined several types of coping (e.g., active, avoidant, distraction, religious, and support seeking) in relation to discrimination and mental health, failing to find a relationship between discrimination, active coping, and mental health in a larger (n = 189) and more diverse sample of Mexican American youth. At this time, it is unclear why active coping was a significant moderator in only one of these studies, however, cultural values may be a factor that could help explain these disparate results.

Cultural Values and Coping with Discrimination

Research on effective coping strategies for discrimination across various developmental periods and racial/ethnic groups has been inconsistent, which some researchers have attributed to individual differences in cultural influences (Juang & Alvarez, 2010). According to the cultural maintenance hypothesis (Noh et. al, 1999), preferred coping styles are based on cultural norms and values. Further, the benefits of active coping may be dependent upon cultural fit (i.e., coping strategies outside of one's cultural norms may not be as beneficial as those strategies within one's cultural norms). Research suggests that individuals in collectivistic cultures (e.g., Latinos, Asian Americans) may prefer to utilize coping strategies that put the needs of the group before their own (Gabrielidis et. al, 1997). Given that active coping is considered to be an individualistic strategy that focuses on the needs of the individual, it may be more

beneficial in minimizing the negative effects of discrimination for individuals who are more oriented to mainstream culture.

Recent studies have begun examining the way in which cultural orientation influences the relation between discrimination, coping, and mental health in minority individuals. For instance, a study of Korean immigrant adults residing in Canada found that active coping was beneficial in curbing the effects of discrimination on depression in those individuals who were more oriented to Canadian mainstream culture (Noh and Kasper, 2003). Similarly, Brittan and colleagues (2013) found that high levels of avoidance coping minimized the relationship between discrimination and internalizing symptoms only in those Mexican American youth that reported lower levels of U.S. cultural behaviors (e.g., “I enjoy listening to English language music.”) . These results indicate that the degree to which certain coping behaviors moderate (i.e., minimize) the relationship between discrimination and mental health problems may be dependent upon one’s cultural orientations and/or values.

The current study expanded upon these studies by utilizing a larger sample (n=638) and including both U.S. mainstream (e.g., self-reliance and competition/personal success) and Mexican American cultural values (familism and respect) as potential influences in the relation between discrimination, active coping, and mental health. Values internalized during adolescence may be especially important in guiding Latino youths’ behaviors and decisions about the socially appropriate cultural norms to follow while residing in a dual cultural environment (Knight et al., 2010). Mexican American and mainstream individualistic cultural values were examined separately given that they are considered to be two distinct but correlated constructs (Knight et al., 2010; Schwartz

et al., 2010). Based on the cultural maintenance hypothesis (Noh et al., 1999) as well as supporting empirical evidence (Noh & Kasper, 2003), it was suspected that active coping would be more beneficial in curbing the negative effects of discrimination on mental health in those youth who reported higher levels of individualistic cultural values and lower levels of Mexican American cultural values.

The Role of Gender and Nativity

Gender is thought of as an important organizing feature of family roles and responsibilities within Latino families (Cauce & Domenech-Rodriguez, 2002) particularly when it comes to socialization experiences for girls and boys (e.g., Azmitia & Brown, 2002). For instance, theory has suggested that Latino boys who embrace *machismo* (i.e., psychological-cultural phenomenon through which Mexican American boys are socialized to suppress emotions; Raffaelli & Ontai, 2004) values may have a harder time coping with stress beyond their control in comparison to Latino males who do not endorse such values (Urrabazo, 1985). While the current study does not include machismo as a variable, these theoretical underpinnings are relevant to the research questions at hand; discrimination could be considered a stressor beyond one's control. Further, recent studies have begun to identify the important roles of gender in discrimination, cultural orientation, and mental health studies in Latino adolescents.

For instance, Umaña-Taylor and Updegraff (2007) found that the relationship between discrimination and depressive symptoms varied by both gender and English language usage. Specifically, boys who reported more English language use had a stronger positive relationship between discrimination and depressive symptoms compared to males who reported less English use. Language use did not influence this relationship

in girls within their sample. This indicates that Latino boys who reported speaking high levels of English were at a higher risk for depressive symptoms than their male counterparts who reported speaking less English. Furthermore, boys had a stronger positive association between discrimination and depressive symptom compared to their female counterparts. Similarly, Brittian and colleagues (2013) found that religious coping moderated the relationship between discrimination and externalizing behaviors for boys, such that there was a positive relationship between discrimination and externalizing problems only in boys who reported low religious coping. Such moderation did not occur for the girls in this study. Given the theory on cultural expectations for Latino males (Urrabazo, 1985), along with the recent findings on the role of gender in studies on discrimination and mental health in Latino youth (Brittian et al., 2013; Umaña-Taylor & Updegraff, 2007), it was expected that boys would be more vulnerable to the negative effects of discrimination related stress than girls. Therefore, gender was examined as a moderator in the current study.

Recent cross-sectional studies have found mean level differences in reported levels of discrimination in Latino youth such that immigrant youth reported higher levels of discrimination than do later generation youth (e.g., Edwards & Romero, 2008; Umaña-Taylor & Updegraff, 2007). In addition to differences across levels of reported discrimination, studies have also found that Latino youth vary on adjustment outcomes (e.g., Gill, Wagner, & Vega, 2000) such that U.S. born youth are more likely to experience adjustment problems compared to their immigrant counterparts (Gill, Wagner, & Vega, 2000). One potential reason for these differences in adjustment outcomes is that immigrant adolescents may be more likely to maintain ties to the protective aspects of

their culture (e.g., ethnic cultural values), whereas those born in the U.S. may not be as connected to these protective cultural factors (Gonzales et al., 2008). Since it is not clear whether adjustment outcomes across nativity are attributed to adherence to Latino/Mexican ethnic values, the current study examined whether the processes between discrimination, M.A/U.S. cultural values, and adjustment outcomes varied by nativity. Given the lack of empirical evidence, however, these analyses were exploratory.

Current Study

It is important that researchers take a more nuanced approach to understanding resiliency processes that cause some youth to do better than others in the midst of degrading experiences with discrimination. Based on the Integrative model (Garcia Coll et. al, 1996) and the cultural maintenance hypothesis (Noh et. al, 1999), the current cross-sectional study examined the ways in which Mexican American and U.S. cultural values interacted with discrimination and active coping as they related to mental health outcomes in Mexican American adolescents. As the cultural maintenance hypothesis (Noh et. al, 1999) suggests, the benefits of active coping may be influenced by cultural fit. Further, recent empirical findings indicated that cultural behaviors may influence the relationship between discrimination, coping, and mental health in Mexican American youth (e.g., Brittian et al., 2013). Therefore, it was hypothesized that active coping would be most protective in minimizing the positive relation between discrimination with internalizing and externalizing behaviors in those youth who reported higher levels of individualistic cultural values and lower levels of M.A. cultural values. Furthermore, given the recent findings on how gender (e.g., Brittian et al., 2013) and nativity may

influence M.A. adolescents' adjustment processes, a multi-group framework was used to examine whether gender and/or nativity influence each of these relations.

Method

Participants

Data for the current study were derived from the third wave (n=638) of an ongoing longitudinal study investigating the role of culture and context in the lives of Mexican American families (Roosa, et al., 2008). The reason for only utilizing the third wave of data was due to the fact that the discrimination measure of interest was not used in the prior two waves. At wave one, participants were 749 Mexican American adolescents who were selected from rosters of schools that served ethnically and linguistically diverse communities in a large southwestern metropolitan area. Eligible families met the following criteria: (a) they had a fifth grader attending a sampled school; (b) both mother and child agreed to participate; (c) the mother was the child's biological mother, lived with the child, and self-identified as Mexican or Mexican American; (d) the child's biological father was also of Mexican origin; (e) the child was not severely learning disabled; and (e) no step-father or mother's boyfriend was living with the child (unless the boyfriend was the biological father of the target child). Family incomes at Time 1 ranged from less than \$5,000 to more than \$95,000, with the average family reporting an income of \$30,000 - \$35,000. In terms of language, 30.2% of mothers, 23.2% of fathers, and 82.5% of adolescents were interviewed in English. The mean age of youth (49% female) at T1 was 10.4, and the majority of adolescents were born in the US (70%).

There were 638 at T3 (631 mothers, 338 fathers, and 638 adolescents), two and five years after T1 data collection, respectively. Families who participated in T3 interviews were compared to families who did not on key demographic and predictor variables. Pearson χ^2 tests were conducted for comparing categorical variables and t-tests were used for comparing continuous variables. There were no significant differences across several key demographic and study variables for youth (e.g., gender, mood disorder symptoms, externalizing symptoms), mothers (e.g., nativity, household structure), and fathers (nativity, education, income, employment status). There was a significant difference on adolescent nativity; those who participated at T3 were more likely to be born in the U.S. than nonparticipants [$\chi^2(1) = 5.02, p=.03$]. There were also significant differences for mothers' education, income, and employment status. Specifically, mothers who participated at T3 reported more years of schooling ($M=10.48, SD = 3.65$) than nonparticipants ($M=9.48, SD = 3.72$), $t(746) = -2.633, p = .009$, higher total family incomes ($M = 6.92, SD = 4.42$) than nonparticipants ($M = 5.61, SD = 4.15$), $t(730) = -2.835, p = .005$, and a greater likelihood of working at least 20 hours per week than nonparticipants [$\chi^2(1) = 10.7, p=.001$].

Procedure

Youth participated in in-home Computer Assisted Personal Interviews, scheduled at the family's convenience. Interviews were about 2.5 hours long. Each interviewer received at least 40 hours of training which included information on the project's goals, characteristics of the target population, professional conduct, and the critical role they would play in collecting the data. Interviewers read each survey question and possible response aloud in participants' preferred language to reduce problems related to

variations in literacy levels. Youth were compensated \$55 for their time during wave three data collection.

Measures

Family income. Family income was included as a control variable given that social disadvantage is often related to increased stress, diminished coping resources, and more health issues (cite). Controlling for income would confirm that the associations in the current study did not occur due to social disadvantage. At grade 10, families' reported a median income between \$25,000 and \$30,000; the median income for Arizona was \$50,256 (2008-2012; U.S. Census Bureau, 2014).

Perceived discrimination. The Perceived Ethnic Discrimination Scale - community version (PERDQ-CV; Brondolo et al., 2005) was used to assess perceptions of discrimination reported by adolescents. This scale was slightly modified to better assess discrimination in both adolescents and adults in the sample. One item was deleted (due to overlap with an item on another scale), two items were rephrased, and one item was added to account for discrimination from police officers. The current study used five subscales: exclusion (three items, e.g., "have others made you feel like an outsider who doesn't fit in because of your dress, speech, or other characteristics related to being Mexican or Mexican American?"); stigmatization (four items, e.g., "has it been hinted that you are not very smart because you are Mexican or Mexican American?"); threat and harassment (four items, "have others threatened to hurt you because you're Mexican American"); workplace/school (four items, e.g., "have you been treated unfairly by teachers, principals, or others at school because you are Mexican or Mexican American?"); and police (1 item, e.g., have policemen or security guards been unfair to

you because you are Mexican or Mexican American?”). Adolescents responded to items using a Likert-type scale ranging from 1 = almost never or never to 5 = almost always or always. Chronbach’s alpha was .93.

Active coping. The *Children's Coping Strategies Checklist* (CCSC) is a self-report inventory in which children describe their coping efforts (Ayers et al., 1996) There are a total of 12 items to assess active coping strategies. Adolescents were asked how often they used each strategy in the past 3 months on a scale of 1 (*almost never or never*) to 5 (*almost always or always*). Sample items include “when you had a problem you told yourself that you could handle the problem” and “you tried to understand it better by thinking more about it.” Cronbach’s alpha was .93.

Cultural values. The Mexican American Cultural Values Scale (Knight et al., 2010) was used to assess Mexican American cultural values at Time 3. The scale was developed based upon focus groups conducted with Mexican American mothers, fathers, and adolescents about Mexican American and Anglo American cultures. The current study used six subscales from this measure to assess Mexican American values: *supportive and emotional familism* (6 items, e.g., “parents should teach their children that the family always comes first”); *obligation familism* (5 items, e.g., “A person should share their homes with relatives if they need a place to stay”); *referent familism* (5 items, e.g., “children should always do things to make their parents happy”); *respect* (8 items, e.g., “children should never question their parents decisions”), *religion* (7 items, e.g., “parents should teacher their children to pray”), and *traditional gender roles* (5 items, e.g., “It is important for the man to have more power in the family than the woman”)

Adolescents responded to items using a Likert-type scale ranging from 1 = not at all to 4 = very much; Cronbach's alpha was .93.

Two subscales from the Mexican American Cultural Values Scale (Knight et al., 2010) was used to assess mainstream individualistic values. The scale was developed based upon focus groups conducted with Mexican American mothers, fathers, and adolescents about Mexican American and Anglo American cultures. The current study combined four subscales from this measure to assess individualistic values: *competition and personal achievement* (four items, e.g., "parents should encourage children to do everything better than others") and *self-reliance* (five items, e.g., "when there are problems in life, a person can only count on him/herself"). Cronbach's alpha was .71.

Internalizing Behaviors. Both mothers and children reported children's depressive symptomatology using the Diagnostic Interview Schedule for Children (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000), a structured diagnostic instrument for use by nonclinicians. The current study utilized the major depressive disorder (MDD) symptom count within the past year to assess youths' depressive symptoms. Mother and child reports were combined such that a given symptom was considered present if reported by either; this approach is consistent with common clinical and research practice (e.g., Shaffer et al., 1996).

Externalizing Behaviors. Both mothers and children reported children's externalizing behaviors using the Diagnostic Interview Schedule for Children (Shaffer et al., 2000). The indicators of externalizing behaviors used were adolescent conduct disorder (CD) and opposition defiant disorder (ODD) symptoms. Given that CD and ODD often co-occur in this age group and that CD is thought of as a precursor to ODD

(Hinshaw & Zupan, 1997), these symptom counts were summed into a combined CD/ODD score. Similar to depressive symptoms, mother and adolescent reports were combined.

Plan of Analysis

All analyses were run using Mplus version 6.0 (Muthén & Muthén, 1998-2010). Four separate regression models were tested to examine how discrimination, active coping, M.A. values, and individualistic values related to mental health outcomes in M.A. adolescents. Each of the models included the hypothesized 3-way interaction between discrimination, active coping, and values (M.A. or individualistic) as well as all lower order terms, and main effects (see Table 1). Each of the 3-way interactions identified discrimination and active coping as independent variables, while M.A. or individualistic values was the moderator. All continuous variables were centered prior to creating the interaction terms (Aiken & West, 1991) and significant interactions were probed at one standard deviation below and above the mean, while simple slope analyses were conducted to further understand how the slopes varied from one another (Preacher, Curran, & Bauer, 2006). Lastly, to account for potential gender and nativity moderation, the Wald χ^2 test was used to examine differences in each of the estimated paths across all four models. The Wald χ^2 test was computed using the “model test” command in Mplus 6.0 and is an alternative method to multiple group analysis when testing for group differences in fully saturated models. Missing data was accounted for using full information maximum likelihood (FIML; Arbuckle, 1996).

Results

Preliminary Analyses

Due to sampling procedures, adolescents were clustered within schools so that ignoring clustering can lead to biased estimates (Enders & Tofighi, 2007). To test whether clustering affected the independence of scores, intraclass correlations (ICCs) were examined for all study variables. ICCs ranged from .01 to .05 suggesting that no more than 5% of the variation in the variables was attributable to neighborhood clustering. Further all design effects were less than 2.0, suggesting that the clustered nature of the sampling design could be ignored and traditional statistical techniques could be implemented without concern for bias (Muthen & Satorra, 1995). Descriptive statistics and correlations for all observed study variables are presented in Table 2.

Discrimination, Coping, Mexican American Values, and Adolescent Adjustment

The regression results indicated that there were significant main effects for discrimination ($\beta = .11, p < .01$) and active coping ($\beta = -.17, p < .001$) on externalizing behaviors (see Table 3). Furthermore, there was a significant 2-way interaction ($\beta = .09, p < .05$) such that the association between discrimination and externalizing behaviors was positive for those youth reporting high levels of active coping ($\beta = .18, p < .01$) and was not significant for those reporting low levels of coping (see Figure 1). Similarly, discrimination was positively associated with internalizing behaviors ($\beta = .25$) in Model 2, while the interaction between discrimination and coping was significantly associated with internalizing behaviors ($\beta = .09, p < .05$) such that the association was stronger for youth that reported high active coping ($\beta = .18, p < .01$) compared those who reported low coping ($\beta = .14, p < .05$; see Figure 2). Given the large sample size, the effect sizes (f^2) were also

taken into account to better understand the strength of the relation between the study variables. The effect sizes for the significant associations described above were all considered to be small (Cohen, 1988); see Table 3), indicating that a small proportion of variance in externalizing and internalizing behaviors were attributed to the direct and indirect associations with discrimination, M.A. values, and active coping.

Discrimination, Coping, Individualistic Values, and Adolescent Adjustment

Discrimination was positively associated with externalizing ($\beta = .14, p < .01$) whereas coping was negatively associated with externalizing behaviors ($\beta = -.21, p < .001$). Furthermore, there was a significant 2-way interaction between discrimination and individualistic values ($\beta = -.13, p < .01$) such that there was a positive association between discrimination and externalizing behaviors in adolescents reporting low levels of individualistic values ($\beta = .27, p < .001$), whereas discrimination was not significantly associated with externalizing in those youth reporting high individualistic values (see Figure 3). Lastly, in Model 4, discrimination was positively associated with internalizing behaviors ($\beta = .25, p < .001$), while discrimination interacted with coping ($\beta = .12, p < .001$) such that the positive association between discrimination and internalizing symptoms was stronger in those youth that reported high active coping ($\beta = .33, p < .001$) compared to those reporting low coping ($\beta = .14, p < .01$; see Figure 4). Similar to models 1 and 2, the effect sizes for the significant associations described in the models containing individualistic values were considered to be small (see Table 4), indicating that a small proportion of variance in externalizing and internalizing behaviors were attributed to the direct and indirect associations with discrimination, individualistic values, and active coping.

Gender and Nativity Moderation

In addition to examining moderation by active coping, Mexican American values, and individualistic values across the entire sample of adolescents, a further step was taken to examine whether there were gender or nativity differences across each of the estimated paths in Models 1-4. The Wald tests indicated that there were three significant slope differences in the associations between the 2-way interaction of discrimination and coping with adjustment. Specifically, the nativity moderation occurred with externalizing behaviors in Models 1 [$X^2(1) = 4.92, p < .001$] and 3 [$X^2(1) = 5.02, p < .05$] while the gender moderation was with internalizing behaviors in Model 4 [$X^2(1) = 5.24, p < .05$]; see Table 5. The nativity moderation (see Figures 5 and 6) across both models was almost identical such that that discrimination only related to externalizing behaviors in U.S. born youth who reported high levels of active coping, [Model 1 ($\beta = .18, p < .01$); Model 3 ($\beta = .25, p < .001$)]. The significant gender moderation occurred with internalizing such that the discrimination only was associated with internalizing behaviors in females reporting high levels of active coping ($\beta = .44, p < .001$; Figure 7), whereas this association was not significant in those who reported low levels of coping .

Discussion

Guided by the integrative model of developmental competencies of minority children (García Coll et al., 1996) and cultural maintenance hypothesis (Noh et. al, 1999), the current study examined how discrimination, cultural values, and active coping related to mental health in Mexican American adolescents. To date, it has remained unclear as to which coping strategies are most beneficial in curbing the negative outcomes associated with discrimination in minority youth. Noh and colleagues' (1999) cultural maintenance

hypothesis suggests that preferred coping strategies are based on cultural norms, while the benefits of coping strategies are likely dependent upon cultural fit (Noh et. al, 1999). Therefore, the overarching goal of the current study was to examine whether the benefits of active coping differed across varying levels of Mexican American and individualistic values. Furthermore, gender and nativity were examined as additional sources of variation. While the central hypotheses (i.e., 3-way interactions between discrimination, active coping, and cultural values) were not supported, there were significant 2-way interactions providing further insight into how active coping and individualistic values influence the association between discrimination and adjustment. These results shed some light on specific mechanisms that may lead some Mexican American youth to be more resilient than others when faced with discrimination.

Cultural Values, Active Coping, and Adjustment

Guided by the cultural maintenance hypothesis (Noh et al., 1999) as well as supporting empirical evidence (Noh & Kasper, 2003), it was hypothesized that active coping would be more beneficial in minimizing negative adjustment in youth who possessed higher levels of individualistic values and lower levels of Mexican American values. Although, Noh and Kaspar (2003) found that active coping buffered the association between discrimination and depression in those adults who were more acculturated, cultural values did not influence the association between discrimination, coping, and adjustment in the current study as expected. There are several possible reasons as to why these differences occurred across studies. First, the ethnic composition of the communities were more than likely very distinct from one another. Koreans residing in Canada were probably more isolated from members of their ethnic group,

whereas the participants in the current study resided a context comprised of a large percentage of Mexican Americans Taking on mainstream culture (e.g., behaviors, values, and identities) is likely more salient in communities that are overwhelmingly comprised of majority culture (Umana-Taylor & Alfaro, 2010) and therefore may be a more influential factor in determining how discrimination relates to active coping and depression. Additionally, the samples varied on a number of demographic factors (e.g., age, ethnicity, nativity, socioeconomic status), making it difficult to make comparisons in how discrimination relates to culture, coping, and mental health. Finally, it is a possibility that the hypothesized relationships may not be true across all minority populations. While theory has suggested that cultural values influence the reaction people have to discrimination (e.g., Noh & Kaspar, 2003), empirical evidence is lacking at this point in time.

Future research should continue to examine the ways in which multiple aspects of culture (e.g., values, behaviors, ethnic socialization, ethnic-identity) influence the effectiveness of specific coping strategies in minimizing the negative implications of discrimination in Mexican American youth. Studies should account for contextual variables (e.g., neighborhood characteristics, local immigration policies) that may highlight important differences in the processes that lead some youth to adjust better than others. Utilizing a person-centered approach (e.g., latent profile analysis) may be a valuable analytic tool in helping researchers gain a more comprehensive understanding of varying patterns of discrimination, coping, cultural variables, and context as they relate to adjustment.

Discrimination, Active Coping, and Adjustment

While the hypothesized 3-way interactions did not emerge, significant interactions between discrimination and active coping related to both externalizing and internalizing behaviors. Overall, discrimination positively associated with externalizing and internalizing behaviors, while active coping negatively related to externalizing behaviors. Further, there were significant 2-way interactions between discrimination and active coping as they related to externalizing (model 1) and internalizing behaviors (models 2 and 4). High levels of active coping seemed most beneficial in adolescents who experienced low levels of discrimination, while the benefits of such coping seemed to diminish as discrimination increased. As seen in Figure 1, those youth who used high active coping had low levels of externalizing behaviors when discrimination was low, however, these behaviors increased when discrimination was higher. Similar associations were found across the other models in which this interaction emerged (see Figures 2 and 4). Overall, these findings suggest that active forms of coping (e.g., problem solving, cognitive restructuring) may minimize negative outcomes associated with discrimination when it occurred at manageable levels. Active coping may not be beneficial once the stress becomes unmanageable stressors (e.g., Clark, 2006; Pina et al., 2008). Future studies should consider using measures of discrimination that assess the frequency of discrimination as well as the level of stressfulness for those discrimination experiences. Further, contextual variables (Umaña-Taylor & Alfaro, 2010) and personality characteristics (Berry & Annis, 1974) should be accounted for in future research given that they likely play a role in how acculturative stress is perceived which could ultimately lead to varying processes associated with adjustment.

Discrimination, Individualistic Values, and Adjustment

The current study found that high levels of individualistic values were protective in minimizing externalizing behaviors associated with varying amounts of discrimination. Youth with low levels of individualistic values, on the other hand, demonstrated more externalizing behaviors when discrimination occurred more frequently. As shown in Figure 3, when discrimination was low, adolescents with low individualistic values exhibited less externalizing behaviors than those youth with high individualistic values, however, the amount of externalizing behaviors was similar (across low and high individualistic values) at higher levels of discrimination. The level of discrimination was not related to the level of externalizing behaviors for those youth with high individualistic values. Cultural values are thought to be an influential force in guiding behaviors considered to be appropriate based on cultural norms (Knight et al., 2010). While Mexican American youth often adopt value systems and behavior styles considered appropriate by members of the ethnic and mainstream cultures (Rudmin, 2008; Schwartz et al., 2006), it is possible that some youth remain less competent in mainstream social contexts. Perhaps the adolescents reporting lower individualistic values felt less confident navigating mainstream culture, leaving them to feel more isolated and perceive greater stress when discriminated against more frequently. Feelings of rejection based on membership in a devalued group can lead individuals to react with a host of negative emotions (e.g., Mendoza-Denton, Downey, Purdie, Davis, & Pietzak, 2002), potentially leading increased acting out behaviors. Those adolescents who possessed higher levels of individualistic values may have perceived higher levels of discrimination to be less stressful if they felt more competent negotiating the mainstream culture, which could

explain the lack of association between discrimination and externalizing behaviors in those youth reporting higher individualistic values.

Gender and Nativity Differences

While specific hypotheses were not made about how the effects of coping would vary across gender, it was suspected that boys would generally be more vulnerable to discrimination stress than girls. The results indicated that discrimination was positively associated with externalizing and internalizing behaviors at similar levels across gender. Further, active coping negatively related to externalizing behaviors across in youth in the sample, regardless of gender. The only gender difference that emerged was 2-way interaction between discrimination and active coping in relation to internalizing behaviors. Specifically, this interaction was significant for females in the study. As shown in Figure 7, girls who demonstrated high active coping exhibited greater internalizing behaviors as they experienced greater discrimination. Put differently, high levels of active coping seemed most beneficial in girls who experienced low levels of discrimination, while the benefits of such coping seemed to diminish as discrimination increased. These results may be explained by gender socialization influences in which the cultural expectation for Mexican American girls is to be nurturing, putting others' needs before their own (Eisenberg, Morris, McDaniel, & Spinrad, 2009). Coping strategies such as support seeking may be considered more appropriate and adaptive for Mexican American girls who experience higher levels of discrimination, whereas the cultural expectation of masculinity may make active coping more appropriate or effective for males who experience similar levels of discrimination.

Similar to above, the associations between discrimination and coping with adjustment were almost identical across nativity with the exception of two paths involving the interaction between discrimination and active coping. Active coping seemed less beneficial to U.S. born adolescents who experienced higher levels of discrimination. This interaction was not significant in the immigrant youth in the study. Discrimination stress may not be as salient for immigrant youth in comparison to their U.S. born counterparts (regardless of the level of stress), given that immigrant youth likely encounter other stressors (e.g., missing loved ones in Mexico, language barriers, immigration laws, etc.; Suarez-Orozco & Suarez-Orozco, 2001) that may overshadow the stress associated with discrimination. Further, it could be that immigrant youth are less aware of discrimination events and therefore not as effected by the interaction between active coping and higher levels of discrimination. Both of these explanations likely depend upon how many years immigrant youth have resided in the U.S. and whether language barriers exist. Future studies should consider accounting for the stress associated with discrimination in addition to the amount of time spent living in the U.S. This may provide further insight to how resiliency differs across nativity in relation to discrimination and adjustment.

Limitations and Directions for Future Research

Despite this study's contributions, including the assessment of heterogeneity within an ethnic homogenous sample of Mexican American adolescents and the use of multiple reporters, there are important limitations to be noted. First, it utilized a cross-sectional design and therefore the directionality of effects could not be determined. It is possible that being pre-disposed to internalizing and externalizing behaviors may

influence the way in which adolescents perceive discrimination and ultimately how discrimination is related to cultural values and active coping. Future studies should continue to examine potential sources of variation in the association between discrimination, cultural values, and coping strategies using longitudinal designs so that causal inferences can be made.

Second, the current study used a discrimination measure that assessed the frequency of discrimination experiences but not the level of stress attached to those experiences. It is likely that some adolescents are more bothered by discrimination than others and therefore measuring the level of stress in response to discrimination experiences may present a clearer depiction of how discrimination affects adjustment. This is in line with Lazarus and Folkman's (1984) model of stress and coping, supporting the notion that the subjective perception of stress is a result of an interactive effect between personal characteristics and situational contexts, both of which are essential for having a more dynamic understanding of stress beyond whether or not the stressful event occurred. Future studies should consider measuring both the frequency and level of stress associated with discrimination so that a more comprehensive understanding of the discrimination and adjustment relationship can be achieved. Furthermore, given that acculturative stress is known to vary across individual characteristics and contextual variables, it is important that future studies account for this variation to enhance our understanding of how perceived discrimination relates to coping, cultural variables, and adjustment.

Furthermore, the current study used a generalized measure of active coping, rather than one that assesses coping in relation to discrimination stress specifically. It is likely

that adolescents utilize different approaches to cope with discrimination experiences that may not be accounted for in general coping measures. Future researchers should use qualitative methods to gain a better understanding of which coping strategies are utilized by Mexican American youth when faced with discrimination. It could help ensure that coping is being measured appropriately in future discrimination studies, which will help us to gain a more thorough understanding of the resiliency processes that lead some youth to do better than others.

Conclusion

This study took a needed step toward better understanding the processes associated with discrimination, coping, cultural values, and adjustment in Mexican American youth. The lack of magnitude (i.e., very small effect sizes) in the significant associations between discrimination, active coping, cultural values, and adjustment highlight the need for more research attempting to disentangle the resiliency processes in Mexican American youth faced with discrimination. This is particularly important given that discrimination has been identified as a potential underlying cause of an array of negative mental health outcomes (e.g., Berkel et al., 2010; Zeiders et al., 2013; Toomey et al., 2013; Umaña-Taylor et al., 2012) and as a contributing factor in the health disparities between Latino and non-Latino youth (Eaton et al., 2008). Future studies should utilize longitudinal designs and consider utilizing measures of discrimination that account for appraisals of stress as well as coping measures designed specifically for dealing with discrimination stress. Enhancing measures of both of these constructs, in addition to accounting for important sources of variability (e.g., personality characteristics and contextual variables) could strengthen the magnitude of effects found

in future models, which may increase our insight into the resiliency processes needed to inform intervention efforts in this growing, vulnerable population.

Study 2: A Longitudinal Examination of Discrimination, Cultural Values, Externalizing Behaviors, and Academic Outcomes in Mexican American adolescents

Latino adolescents are at a greater risk for both externalizing behaviors (Bird et al., 2001; Eaton et al., 2008) and academic problems (e.g., Farkas, 2003) than their European American counterparts. The academic risks are of particular concern given that Latino youths' dropout rates are approximately twice as high as other racial/ethnic groups (U.S. Department of Commerce, 2006) and Mexican Americans have a higher dropout rate than any other Latino group. One thought is that these disparities may be partially attributed to discrimination stress, as recent studies have found links between discrimination and both externalizing behaviors and academic difficulties (Berkel et al., 2010; Umaña-Taylor et al., 2012), similar to research on African American youth (Benner & Graham, 2011; Brody et al., 2006; Cooper, Brown, Clinton, & Guthrie, 2013; Chaveous et al., 2010). While there have been recent strides made to enhance our understanding of discrimination in the lives of Latino youth, a particular knowledge gap remains when it comes to understanding how discrimination may change across adolescence, and more importantly, how these changes may effect externalizing behaviors and academic outcomes. Given that Latinos accounted for approximately 50% of recent U.S. population growth and represent a particularly large proportion of individuals under the age of 18 (US Census, 2010), it is important that we enhance our understanding of the underlying mechanisms of how discrimination experiences over time relate to adjustment in this growing population.

The current study was guided by the integrative model of developmental competencies (García Coll et al., 1996) to investigate how trajectories of discrimination across 5th, 7th, and 10th grades relate to cultural values and mental health outcomes in 10th

grade within a sample of Mexican American (M.A.) adolescents. The integrative model emphasizes that to understand minority development, our research must include: 1) longitudinal investigations of minority youth development; 2) examination of intra-group variability; 3) cultural variables (e.g., discrimination, cultural values, and nativity); and 4) examination of processes (e.g., mediation), rather than only direct relations between independent variables and specific outcomes. The current longitudinal study was consistent with each of these recommendations with the hope of gaining a better understanding of how M.A. adolescents' discrimination experiences changed over time, how these changes related to both M.A. and individualistic cultural values, externalizing behaviors, and academic outcomes (e.g., academic self-efficacy, school attachment, and grades) in the 10th grade. Furthermore, both M.A. and individualistic cultural values were tested as mediators in the relation between discrimination and both outcome variables. Given that discrimination is a part of the lived reality of many Latino adolescents' daily lives and has been associated with negative mental health outcomes (e.g., Berkel et al., 2010; Umaña-Taylor et al., 2012; Umaña-Taylor & Updegraff, 2007) and academic problems (Berkel et al., 2010; Umaña-Taylor et al., 2012), it is important that we expand our understanding of the processes through which trajectories of discrimination relate to mental health.

Discrimination and Adjustment

Racial and ethnic discrimination consists of unfair, differential treatment due to one's race or ethnicity and is thought to be a common stressor for Latino youth as they attempt to navigate two different cultures in the U.S. (e.g., Romero et al., 2007). Latino youth commonly report discrimination experiences occurring in the school context as well as other public spaces (Edwards & Romero, 2008; Martinez, DeGarmo, & Eddy, 2004; Rosenbloom

& Way, 2004). Latino youth describe discrimination experiences based on English fluency, immigration concerns, negative stereotypes, poverty, and skin color and report that the source of these experiences generally are teachers and peers (Fennelly et. al, 1998; Romero & Roberts, 2003b; Rosenbloom & Way, 2004). Specific forms of discrimination that may occur within the school context include subtle practices such as academic tracking, over-retention in grade, and low teacher expectations (see Farkas, 2003 for a review). Several studies have established a negative link between discrimination and various adjustment outcomes (Berkel et. al, 2010; Edwards & Romero, 2008; Romero & Roberts, 2003; Umaña-Taylor & Updegraff, 2007), however, fewer longitudinal studies have studied trajectories of discrimination in minority adolescents (e.g., Benner & Graham, 2011; Greene, Way, & Pahl, 2006; Juang & Cookston, 2009).

There are several reasons why one would believe that perceptions of discrimination increase across adolescence. First, given that formal operational thought develops in adolescence (Inhelder & Piaget, 1958), it seems that minority adolescents would become increasingly aware of how their racial/ethnic groups are evaluated by the larger society. Second, as minority adolescents' social worlds expand, it is reasonable to suspect that they would increase the time they spend with the mainstream culture (Phinney & Chavira, 1995). Third, as ethnic minority adolescents get older, they may be perceived as increasingly threatening by adults from the majority culture (Tatum, 1997) and therefore may experience higher levels of discrimination over time. Recent studies provide support for these theoretical conceptualizations, finding that discrimination increased across time in samples of U.S. Latinos (Benner & Graham, 2011), Chinese Americans (Juang & Cookston, 2009), and a multi-ethnic sample of minority youth (Greene et al, 2006). Given these theoretical

underpinnings and recent empirical findings, the current study examined how discrimination changes across 5th, 7th, and 10th grades. It was hypothesized that reports of discrimination would increase as M.A. adolescents become older.

Discrimination and externalizing behaviors. In addition to examining trajectories of discrimination itself, this study also examined the relation between trajectories of discrimination and externalizing behaviors. Positive relations between discrimination and externalizing behaviors were found prospectively (Umaña-Taylor et al., 2012; Berkel et al., 2010) in M.A. adolescents, similar to research on African American youth (Cooper et al., 2013; Brody et al., 2006). Given these findings, the current study examined whether initial levels of discrimination (5th grade) and growth patterns of discrimination were associated with externalizing behaviors in 10th grade. It was hypothesized that higher levels of discrimination in 5th grade as well as increases over time in discrimination would relate to higher levels of externalizing behaviors in 10th grade.

Discrimination and academic outcomes. Research has found negative associations between discrimination and academic adjustment in Latino youth. For example, discrimination was linked to lower academic motivation (Alfaro et al., 2009), academic self-efficacy (Berkel et al., 2010), and GPA (Umaña-Taylor et al., 2012) in various samples of Latino adolescents. Furthermore, DeGarmo & Martinez (2006) found negative associations between discrimination and multiple aspects of academic well-being (i.e., GPA, likelihood of dropout, homework frequency, and performance dissatisfaction). Similar associations between discrimination and academic adjustment have been found in African American youth (e.g., Cooper et al., 2013; Wang and Huguley, 2012; Benner & Graham, 2011; Green et al., 2006) as well as Asian American youth (Kiang, Supple, Stein, & Gonzalez, 2012).

There is only one study at this point that examined how trajectories of discrimination related to academic adjustment. Specifically, Chaveous and colleagues (2008) found negative associations between trajectories of discrimination and an array of academic outcomes (e.g., school importance, academic self-concept, and GPA). Based on the findings described above, the current study examined whether initial levels of discrimination as well as trajectories of discrimination were associated with: (1) academic self-efficacy, (2) school attachment, and (3) academic achievement in M.A. youth. It was hypothesized that higher initial levels of discrimination in 5th grade and increases over time in discrimination would relate to lower levels of academic adjustment in 10th grade.

Discrimination, Cultural Values, and Adjustment

Values internalized by adolescence may be especially important when it comes to understanding Latino youths' adaptation as they likely become the guiding force in present and future decisions about appropriate cultural norms within a dual cultural context in the US (Knight et al., 2010). Values are the primary mechanism through which culture is transmitted (Roosa, Morgan-Lopez, Cree, & Spector, 2002) and the internalization of values is one of the more important developmental milestones within adolescence (Knight et al., 2009). Common values highly endorsed by Latino families include familism (i.e., obligation and support amongst family members; Sabagal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987) and respect for elders, which tend to be different than individual focused values (e.g., self-reliance, materialism, and competition/personal success) more highly endorsed by U.S. mainstream culture (Knight et al., 2010). Theory suggests that many Latino adolescents likely acquire a bicultural identity (e.g., Rudmin, 2008; Schwartz et al., 2006) in which they adopt values endorsed and accepted by members of both Latino and mainstream U.S.

cultures. For instance, Latino youth can “act American” on one environment, and “act Hispanic” at home (e.g., Benet-Martinez & Haritatos, 2005). Therefore the current study included both sets of values and examined them separately given that they are considered to be distinct dimensions.

Recent studies have examined the relation between discrimination and M.A. and U.S. cultural values. For instance, prospective positive associations were found between perceived discrimination and ethnic values in M.A. adolescents (Brittian, O’Donnell, Knight, Carlo, Umana-Taylor, & Roosa, 2013). Similar associations have been supported in research on African American youth with the explanation that discrimination experiences may raise a sense of racial/ethnic awareness that leads adolescents to explore their group membership (Cross et al., 1991; Pahl & Way, 2006). While it is currently unknown how discrimination might influence individualistic cultural values, a related study found that, over time, minority adolescents who experienced discrimination were more likely to drop the word “American” in their ethnic label (i.e., “Chinese American” at Time 1 and “Chinese” at Time 2; Portes and Rumbaut (2001). This leads one to believe that discrimination may affect M.A. and individualistic values differently in minority youth. The current study examined longitudinal relations between discrimination and M.A. (e.g., familism and respect) and individualistic (e.g., self-reliance and competition and personal success) cultural values. These associations were tested between initial levels of discrimination in 5th grade and trajectories of discrimination with both Mexican and individualistic cultural values in 10th grade. Given the limited amount of research and somewhat discrepant findings discussed above, these analyses were exploratory.

In addition to the relation between discrimination and cultural values, the current study sought to gain a better understanding of how cultural values related to externalizing behaviors in M.A. youth. Most studies to date have been limited to the examination of how ethnic cultural values influence mental health, with very few studies examining how individualistic cultural values relate to mental health outcomes. It is thought that ethnic values such as familism reduce the risk for externalizing behaviors through the strong sense of obligation and responsibility towards one's family, preventing youth from engaging in an array of problem behaviors outside of their homes (Brooks, Stuewig, & LeCroy, 1998; Keefe, Padilla, & Carlos, 1978). These notions have been supported in some studies that reported that ethnic values were associated with lower externalizing behaviors among Latino adolescents (e.g., Berkel et al., 2010; Romero & Ruiz, 2007). Mainstream values, on the other hand have been linked to higher levels of problem behaviors among Latino youth (Pantin, Schwartz, Sullivan, Coatsworth, & Szapoznik, 2003) with the explanation that as youth increase their individualistic values, they are simultaneously losing their Latino ethnic values such as respect and obligation to their family members. It is important to note, however, that Latino and individualistic values are often positively correlated in youth who are simultaneously socialized by both mainstream and ethnic cultures (Knight et al., 2010; Padilla, 2006). Therefore, the current study examined how both M.A. and individualistic cultural values were associated with externalizing behaviors in M.A. adolescents. Based on previous research, it was hypothesized that M.A. values would be negatively associated with externalizing behaviors, whereas individualistic values would be positively associated with such behaviors in 10th grade.

Studies have often found that immigrant youth have higher educational aspirations and stronger beliefs in the importance of education compared to their individualistic born counterparts (Fuligni, Tseng, & Lam, 1999). Researchers have attributed this pattern to a stronger sense of family obligations within immigrant families which are thought to provide immigrant youth with an enhanced sense of motivation to succeed academically (Fuligni, 2001). It is thought that doing well in school is one way that immigrant youth could fulfill this obligation, especially since many families immigrate to the U.S. for educational and occupational opportunities (Suarez-Orozco & Suarez-Orozco, 2001). Recent studies have confirmed these theoretical notions finding that M.A. cultural values were associated with higher levels of academic engagement (Gonzales et al., 2008) and academic self-efficacy (Berkel et al., 2010) in M.A. adolescents. While quantitative studies have not studied the association between individualistic cultural values and academic outcomes, qualitative research has argued that individualistic cultural values such as competition and personal success are important attributes needed to succeed in U.S. schools (Valdés, 1996). Based on these studies, it was hypothesized that both M.A. and individualistic cultural values would both be positively related to academic outcomes in 10th grade. Furthermore, prior research has found that M.A. cultural values mediated the prospective relation between discrimination and externalizing behaviors, academic self-efficacy, and grades (Berkel et al., 2010). Therefore, the current study sought to expand on these findings by longitudinally examining *both* M.A. and individualistic cultural values as mediators of the relation between initial levels of discrimination in 5th grade as well as trajectories of discrimination and externalizing behaviors and academic outcomes (e.g., academic self-efficacy, school attachment, and grades).

Moderating Role of Gender and Nativity

Racial/ethnic discrimination may contribute to differential experiences for girls and boys. For example, stereotypes for Black and Latino boys often entail assumptions about propensity for violence and delinquency (Gibbs, 1998; Noguera, 2003), likely leading to more explicit forms of discrimination than those experienced by girls (Tatum, 1997). Further, as ethnic minority boys become older, they are likely to be perceived as more threatening by adults in the majority culture, which may lead to a steeper increase in reported discrimination across age compared to girls. For example, Sellers and colleagues (2003) found that late adolescent African American boys reported higher levels of discrimination compared to their female counterparts, while they did not find such gender differences in discrimination levels within a sample of mid-adolescent African American adolescents (Sellers & Shelton, 2006). These findings suggest that gender differences in discrimination may not emerge until adolescents become older. Based on these findings, it was hypothesized that discrimination would increase at greater levels over time in M.A. boys compared to their female counterparts.

Gender differences have also emerged in the association between discrimination and externalizing behaviors in African American (Brody et al., 2006) and Mexican-origin youth (Umaña-Taylor et al., 2012). Both of these studies found that the association between discrimination and externalizing behaviors were stronger in males than females. These findings indicated that adolescent males may be more likely to exhibit acting out behaviors in response to discrimination experiences than their female counterparts. This is consistent with other studies in which boys were more likely than girls to respond to stressful situations by losing inhibitory controls and expressing anger and frustration through their behaviors

(Hetherington, 1989; Rutter, 1990). Given these findings, it was suspected that initial levels of discrimination as well as trajectories of discrimination would relate to higher levels of externalizing behaviors at Time 3 for boys compared to girls.

Similarly, studies have found that boys may react to discrimination stress differently than girls within the school setting, which may affect academic outcomes in differential ways. For example, within the school setting, boys may adapt to discrimination stress by disengaging from the educational context itself and minimizing the importance of school in their lives (Graham et al., 1998; Osborne, 1999), possibly leading to poorer academic outcomes (Cunningham, 1999; Spencer, 1999; Swanson et al., 2003). Recent findings have partially supported these notions in African American and Latino adolescents. Specifically, classroom discrimination *negatively* related to school importance for African American boys, whereas it *positively* related to GPA and academic self-concept for African American girls (Chaveous et al., 2008). This indicates that girls may react to discrimination stress in a more positive way compared to boys. Research on Latino youth found that discrimination was negatively associated with academic motivation (Alfaro et al., 2009) and GPA (Umaña-Taylor et al., 2012) for boys, whereas these associations were not significant for girls. Given the findings described above, it was predicted that the relation between discrimination (both intercept and slope) and academic outcomes in 10th grade would be stronger for males than females. The remaining analyses (i.e., how gender influences the relation between discrimination cultural values, and mental health, as well as the mediational analyses) would remain exploratory due to the lack of research in these specific areas.

Similarly, recent cross-sectional studies have found mean level differences in reported levels of discrimination in Latino youth such that immigrant youth tend to report

higher levels of discrimination than do later generation youth (e.g., Edwards & Romero, 2008; Umaña-Taylor & Updegraff, 2007). These initial mean level differences may disappear as immigrant youth spend more time in the U.S. For example, a longitudinal study of Chinese-American adolescents found that while initial levels of discrimination were greater for immigrant youth compared to their second-generation counterparts, these levels evened out two years later (Juang & Cookston, 2009). Given this finding, it was predicted that immigrant youth would report greater initial levels of discrimination and flatter slopes (i.e., less growth over time) in comparison to their U.S. born counterparts.

Further, studies have found that Latino youth vary on adjustment outcomes (e.g., Gill, Wagner, & Vega, 2000) such that U.S. born youth are more likely to experience adjustment problems than their immigrant counterparts (Gill, Wagner, & Vega, 2000). One potential reason for these differences in adjustment outcomes is that immigrant adolescents may be more likely to maintain ties to the protective aspects of their culture (e.g., ethnic cultural values), whereas those born in the U.S. may not be as connected to these protective cultural elements (Gonzales et al., 2008). Since it is unknown whether adjustment outcomes across nativity are influenced by adherence to Latino/Mexican ethnic values, the current study examined whether the processes between discrimination, Mexican/U.S. cultural values, and adjustment outcomes varied by nativity. Given the lack of empirical evidence, however, these analyses remained exploratory.

Current Study

The current study aimed to extend our knowledge of how discrimination related to various adjustment outcomes in M.A. adolescents across time. Utilizing the integrative model of developmental competencies (García Coll et al., 1996) as a framework, a longitudinal

approach was used to first examine how adolescent reports of discrimination change over time. It was expected that trajectories of discrimination would increase from 5th to 10th grade. The second goal was to explore how these trajectories of discrimination related to both externalizing behaviors and academic outcomes in 10th grade. It was expected that trajectories of discrimination would positively associate with externalizing behaviors and negatively associate with academic outcomes. The third goal of this study was to examine the link between initial levels of reported discrimination (5th grade) and trajectories of discrimination with both M.A. and U.S. cultural values. It was expected that higher initial levels of discrimination as well as increases in discrimination would be associated with higher levels of M.A. values and lower levels of U.S. values. The fourth goal was to explore the link between M.A. and U.S. cultural values and adjustment outcomes. It was expected that M.A. values would negatively relate to externalizing behaviors and positively relate to academic outcomes, whereas U.S. values would positively relate to both externalizing behaviors and academic outcomes. The fifth goal of the study was to examine M.A. and U.S. cultural values as mediators between trajectories of discrimination and adjustment outcomes in the tenth grade. Lastly, the current study used multi-group modeling to assess whether the models differed across gender and nativity.

Method

Participants

Data for the current study were derived from the first three waves of an ongoing longitudinal study investigating the role of culture and context in the lives of Mexican American families (Roosa, et al., 2008). Participants were 749 Mexican American adolescents who were selected from rosters of schools that served ethnically and

linguistically diverse communities in a large southwestern metropolitan area. Eligible families met the following criteria: (a) they had a fifth grader attending a sampled school; (b) both mother and child agreed to participate; (c) the mother was the child's biological mother, lived with the child, and self-identified as Mexican or Mexican American; (d) the child's biological father was of Mexican origin; (e) the child was not severely learning disabled; and (e) no step-father or mother's boyfriend was living with the child (unless the boyfriend was the biological father of the target child). Family incomes at Time 1 ranged from less than \$5,000 to more than \$95,000, with the average family reporting an income of \$30,000 - \$35,000. In terms of language, 30.2% of mothers, 23.2% of fathers, and 82.5% of adolescents were interviewed in English. The mean age of youth (49% female) at T1 was 10.4, and the majority of adolescents were born in the US (70%).

There were 711 family interviews at T2 (703 mothers, 410 fathers, and 710 adolescents and 638 at T3 (631 mothers, 338 fathers, and 638 adolescents), two and five years after T1 data collection, respectively. Families who participated in T3 interviews were compared to families who did not on key demographic and predictor variables. Pearson χ^2 tests were conducted for comparing categorical variables and t-tests were used for comparing continuous variables. There were no significant differences across several key demographic and study variables for youth (e.g., gender, mood disorder symptoms, externalizing symptoms), mothers (e.g., nativity, household structure), and fathers (nativity, education, income, employment status). There was a significant difference on adolescent nativity; those who participated at T3 were more likely to be born in the U.S. than nonparticipants [$\chi^2(1) = 5.02, p=.03$]. There were also significant differences for mothers' education, income, and employment status. Specifically, mothers who participated at T3 reported more years of

schooling ($M=10.48$, $SD = 3.65$) than nonparticipants ($M=9.48$, $SD = 3.72$), $t(746) = -2.633$, $p = .009$, higher total family income ($M = 6.92$, $SD = 4.42$) than nonparticipants ($M = 5.61$, $SD = 4.15$), $t(730) = -2.835$, $p = .005$, and a greater likelihood of working at least 20 hours per week than nonparticipants [$\chi^2(1) = 10.7$, $p=.001$].

Procedure

Youth participated in in-home Computer Assisted Personal Interviews, scheduled at the family's convenience. Interviews were about 2.5 hours long. Each interviewer received at least 40 hours of training which included information on the project's goals, characteristics of the target population, professional conduct, and the critical role they would play in collecting the data. Interviewers read each survey question and possible response aloud in participants' preferred language to reduce problems related to variations in literacy levels. Youth were compensated for their time at all three waves of data collection (i.e., T1 = \$45; T2 = \$50, T3 = \$55).

Measures

Perceived discrimination. Perceived discrimination was measured as a mean of nine items designed to assess discrimination experiences from peers and teachers. Because no measure of discrimination specifically designed for Mexican Americans was available at the time of this study's development, two measures that had been validated for other groups [Hughes and Dodge (1997): Racism in the Workplace Scale; Landrine and Klonoff (1996): Schedule of Sexist Events] were adapted to this population. The 4 peer items (e.g., "How often have kids at school called you names because you are Mexican American?") and 5 teacher items (e.g., "How often have you had to work harder in school than White kids to get the same praise or the same grades from your teachers because you are Mexican American")

relied upon a Likert-type response scale ranging from 1 = *not at all true* to 5 = *very true*. Items reflected both personal experiences of discrimination and public regard. Cronbach's alpha at grade 5, 7, and 10 was .74, .75, and .83, respectively.

Cultural values. The Mexican American Cultural Values Scale (Knight et al., 2010) was used to assess Mexican American cultural values at Time 3. The scale was developed based upon focus groups conducted with Mexican American mothers, fathers, and adolescents about Mexican American and Anglo American cultures. The current study used six subscales from this measure to assess Mexican American values: *supportive* and *emotional familism* (6 items, e.g., "parents should teach their children that the family always comes first"); *obligation familism* (5 items, e.g., "A person should share their homes with relatives if they need a place to stay"); *referent familism* (5 items, e.g., "children should always do things to make their parents happy"); *respect* (8 items, e.g., "children should never question their parents decisions"), religion (7 items, e.g., "parents should teacher their children to pray"), and traditional gender roles (5 items, e.g., "It is important for the man to have more power in the family than the woman") Adolescents responded to items using a Likert-type scale ranging from 1 = not at all to 4 = very much; Cronbach's alpha was .93.

The current study used two subscales from the Mexican American Cultural Values Scale (Knight et al., 2010) to assess individualistic values: *competition and personal achievement* (4 items, "parents should encourage children to do everything better than others") and *self-reliance* (5 items, e.g., "when there are problems in life, a person can only count on him/herself"). Adolescents responded to items using a Likert-type scale ranging from 1 = not at all to 4 = very much; Cronbach's alpha was .93.

Externalizing behaviors. Both mothers and children reported children's externalizing behaviors using the Diagnostic Interview Schedule for Children (Shaffer et al., 2000). The indicators of externalizing behaviors used were adolescent conduct disorder (CD) and opposition defiant disorder (ODD) symptoms. Given that CD and ODD often co-occur in this age group and that CD is thought of as a precursor to ODD (Hinshaw & Zupan, 1997), these symptom counts were summed into a combined CD/ODD score. The current study used combined reports of both adolescent and mother reports of these symptom counts, which is supported by empirical evidence suggesting a positive association between family conflict and conduct problems in Mexican American adolescents (Lau et al., 2005).

Academic self-efficacy. Adolescents' reports on academic self-efficacy were measured using the Patterns of Adaptive Learning Survey (Midgley, Maehr, & Urdan, 1996). Items are not specific to subject matter or tasks, but they are specific to students' classroom experiences (e.g., "I am certain I can master the skills taught in school this year"). Adolescents responded to items using a Likert-type scale ranging from 1 = not at all true to 4 = very true. Cronbach's alpha was .85 at Grade 7 (controlled for Time 2 academic self-efficacy), and .88 at Grade 10.

School attachment. School attachment was assessed by combining three previous scales: (1) The School is Important Now Scale (Eccles, 1994), (2) The Academic Liking Scale (Eccles, 1994), and (3) The Importance of Education Scale (Smith et al., 1997). Example of the 9 items include "You look forward to going to school" and "You like school a lot." Adolescents responded to items using a Likert-type scale ranging from 1 = not at all true to 5 = very true. Cronbach's alpha was .76 at Grade 7 and .81 at Grade 10.

Academic achievement. To assess academic achievement, we relied on teacher reports. Specifically, math and English teachers were asked, “If you were giving final grades today, what grade would this student receive in your course?” Teachers responses (1) A to (5) E/F were averaged to compute one score.

Results

Analytic Plan

The current analyses were conducted using latent growth curve modeling using Mplus 6.0 (Muthén & Muthén, 1998-2010). Missing data were handled using Full Information Maximum Likelihood (Arbuckle, 1996; Schafer & Graham, 2002). First, a latent growth curve model (LGM) was run to obtain estimated means for the intercept (discrimination in 5th grade) and slope (change in discrimination across 5th, 7th, and 10th grade). Next, path analysis in an SEM framework was used to estimate two models including discrimination, cultural values (Mexican American and individualistic values were included in separate models), and each of the adjustment outcomes. Mediation was then tested in any model that contained significant paths from discrimination to cultural values and cultural values to adjustment outcomes. Mediation was tested using the Mplus estimation of indirect effects which calculates indirect effects using estimated coefficients with delta method standard errors (Muthén & Muthén, 1986-2010). Lastly, multi-group modeling was utilized to test for moderation by gender and nativity, which would determine whether there were gender or nativity differences in the paths estimated in either of the hypothesized models. The χ^2 difference test (Kline, 1998) was used to compare models in which all estimates were free to vary across groups to models in which all of the paths were constrained to be equal across groups to determine whether specific paths needed to be free (i.e., differed

significantly) across groups. Means, standard deviations, and bivariate correlations are in Table 4.

Results from the first model (discrimination only) indicated a poor fit to the data [$\chi^2(3)=72.75$; CFI=.68; RMSEA=.18; SRMR=.07]. Given that the means of discrimination followed a non-linear trajectory (W1=1.80; W2=1.59; W3=1.66), a quadratic growth model was also fit to the data, which is an acceptable approach with three data points if all of the variance/covariance parameters are not free (Muthén & Muthén, 1986-2010). The quadratic model fit the data adequately once the quadratic term variance was constrained to zero [$\chi^2(2)=218.09$; CFI=.91; RMSEA=.09; SRMR=.06]. The mean intercept, linear, and quadratic slopes were all significant (see Table 5). Given that the quadratic term variance was fixed to zero, the analyses in the path models below only include coefficients for the intercept and linear slope for discrimination.

Discrimination, Values, and Adjustment Outcomes

The model with Mexican American cultural values fit the data adequately [$\chi^2(26)=140.84$; CFI=.90; RMSEA=.07; SRMR=.06]. Direct paths were estimated from discrimination to Mexican American values and each of the outcomes. Further, a direct path was estimated from Mexican American values to each of the outcomes. Findings indicated that there was a positive association between mean discrimination in 5th grade (intercept) and 10th grade Mexican American values ($\beta = .17$, $p < .01$), whereas there was a negative association between the discrimination intercept and academic self-efficacy in 10th grade ($\beta = -.21$, $p < .01$). Lastly, there were significant associations between Mexican American cultural values and academic self-efficacy ($\beta = .24$, $p < .001$), externalizing behaviors ($\beta = -.08$, $p < .05$), and school attachment ($\beta = .19$, $p < .001$) such that Mexican American values were

positively associated with academic self-efficacy and school attachment and negatively associated with externalizing behaviors. See Figure 5 for the significant path coefficients.

The model with individualistic values also fit the data adequately [$\chi^2(27)=89.01$; CFI=.94; RMSEA=.05; SRMR=.05]. There was a positive association between mean discrimination in 5th grade with individualistic values in 10th grade ($\beta = .29, p < .05$), whereas there was a negative association with externalizing behaviors ($\beta = -.46, p < .05$).

Furthermore, there was a positive relation between the discrimination linear slope with academic self-efficacy ($\beta = .38, p < .05$) and school attachment ($\beta = .37, p < .05$), whereas there was a negative association with externalizing behaviors ($\beta = -.52, p < .01$). These findings suggested that a decline in discrimination was associated with higher academic self-efficacy and school attachment and lower externalizing behaviors in 10th grade. Lastly, there was a significant positive association between individualistic values and academic self-efficacy ($\beta = .16, p < .001$). See Figure 6 for all of the path coefficients.

Mediation Analysis

Indirect effects were tested in both of the models given that they each had significant paths from discrimination to values and values to adjustment outcomes. Both models demonstrated inconsistent mediation in which the mediators acted as suppressor variables, minimizing the negative effects of discrimination on academic self-efficacy and school attachment through its positive association with Mexican American and individualistic values (MacKinnon, Fairchild, and Fritz, 2007). The results for the model with Mexican American values indicated that there was a significant indirect path between discrimination in 5th grade (via Mexican American values in 10th grade) to academic self-efficacy ($\beta = .04, p < .05$) and school attachment in 10th grade ($\beta = .03, p < .05$) such that discrimination related positively to

academic self-efficacy and school attachment though its positive association with Mexican American values. The results for the model with individualistic values indicated that there was a significant indirect path between discrimination in 5th grade (via individualistic values in 10th grade) to academic self-efficacy ($\beta = .03$, $p = .06$) such that discrimination related positively to academic self-efficacy though its positive association with individualistic values.

Finally, multi-group modeling analyses were used to determine whether any of the paths varied across gender and nativity in the models. Results showed that none of the χ^2 difference tests were significant, indicating that neither gender nor nativity moderated any of the estimated paths in the Mexican American values or individualistic values models.

Discussion

The current study utilized the integrative model of development of minority children (Garcia Coll et al., 1996) as a framework for examining the longitudinal associations between discrimination as they related to cultural values and adjustment in a heterogeneous sample of Mexican American adolescents. Consistent with the integrative model, cultural values were examined as mediators, while both gender and nativity were examined as moderators to better understand the underlying processes involved in promoting adjustment outcomes in Mexican American youth who face discrimination. Being faced with discrimination during the transitional periods between junior high and high school may be of particular concern given that they are considered vulnerable developmental periods having potential long term implications for mental health, delinquency, and academic adjustment (Azmitia et al., 2009; Barber and Olsen, 2004). Developing a more nuanced understanding of why some adolescent's fair better than others is crucial given the potential role of

discrimination in the current disparities in academic achievement (e.g., Ganadara & Contreras, 2009) and behavior problems (e.g., Umaña-Taylor et al., 2012) existing between Mexican American youth and their peers from other racial/ethnic group memberships.

Surprisingly, this study found that discrimination decreased from 5th to 10th grade, despite the argument suggesting that minority youth experience greater levels of discrimination across adolescence due to expanding social worlds exposing them to increased time spend with mainstream culture (Phinney & Chavira, 1995). While empirical evidence has supported this pattern of discrimination (Benner & Graham, 2011; Greene et al., 2006; Juang & Cookston, 2009), the absolute levels and changes over time were not considered large (Benner & Graham, 2011; Brody et al., 2006; Greene et al., 2006). Further, there are important individual (e.g., ethnicity) and contextual factors (ethnic composition of community and school) that may explain the negative slopes in the current findings. First, previous research examined trajectories of discrimination in adolescents from different racial/ethnic backgrounds including a samples of multi-racial (Greene et al., 2006), Latino (e.g., Mexican, El Salvadorian, Guatemalan, and Central/South American countries; Benner & Graham, 2011), and Chinese (Juang & Cookston, 2009) adolescents, most of whom likely had different customs and traditions in comparison to Mexican Americans. These differences could have posed varying effects in the way in which they experienced discrimination. Further the adolescents in the previous studies attended ethnically diverse schools which have been associated with more perceived discrimination in African American (Seaton & Yip, 2009) and Latino youth (Benner & Graham, 2011). The adolescents in the current study attended schools that were comprised of more than 50% (on average across schools) Latino students, which could make discrimination a less salient stressor as their peer groups likely

consisted of many other Mexican Americans and were in most cases not outnumbered by other ethnic groups. Furthermore, a significant proportion of the communities were comprised of a large proportion of Mexican Americans, which may have provided resources and support needed to develop a strong sense of ethnic identity (Phinney, 2003), a known buffer of discrimination (Greene et al., 2006; Lee 2005; Umaña-Taylor et al., 2012). Future studies should consider examining whether trajectories of discrimination vary across ethnic identity and neighborhood context to determine whether there are differences in patterns of discrimination across time.

Discrimination, Cultural Values, and Adjustment: Direct Effects

The second goal of the study was to determine how discrimination associated with various aspects of adjustment. Discrimination in 5th grade was associated with lower academic self-efficacy (Mexican American model) and externalizing behaviors (individualistic model) in 10th grade. The associations with academic self-efficacy are particularly troublesome, given that they held over a five year period, after controlling for all other variables in the model, including previous levels of academic self-efficacy. These findings are in alignment with previous research suggesting Latino youth recognized that teachers were less likely to encourage them to take advanced academic courses and more likely to be wrongly disciplined in comparison to their White counterparts (Fisher, Wallace, and Fenton, 2000). Being aware of these unfair practices could lead many adolescents to lose confidence and feel less efficacious in the educational context. The current study's results portrayed the lasting negative impact that discrimination can have on Mexican American youth and may be related to Latinos' high school school dropout rates, which are

approximately double that of every other racial/ethnic group (U.S. Department of Education, 2013).

Discrimination in 5th grade was negatively associated with externalizing behaviors which varies from other studies' findings of a positive relationship (e.g., Berkel et al., 2010; Umaña-Taylor et al., 2012). This association makes sense when taking into consideration the negative correlation between the intercept and slope, which can be interpreted as meaning that those adolescents with higher levels of discrimination in 5th grade had a steeper decline in discrimination, which was in turn associated with lower externalizing behaviors. Comparatively, those youth who started at lower levels of discrimination had a flatter slope, which was associated with less of a reduction in externalizing behaviors. Given that the intercept and slope don't occur in a vacuum, it makes sense to interpret them together to provide a clearer picture. Trajectories of discrimination only related to adjustment outcomes in the model that included individualistic values. Specifically, decreases in discrimination were associated with higher self-efficacy, school attachment, and lower externalizing behaviors. It remains unknown what individual and contextual characteristics led to a decline in discrimination across time. Future studies should consider using a latent class or growth mixture modeling approach to better capture information about which combination of individual and contextual variables lead to decreases in discrimination and ultimately better adjustment.

It was suspected that discrimination would relate to higher levels of M.A values and lower levels of individualistic values, however, it positively predicted both sets of values in the current sample. The association with Mexican American values was not surprising, given that similar findings have been found in previous studies between discrimination and ethnic

cultural values (Brittian et. al; Cross et al., 1991), suggesting that discrimination experiences may raise a sense of racial/ethnic awareness, leading minority youth to explore their group membership and cultural heritage (Tajfel and Turner 1986; Greene et. Al, 2006). One thing that sets the present study apart from the others is that discrimination predicted Mexican American values across a five year time span and across two particularly important developmental transition periods. Discrimination experiences at a younger age seem to have particularly lasting influence on prompting Mexican American adolescents to connect with their ethnic values, which have been linked to many forms of adjustment in Latino youth (e.g., Berkel et al., 2010; Gonzales, 2008). Future studies should examine longitudinal relations between discrimination and other ethnic cultural variables such as ethnic identity and cultural orientation (i.e., behaviors) that may serve as risk reducers (i.e., mediators) in minimizing other negative adjustment outcomes that Mexican American youth are prone to.

Surprisingly, similar positive associations emerged between discrimination and individualistic values, despite prior research finding that minority youth who experience discrimination slowed their identity or attachment to the mainstream culture, including the use of ethnic labels (e.g., Chinese instead of Chinese American; Portes and Rumbaut (2001). Similarly, initial levels of discrimination were marginally associated with slower orientation to US culture in a longitudinal study on Chinese adolescents (Juang & Cookston, 2009). One possible explanation for these differential findings lies in the distinct differences in the diversity of the student bodies within the schools attended. For example, the Chinese students attended schools in San Francisco in which the peer contexts were ethnically and culturally diverse, which has been linked to higher rates of discrimination (e.g., Benner & Graham, 2011; Seaton & Yip, 2009). Discrimination experiences in this context may cause minority

youth to be more apprehensive to acculturate given their lack of numbers in same-ethnic peer networks. Many of the Mexican American youth in the current study existed in ethnically homogenous communities and schools in which the supportive ethnic contexts may have provided them with the confidence needed to incorporate individualistic values into their lives, despite being discriminated against by mainstream peers and teachers.

As expected, Mexican American values were positively associated with academic self-efficacy and school attachment, whereas they were negatively linked to externalizing behaviors. Similar findings have emerged in other studies that found a positive link between ethnic cultural values and academic engagement (Gonzales et al., 2008) and academic self-efficacy (Berkel et al., 2010) in Mexican American adolescents. Further the negative association between Mexican American cultural values and externalizing behaviors was found (Berkel et al., 2010) with the explanation that ethnic cultural values are thought to minimize externalizing behaviors through the strong sense of obligation towards the family, preventing adolescents from participating in problem behaviors that may cause bring about humiliation or shame (e.g., Brooks et al., 1998). The association between Mexican American values and academic achievement did not emerge, which may have been negated due to the stronger associations between Mexican American values and the other outcomes in the model. Lastly, individualistic values only predicted academic self-efficacy such that higher individualistic values related to higher efficacy. While this has not been studied quantitatively before, qualitative research has argued that individualistic cultural values such as competition and personal success are important attributes needed to succeed in U.S. schools (Valdés, 1996). Similarly, some studies have found that acculturation (i.e., mainstream cultural practices) increases the likelihood of minority youth succeeding in

school (Lopez, Ehly, & García-Vásquez, 2002). It may be that mainstream cultural values and practices increase minority adolescents self-esteem within the mainstream context, which in turn minimizes the negative impact that discrimination has on academic outcomes (Schwartz et al., 2007). Finally, the lack significant associations with other adjustment outcomes were likely due to the strength of the associations between discrimination and outcomes. It appears that Mexican American values promoted adjustment more than individualistic values in this sample of Mexican American youth.

Indirect Effects

In addition to examining these direct effects, the study also investigated whether Mexican American and individualistic values mediated the association between discrimination and adjustment. Both Mexican American and individualistic values served as mediators between discrimination and self-efficacy, while only Mexican American values reduced discrimination's risk on school attachment. Each of these associations were risk reducing, such that discrimination was associated with higher values, which in turn related to better adjustment. These findings are important, particularly when it comes minimizing the longitudinal negative effects of discrimination on academic self-efficacy, given that they occurred above and beyond all other all other outcomes, after controlling for prior levels. While Mexican American values were found to be a mediator between prospective associations between discrimination academic and self-efficacy (Berkel et al., 2010), this is the first known study to find this relationship longitudinally. Further, this is the first known study to find the risk reducing effects of individualistic and Mexican American values in relation to academic self-efficacy and school attachment, respectively. Academic self-efficacy (Chun & Dickson, 2010) and school attachment (e.g., Alfaro et al., 2009) are

thought to promote academic achievement in adolescence; therefore the current findings highlight important processes that may ultimately lead to better academic performance in Mexican American youth, despite being faced with discrimination.

Limitations and Future Directions

Although the current study makes a significant contribution to discrimination research in Mexican American youth, some limitations should be discussed. First, the source of discrimination was not accounted for in the study, making it hard decipher which sources may be most detrimental to Mexican American youth. The importance of this was highlighted in a recent study by Benner and Graham (2013) finding that a multi-ethnic group of minority youth identified three sources of discrimination (e.g., school personnel, peers, and societal institutions), all of which had varying effects on adjustment. Specifically, greater discrimination from school personnel was linked to worse academic performance, greater discrimination from peers was associated with poorer psychological maladjustment, and greater societal discrimination was linked with heightened awareness. Future studies should consider assessing the source of discrimination as it has important implications on intervention and policy in developing programs that address specific aspects of adjustment in minority youth who face discrimination. Rather than develop generalized programs designed to address the negative effects of discrimination, it seems more appropriate to tailor them to specific sources of discrimination, given that they are more than likely linked to different maladjustment outcomes.

Next, context was not included in the current study, which likely accounts for important sources of variation in discrimination and adjustment research (Garcia-Coll et al., 1996). The importance of context was evident in recent discrimination research such that

more ethnic diversity in schools was linked to higher levels of discrimination (Benner & Graham, 2011; Juang & Cookston, 2009) while more diverse teaching staff was associated with lower levels of discrimination (Benner and Graham, 2011). Further, Benner and Graham (2013) went beyond this by finding that racial/ethnic characteristics of schools and neighborhoods influence adolescents' perceptions of the race/ethnic climates. Adolescents who viewed these climates in a negative light were more likely to perceive discrimination by school personnel, peers, and societal institutions, which had varying pathways to maladjustment. This type of contextualized approach is in line with the integrative model of development (Garcia-Coll et al., 1996) and needs to be considered in future studies on discrimination. A generalized approach that excludes context is likely not going to provide us with accurate depiction of the processes that lead to adjustment.

Finally, this study used a variable centered growth modeling approach, which assumes that individuals come from a single population and that a single growth trajectory can approximate the entire population of interest. While covariates are an option in assessing variability, they also assume that individuals are affected in the same way. Using this approach limits our understanding of the multiple influences that come into play when examining how discrimination influences adjustment in Mexican American youth, a population that is growing exponentially in the U.S. In support of the integrative model's (Garcia-Coll et al., 1996) recommendation to be mindful of the heterogeneity in developmental processes within racial/ethnic groups, it seems appropriate to utilize latent class or growth mixture modeling approaches to fully capture the individual and contextual patterns that lead to adjustment.

Conclusion

Perceived discrimination is a reality for Mexican Americans adolescents, which is concerning given the well-established maladjustment problems that accompany discrimination. Further, Mexican Americans comprise 65% of the greater Latino population (Pew Hispanic center, 2013) which are projected to outnumber non-Latino youth in public schools by 2050 (Fry and Gonzales, 2008). The current study demonstrated the pervasiveness of discrimination over time, particularly on academic self-efficacy. Positively, discrimination decreased from 5th to 10th grade, which includes two key transition periods and was likely influenced by the context in which the adolescents resided. Resiliency processes were highlighted through the risk reducing role of Mexican American and individualistic cultural values in minimizing the negative effects of discrimination on academic outcomes and externalizing behaviors. Future studies should utilize person centered approaches that better depict culturally informed resiliency processes in discrimination and adjustment.

DISSERTATION CONCLUSION

The mental health and educational disparities between Latino youth and their non-Latino youth have been well established (e.g., Eaton et al., 2008). Discrimination has been identified as a potential underlying cause of these disparities and has been linked to an array of mental health problems and academic deficits in Mexican American youth (e.g., Berkel et al., 2010), who represent the highest proportion of Latino adolescents in the U.S. (U.S. Census, 2010). Despite knowing that discrimination leads to negative adjustment outcomes, researchers have remained unclear as to why some youth thrive more than others. Thus, the current dissertation sought to examine culturally informed (García -Coll et al., 1996) processes between discrimination and adjustment in heterogeneous group of Mexican American adolescents. Collectively, both studies highlight the important role of Mexican American and individualistic values when it comes to minimizing the negative effects of discrimination in Mexican American youth. Both of these studies contribute to our understanding of cultural processes which can provide direction for future intervention efforts aimed at decreasing negative adjustment in Mexican American adolescents who face discrimination.

Despite the collective contributions of both studies, there are also unique contributions to be noted. To date, there has been inconclusive evidence as to which type of coping strategy is most effective in dealing with discrimination, with one theory being that the effectiveness of coping likely depends on cultural fit (Noh et al., 1999). Study 1 was the first to examine how both sets of cultural values may modify the way in which active coping related to discrimination and adjustment. While the results proved to be insignificant, it is a

step in the right direction for future studies. In study 2, growth curves were estimated across important transitional periods within adolescence, which are considered to be particularly vulnerable points in development having potential long term implications for maladjustment (Azmitia et al., 2009; Barber and Olsen, 2004). Lastly, study 2 identified the important risk reducing roles of Mexican American and individualistic values in curbing the negative effects of discrimination on academic adjustment.

Finally, both of these studies reiterated important directions for future research. Given the inconsistencies across the few studies that examined the role of cultural variables (e.g., mainstream cultural orientation, ethnic identity, and values) and coping in relation to discrimination and adjustment, it seems imperative that more consistent measurement be taken into consideration. Future studies should consider the following: the appraisals of stress associated with discrimination (rather than the event itself), the source of discrimination, better coping measures that are designed specifically for discrimination stress, and the importance of accounting for contextual variables, such as diversity of the school and teachers. Lastly, given the importance of accounting for individual, cultural, and contextual variables, it is important that future researchers consider person centered approaches so that a more complex understanding can unfold by identifying patterns leading to resiliency.

REFERENCES

- Alfaro, E.C., Umaña-Taylor, A.J., Gonzales-Backen, M. A., Bamaca, M.Y., & Zeiders, K. H. (2009). Latino adolescents' academic success: The role of discrimination, academic motivation, and gender. *Journal of Adolescence*, 32, 941-962.
- Arbuckle, J. L. (1996). Full information estimation in the presence of incomplete data. In G.A. Marcoulides & R.E. Schumacker (Eds.) *Advanced structural equation modeling: Issues and techniques*. Hillsdale, NJ: Erlbaum, 243-277.
- Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M.W. (1996). A dispositional and situational assessment of children's coping: Testing alternative theoretical models of coping. *Journal of Personality*, 64, 923-958.
- Azmitia, A., & Brown, J. R. (2000). Latino immigrant parents' beliefs about the "path of life" of their adolescent children. In J. M. Contreras, K. A. Kerns, & A. M. Neal-Barnett (Eds.), *Latino children and families in the United States* (pp. 77-106). Westport, CT: Praeger Press.
- Barber, B. K., & Olsen, J. A. (2004). Assessing the transitions to middle and high school. *Journal of Adolescent Research*, 19(1), 3-30.
- Benner, A.D. & Graham, S. (2011). Adolescents' experiences of discrimination across the first 2 years of high school: Correlates and influences on education outcomes. *Child Development*, 82, 508-519.
- Benner, A. D., & Graham, S. (2013). The antecedents and consequences of racial/ethnic discrimination during adolescence: Does the source of discrimination matter?. *Developmental psychology*, 49(8), 1602.
- Berkel, C., Knight, G.P, Zeiders, K.H., Tein, J.Y., Roosa, M.W., Gonzales, N.A., & Saenz, D. (2010). Discrimination and adjustment for Mexican American Adolescents: A prospective examination of the benefits of culturally related values. *Journal of Research on Adolescence*, 1-23.
- Berkel, C., Murry, V. M., Hurt, T. R., Chen, Y.-F., Brody, G. H., Simons, R. L., et al. (2009). It takes a village: Protecting rural African American youth in the context of racism. *Journal of Youth and Adolescence*, 38, 175-188.
- Bird, H. R., Canino, G. J., Davies, M., Zhang, H., Ramirez, R., & Lahey, B. B. (2001). Prevalence and correlates of antisocial behaviors among three ethnic groups. *Journal of Abnormal Child Psychology*, 29, 465-478.

- Bollen, K. A., & Curran, P. J. (2006). *Latent curve models: A structural equation approach*. Hoboken, NJ: Wiley.
- Brittian, A. S., O'Donnell, M., Knight, G. P., Carlo, G., Umaña-Taylor, A. J., & Roosa, M. W. (2013). Associations between adolescents' perceived discrimination and prosocial tendencies: The mediating role of Mexican American values. *Journal of Youth and Adolescence*, 42(3), 328-341. doi:http://dx.doi.org/10.1007/s10964-012-9856-6
- Brittian, A.S., Toomey, R.B., Gonzales, N.A., Dumka, L.E. (2013). Perceived discrimination and Mexican American adolescents' internalizing and externalizing behaviors: Examining the moderating role of coping strategies, gender, and acculturation. Manuscript submitted for publication. *Applied Developmental Science*, 17(1), 4-19. doi: 10.1080/10888691.2013.748417
- Brody, G. H., Chen, Y.-F., Murry, V. M., Ge, X., Simons, R. L., Gibbons, F. X., et al. (2006). Perceived discrimination and the adjustment of African American youths: A five-year longitudinal analysis with contextual moderation effects. *Child Development*, 77, 1170–1189.
- Brondolo, E., Kelly, K. P., Coakley, V., Gordon, T., Thompson, S., Levy, E., Cassells, A., Tobin, J. N., Sweeney, M., & Contrada, R. J. (2005). The perceived ethnic discrimination questionnaire: Development and preliminary validation of community version. *Journal of Applied Social Psychology*, 35, 335-365.
- Brooks AJ, Stuewig J, LeCroy CW (1998). A family based model of Hispanic adolescent substance use. *Journal of Drug Education*, 28,65–86.
- Cauce, AM.; Domenech-Rodríguez, M. Latino families: Myths and realities. In: Contreras, J.; Neal- Barnett, A.; Kerns, K., editors. *Latino Children and Families in the United States: Current Research and Future Directions*. Westport, CT: Praeger Publishers; 2002. p. 3-26.
- Centers for Disease Control and Prevention (2006). Surveillance Summaries, June 9. *MMWR*, 55 (No. SS-5).
- Chaveous, T.M., Drake, D.R., Smalls, C., Griffin, T., & Cogburn, C. (2009). Gender matters, too: The influence of school racial discrimination and racial identity on academic engagement outcomes among African American adolescents. *Developmental Psychology*, 44, 637-654.
- Chun, H., & Dickson, G. (2011). A psychoecological model of academic performance among Hispanic adolescents. *Journal of youth and adolescence*, 40(12), 1581-1594.

- Clark, R., Anderson, N.B., Clark, V.R., Williams, D.R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, 54, 805-816.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Coker, T. R., Elliott, M. N., Kanouse, D. E., Grunbaum, J. A., Schwebel, D. C., Gilliland, M. J., et al. (2009). Perceived racial/ethnic discrimination among fifth-grade students and its association with mental health. *American Journal of Public Health*, 99, 878-884.
- Cooper, S.M., Brown, C., Metzger, Isha, Clinton, Y., & Guthrie, B. (2013). Racial Discrimination and African American Adolescents' Adjustment: Gender Variation in Family and Community Social Support, Promotive and Protective Factors. *Journal of Child Family Studies*, 22, 15-29. DOI 10.1007/s10826-012-9608-y
- Cross, W. E., Parham, T. A., & Helms, J. E. (1991). The stages of Black identity development: Nigrescence models. In R. L. Jones (Ed.), *Black psychology* (3rd ed., pp. 319–338). Berkeley, CA: Cobb & Henry Publishers.
- Cunningham, G. B., & Sagas, M. (2007). Examining the potential differences between men and women in the impact of treatment discrimination. *Journal of Applied Social Psychology*, 37, 3010-3024.
- DeGarmo, D. S., & Martinez, C. R. J. (2006). A culturally informed model of academic well-being for Latino youth: The importance of discriminatory experiences and social support. *Family Relations: Interdisciplinary Journal of Applied Family Studies*, 55(3), 267-278.
- Duncan, T. E., Duncan, S. S., & Strycker, L. A. (2006). *An introduction to latent variable growth curve modeling: Concepts, issues, and applications*. Mahwah, NJ: Lawrence Erlbaum.
- Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., Harris, W. A., Lowry, R., McManus, T., Chyen, D., Lim, C., Brener, N. D., & Wechsler, H. (2008). Youth Risk Behavior Surveillance --- United States, 2007. *MMWR Surveillance Summaries*, 57 (SS04): 1-131.
- Ebata, A. T., & Moos, R. H. (1991). Coping and adjustment in distressed and healthy adolescents. *Journal of Applied Developmental Psychology*, 17, 33-54.
- Edwards, L. M., & Romero, A. J. (2008). Coping with discrimination among Mexican descent adolescents. *Hispanic Journal of Behavioral Sciences*, 30, 24–39.

- Farkas, G. (2003). Racial disparities and discrimination in education: What do we know, how do we know it, and what do we need to know? *Teachers College Record*, *105*, 1119–1146.
- Fennelly, K., Mulkeen, R., & Giusti, C. (1998). Coping with racism & discrimination. In H. I.
- McCubbin, E. A. Thompson, A. I. Thompson, & J. E. Fromer (Eds.), *Resilience in Native American and immigrant families* (pp. 367-383). Thousand Oaks, CA: Sage.
- Fisher, C.B., Wallace, S.A., & Fenton, R.E. (2000). Discrimination distress during adolescence. *Journal of Youth and Adolescence*, *29*, 679-695.
- Fordham, S. (1988). Racelessness as a factor in Black students' school success: Pragmatic strategy or pyrrhic victory? *Harvard Educational Review*, *58*(1), 54–84.
- Fordham, S., & Ogbu, J. (1986). Black students' school success: Coping with the “burden of acting White.” *Urban Review*, *18*, 176–206.
- Fuligni, A. J. (2001). Family obligation and academic motivation of adolescents from Asian, Latin American, and European backgrounds. In A. J. Fuligni(Ed.), *Family obligation and assistance during adolescence: Contextual variations and developmental implications*. New York, Jossey-Bass: 61-75
- Gabrielidis, C., Stephan, W.G., Ybarra, O., Dos Santos Pearson, V.M., & Villareal, L. (1997). Preferred styles of conflict resolution: Mexico and the United States. *Journal of Cross Cultural Psychology*, *28*, 661-677.
- Gandara, P. C., & Contreras, F. (2009). *The Latino education crisis: The consequences of failed social policies*. Harvard University Press.
- Garcia Coll, C., Crnic, K., Lamberty, G., Wasik, B. H., Jenkins, R., Garcia, H. V., & McAdoo, H. P. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development*, *67*, 1891-1914.
- Gibbs, J. T. (1998). African American adolescents. In J. T. Gibbs, & H. L. Nahme (Eds.), *Children of color: Psychological interventions with culturally diverse youth* (pp. 171–214). San Francisco: Jossey-Bass.
- Gil, A.G., Wagner, E.F., & Vega, W.A. (2000). Acculturation, familism, and alcohol use among Latino adolescent males: Longitudinal relations. *Journal of Community Psychology*, *28*, 443-458.
- Gonzales, N. A., Germaín, M., Kim, S. Y., George, P., Fabrett, F. C., Millsap, R., et al. (2008).

- Mexican American adolescents' cultural orientation, externalizing behavior and academic engagement: The role of traditional cultural values. *American Journal of Community Psychology*, 41, 151–164.
- Graham, S., Taylor, A., & Hudley, C. (1998). Exploring achievement values among ethnic minority early adolescents. *Journal of Educational Psychology*, 90, 606–620.
- Greene, M.L., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer discrimination among Black, Latino and Asian American adolescents: Patterns and psychological correlates. *Developmental Psychology*, 42, 218-238.
- Harrell SP. (2000). A multidimensional conceptualization of racism-related stress: implications for the well-being of people of color. *American Journal of Orthopsychiatry*, 70, 42-57.
- Hetherington, E. M. (1989). Coping with family transitions: Winners, losers, and survivors. *Child Development*, 60, 1 – 14.
- Hinshaw, S. P. & Zupan, B. A. (1997). Assessment of antisocial behavior and children and adolescents. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 36 – 59). New York: John Wiley & Sons.
- Hovey, J.D. & King, C.A. (1996). Acculturation stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 1183-1192.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Hughes, D., & Dodge, M. A. (1997). African American women in the workplace: Relationships between job conditions, racial bias at work, and perceived job quality. *American Journal of Community Psychology*, 25, 581-599.
- Inhelder, B., & Piaget, J. (1958). *The growth of logical thinking from childhood to adolescence*. New York: Basic Books.
- Juang, L., & Alvarez, A. (2010). Discrimination and adjustment among Chinese American adolescents: Family conflict and family cohesion as vulnerability and protective factors. *American Journal of Public Health*, 100, 2403-2409.
- Juang, L. P., & Cookston, J. T. (2009). Acculturation, discrimination, and depressive symptoms among Chinese American adolescents: A longitudinal study. *Journal of Primary Prevention*, 30, 475–496.

- Keefe, S., & Padilla, A. (1987). *Chicano ethnicity*. Albuquerque, NM: University of New Mexico Press.
- Kiang, L., Supple, A. J., Stein, G. L., & Gonzalez, L. M. (2012). Gendered academic adjustment among asian american adolescents in an emerging immigrant community. *Journal of Youth and Adolescence*, 41(3), 283-294. doi:http://dx.doi.org/10.1007/s10964-011-9697-8
- Kline, R. B. (1998). *Principles and Practice of Structural Equation Modeling*. The Guilford Press, New York.
- Kline, R.B. (2005), *Principles and Practice of Structural Equation Modeling* (2nd Edition ed.). New York: The Guilford Press.
- Kliewer, Wendy, I. Sandler, and S. Wolchik. "Family socialization of threat appraisal and coping: Coaching, modeling, and family context." *Social networks and social support in childhood and adolescence* 16 (1994): 279-291.
- Klonoff, E. A., & Landrine, H. (1995). The schedule of sexist events: A measure of lifetime and recent sexist discrimination in women's lives. *Psychology of Women Quarterly*, 19, 439-472.
- Knight, G. P., Gonzales, N. A., Saenz, D. S., German, M., Deardorff, J., Roosa, M. W., & Updegraff, K. A. (2010). The Mexican American cultural values scale for adolescents and adults. *Journal of Early Adolescence*, 30(3), 444-481.
- Knight, G. P., Jacobson, R. P., Gonzales, N. A., Roosa, M. W., & Saenz, D. S. (2009). An evaluation of the psychological research on acculturation and enculturation processes among recently immigrating populations. *Strengths and challenges of new immigrant families: Implications for research, policy, education, and service*. New York: Lexington.
- Landrine, H., & Klonoff, E. A. (1996). The schedule of racist events: A measure of racial discrimination and a study of its negative physical and mental health consequences. *Journal of Black Psychology*, 22, 144-168.
- Lau, A. S., McCabe, K. M., Yeh, M., Garland, A. F., Wood, P. A., & Hough, R. L. (2005). The acculturation gap-distress hypothesis among high-risk Mexican American families. *Journal of Family Psychology*, 19, 367-375.
- Lazarus, S. R., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- MacKinnon, D.P., Fairchild, A.J., & Fritz, M.S. (2007). Mediation Analysis. *Annual Review of Psychology*, 58, 593-614. Doi:101146/annurev.psych.58. 110405.085542

- Martinez, C. R., Jr., DeGarmo, D. S., & Eddy, J. M. (2004). Promoting academic success among Latino youths. *Hispanic Journal of Behavioral Sciences*, 26, 128–151.
- Midgley, C., Maehr, M.L., & Urdan, T. (1996). *Patterns of adaptive learning survey (PALS)*. Ann Arbor: University of Michigan Press.
- Muthén, L.K. and Muthén, B.O. (1998-2010). *Mplus User's Guide*. Sixth Edition. Los Angeles, CA: Muthén & Muthén.
- Neblett, E. W., Jr., Philip, C. L., Cogburn, C. D., & Sellers, R. M. (2006). African American adolescents' discrimination experiences and academic achievement: Racial socialization as a cultural ompensatory and protective factor. *Journal of Black Psychology*, 32, 199–218.
- Noguera, P. A. (2003). The trouble with Black boys: The role and influence of environmental and cultural factors on the academic performance of African American males. *Urban Education*, 38(4), 431–459.
- Noh, S., Beiser, M., Kaspar, V., Hou, F., & Rummens, J. (1999). Perceived racial discrimination, depression, and coping: a study of Southeast Asian refugees in Canada. *Journal of Health and Social Behavior*, 40, 193-207.
- Noh S, & Kaspar V. (2003). Perceived discrimination and depression: moderating effects of coping, acculturation, and ethnic support. *American Journal of Public Health*, 93, 232-238.
- Osborne, J. (1999). Unraveling underachievement among African American boys from an identification with academics perspective. *Journal of Negro Education*, 68(4), 555–565.
- Padilla, A. M. (2006). Bicultural social development. *Hispanic Journal of Behavioral Sciences*, 28(4), 467-497.
- Pahl, K., & Way, N. (2006). Longitudinal trajectories of ethnic identity among urban Black and adolescents. *Child Development*, 77, 1403–1415.
- Pantin, H., Schwartz, S.J., Sullivan, S., Coatsworth, J.D., & Szapocznik, J. (2003). Preventing substance abuse in Hispanic immigrant adolescents: An ecodevelopmental, parent-centered approach. *Hispanic Journal of Behavioral Sciences*, 25, 469-500.

- Pascoe, E.A., & Richman, L.S. (2009). Perceived Discrimination and Health: A Meta-Analytic Review. *Psychological Bulletin*, 135, 531-554.
- Pew Hispanic Center. (2013). http://www.pewhispanic.org/files/2013/05/2013-04_Demographic-Portrait-of-Mexicans-in-the-US.pdf. Retrieved April 10, 2013, from <http://pewhispanic.org/files/other/middecade/Table-3.pdf>
- Pew Hispanic Center. (2006). Pew Hispanic Center fact sheet: Statistical portrait of Hispanics in the United States 2006: Summary and chart pack. Los Angeles: Annenberg School for Communication, University of Southern California. Retrieved October 5, 2010, from <http://pewhispanic.org/files/other/middecade/Table-3.pdf>
- Phinney, J. S., & Chavira, V. (1995). Parental ethnic socialization and adolescent coping with problems related to ethnicity. *Journal of Research on Adolescence*, 5, 31-53.
- Portes, A. & Rumbaut, R. G. (2001). *Legacies: The Story of the Immigrant Second Generation*. Berkeley: University of California Press.
- Raffaelli, M. & Ontai, L. L. (2004). Gender socialization in Latino/a families: Results from two retrospective studies. *Sex Roles*, 50, 287-299.
- Romero, A. J., & Roberts, R. E. (2003a). The impact of multiple dimensions of ethnic identity on discrimination and adolescents' self-esteem. *Journal of Applied Social Psychology*, 33, 2288-2305.
- Romero, A. J., & Roberts, R. E. (2003b). Stress within a bicultural context for adolescents of Mexican descent. *Cultural Diversity and Ethnic Minority Psychology*, 9, 171-184.
- Romero, A. J., & Roberts, R. E. (2007). Stress within a bicultural context for adolescents of Mexican descent. *Cultural Diversity and Ethnic Minority Psychology*, 9, 171-184.
- Roeser, R.W., Lord S. E., & Eccles, J. (1994). A portrait of academic alienation in adolescence: Motivation, mental health, and family experience. Paper presented at the Biennial Meeting of the Society for Research on Adolescence, San Diego, CA.
- Roosa, M. W., Morgan-Lopez, A., Cree, W., & Specter, M. (2002). Ethnic culture, poverty, and context: Sources of influence on Latino families and children. In J. M. Contreras, K. A. Kerns & A. M. Neal-Barnett (Eds.), *Latino children and families in the United States: Current research and future directions* (pp. 27-44). Westport, CT: Greenwood.
- Roosa, M. W., Liu, F. F., Torres, M., Gonzales, N. A., Knight, G. P., & Saenz, D. (2008). Sampling and recruitment in studies of cultural influences on adjustment: A case study with Mexican Americans. *Journal of Family Psychology*, 22(2), 293-302.

- Rosenbloom, S. R., & Way, N. (2004). Experiences of discrimination among African American, Asian American, and Latino adolescents in an urban high school. *Youth & Society, 35*, 420-451.
- Rudmin FW. (2008). Immigrant youth in cultural transition: Acculturation, identity, and adaptation across national contexts. *Journal of Cross-Cultural Psychology, 39*, 230–233.
- Sabogal, F., Marin, G., Otero-Sabogal, R., Marin, B. V., & Perez-Stable, E. J. (1987). Hispanic families and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Social Sciences, 9*(4), 397-412. doi: 10.1177/07399863870094003
- Seaton, E. K., & Yip, T. (2009). School and neighborhood contexts, perceptions of racial discrimination, and psychological well-being among African American adolescents. *Journal of youth and adolescence, 38*(2), 153-163.
- Schwartz, S. J., Montgomery, M. J., & Briones, E. (2006). The role of identity in acculturation among immigrant people: Theoretical propositions, empirical questions, and applied recommendations. *Human Development, 49*, 1-30.
- Schwartz, S. J., Unger, J. B., Zamboanga, B. L., & Szapocznik, J. (2010). Rethinking the concept of acculturation: Implication for theory and research. *American Psychologist, 56*(4), 237-251.
- Sellers, R., Copeland-Linder, N., Martin, P., & Lewis, R. (2006). Racial identity matters: The relationship between racial discrimination and psychological functioning in African American adolescents. *Journal of Research on Adolescence, 16*(2), 187-216.
- Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology, 84*, 1079-1092.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*, 147-177.
- Shaffer, D., Fisher, P., Lucas, C. P., Dulcan, M. K., & Schwab-Stone, M. E. (2000). NIMH Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV): description, differences from previous versions, and reliability of some common diagnoses. *J Am Child Adolescent Psychiatry, 39*(1), 28-38.
- Shaffer, D., Fisher, P., Duncan, M. K., Davies, M., Piacentini, J., Schwab-Stone, M. E. (1996). The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): description, acceptability, prevalence rates, and performance in the Methods for

- the Epidemiology of Child and Adolescent Mental Disorders Study (MECA). *J Am Acad Child Adolescent Psychiatry*, 35(7), 865-877.
- Simons, R., Murry, V., McLoyd, V., Lin, K., Cutrona, C., & Conger, R. (2002). Discrimination, crime, ethnic identity, and parenting as correlates of depressive symptoms among African American children: A multilevel analysis. *Development and Psychopathology*, 14, 372-393.
- Smith, E.P., Connell, C.M., Wright, G., Sizer, M., Norman, J.M., Hurley, A., & Walker, S.N. (1997). An ecological model of home, school, and community partnerships: Implications for research and practice. *Journal of Educational and Psychological Consultation*, 8(4), 339-360.
- Spencer, M. (1999). Social and cultural influences on school adjustment: The application of an identity-focused cultural ecological perspective. *Educational Psychologist*, 34(1), 43-58.
- Suarez-Orozco, C.; Suarez-Orozco, M.M. *Children of immigration*. Cambridge: Harvard University Press; 2001.
- Swanson, D., Cunningham, M., & Spencer, M. B. (2003). Black males' structural conditions, achievement patterns, normative needs, and "opportunities." *Urban Education*, 38(5), 608-633.
- Tajfel, H. (1981). Turner, J.C. (1986) 'The Social Identity Theory of Intergroup Behavior'. *Psychology of intergroup relations*, 7-24.
- Tatum, B. (1997). *Why are all the Black kids sitting together in the cafeteria?* New York: Basic Books.
- Tein, J.-Y., Sandler, I.N., MacKinnon, D.P. & Wolchik, S.A. (2004). How did it work? Who did it work for? Mediation and moderation of a preventive intervention for children of divorce. *Journal of Counseling and Clinical Psychology*, 72(4), 617-624.
- Toomey, R. B., Umaña-Taylor, A. J., Updegraff, K. A., & Jahromi, L. B. (2013). Ethnic identity development and ethnic discrimination: Examining longitudinal associations with adjustment for Mexican-origin adolescent mothers. *Journal of Adolescence*, 36(5), 825-833. doi:<http://dx.doi.org/10.1016/j.adolescence.2013.06.004>
- Umaña-Taylor, A.J., & Updegraff, K.A. (2007). Latino adolescents' mental health: Exploring the interrelations among discrimination, ethnic identity, cultural orientation, self-esteem, and depressive symptoms. *Journal of Adolescence*, 30, 549-567.
- Umaña-Taylor, A.J., Wong, J.J., Gonzales, N.A., Dumka, L.E. (2012). Ethnic identity and gender as moderators of the association between discrimination and academic

- adjustment among Mexican-origin adolescents. *Journal of Adolescence*, 35, 2012, 773-786.
- U.S. Census Bureau (2014). *Arizona State and County Quickfacts*. Retrieved from: <http://quickfacts.census.gov/qfd/states/04000.html>
- U.S. Census Bureau (2010). *Educational Attainment by Race and Hispanic Origin*. Retrieved from: http://www.census.gov/compendia/statab/cats/education/educational_attainment.html
- U.S. Department of Commerce. (1996–2006). Census Bureau, Current Population Survey, selected years, October. Retrieved December 4, 2008, from http://nces.ed.gov/pubs2008/nativetrends/tables/table_6_1b.asp
- U.S. Department of Commerce. (2006). Census Bureau, American Community Survey. Retrieved December 4, 2008, from http://nces.ed.gov/pubs2008/nativetrends/tables/table_3_4a.asp
- U.S. Department of Education (2013). Retrieved February 10, 2013 from https://nces.ed.gov/programs/digest/d12/tables/dt12_128.asp
- Urrabazo, R. (1985). *Machismo: Mexican American male self-concept*. Doctoral dissertation, Graduate Theological Union, Berkeley, CA.
- Valdes, G. (1996). *Con respeto: Bridging the distances between culturally diverse families and schools*. New York: Teachers College Press.*
- Wong, C., Eccles, J., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality*, 71, 1197–1232.
- Zeiders, K. H., Umaña-Taylor, A. J., & Derlan, C. L. (2013). Trajectories of depressive symptoms and self-esteem in latino youths: Examining the role of gender and perceived discrimination. *Developmental Psychology*, 49(5), 951-963. doi:<http://dx.doi.org/10.1037/a002886>

Table 1.

Summary of paths being estimated in Models 1-4

Models	Independent Variables	Dependent Variable
1	(1) Discrimination X coping X MAV (2) Discrimination X coping (3) Discrimination X MAV (4) All main effects	Externalizing Behaviors
2	(1) Discrimination X coping X MAV (2) Discrimination X coping (3) Discrimination X MAV (4) Coping X MAV (5) All main effects	Internalizing Behaviors
3	(1) Discrimination X coping X IV (2) Discrimination X coping (3) Discrimination X IV (4) Coping X IV (5) All main effects	Externalizing Behaviors
4	Discrimination X coping X IV (1) Discrimination X coping (2) Discrimination X IV (3) Coping X IV (4) All main effects	Internalizing Behaviors

Note. MAV = Mexican American values; IV = individualistic values

Table 2.

Correlations among study variables and Descriptives

	1	2	3	4	5	6	7	8	9
1. Gender	1								
2. Nativity	.05	1							
3. Income	.03	-.34**	1						
4. Discrimination	.04	.03	.01	1					
5. Active coping	-.02	-.02	.12**	-.13*	1				
6. MAV	.10*	-.02	-.02	.10	.25**	1			
7. IV	.10*	.09*	-.09*	.08*	.20**	.29**	1		
8. Externalizing	.03	-.02	-.05*	.12*	-.20**	-.10**	.02	1	
9. Internalizing	.20**	-.08	-.01	.21*	-.08*	-.02	.04	.57**	1
<i>M</i>	1.51	1.30	7.11	1.20	3.86	3.92	3.30	5.64	12.14
<i>SD</i>	.50	.46	4.70	.34	.66	.43	.60	4.98	8.42

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

Table 3.

*Standardized Regression Estimates, Standard Errors,
and Effect Sizes for Models 1 and 2*

	Externalizing Behaviors			Internalizing Behaviors		
	β	SE	f^2	β	SE	f^2
Income	.04	.04	-	-.03	.04	-
Discrimination (D)	.11**	.04	.01	.25***	.04	.05
M.A. Values (MAV)	-.06	.04	-	.00	.04	-
Active Coping (AC)	-.17***	.04	.06	-.05	.04	-
D X AC	.09*	.05	.06	.09*	.05	.04
D X MAV	-.03	.05	-	.00	.05	-
AC X MAV	.02	.04	-	.01	.04	-
D X MAV X AC	.02	.05	-	-.05	.05	-

Note. ** $p < .01$, *** $p < .001$. Effect sizes (f^2) were included for the significant regression coefficients. Cohen's interpretation of effect sizes (1988) were used in the current study: small effect = .02; medium effect = .15; large effect = .35.

Table 4.

*Standardized Regression Estimates, Standard Errors,
and Effect Sizes for
Models 3 and 4*

	Externalizing Behaviors			Internalizing Behaviors		
	β	SE	f^2	β	SE	f^2
Income	.06	.04	-	-.02	.04	-
Discrimination (D)	.14**	.04	.02	.25***	.04	.02
IV	.05	.04	-	.04	.04	-
Active Coping (AC)	-.21***	.04	.04	-.06	.04	-
D X AC	.08	.04	-	.12**	.04	.06
D X IV	-.13**	.05	.01	-.09	.05	-
AC X IV	.01	.04	-	-.04	.04	-
D X I X AC	.01	.05	-	-.04	.05	-

Note. ** $p < .01$, *** $p < .001$. Effect sizes (f^2) were included for the significant regression coefficients. Note. ** $p < .01$, *** $p < .001$. Effect sizes (f^2) were included for the significant regression coefficients. Cohen's interpretation of effect sizes (1988) were used in the current study: small effect = .02; medium effect = .15; large effect = .35.

Table 5.

Standardized Regression Estimates for Significant Nativity and Gender Moderation

	Externalizing Behaviors			Internalizing Behaviors		
	β	SE	f^2	β	SE	f^2
Nativity						
Model 1: U.S. Born						
D X AC	.14**	.05	.08	-	-	
Model 3: U.S. Born						
D X AC	.13**	.05	.06	-	-	
Gender						
Model 4: Females	-	-		.21**	.07	.08

Note. D X AC = Discrimination X Active Coping interaction. Effect sizes (f^2) were included for the significant regression coefficients. Cohen's interpretation of effect sizes (1988) were used in the current study: small effect = .02; medium effect = .15; large effect = .35

Table 1.

Means, Standard Deviations, and Correlations among Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Gender	1														
2. Nativity	.05	1													
3. Disc - W1	.04	.20**	1												
4. Disc - W2	.08*	.12**	.39**	1											
5. Disc - W3	.00	.23**	.39**	.39**	1										
6. MAV - W3	.10*	.02	.19**	.15**	.06	1									
7. IV - W3	.10*	.09*	.10*	.06	.06	.29**	1								
8. Ext - W2	.03	-.02	.04	.03	.05	-.10**	.02	1							
9. Ext - W3	.09*	-.10**	-.04	.21**	.10**	-.09**	.09*	.48**	1						
10. SE - W2	.02	.05	-.12**	-.09**	.03	.17**	.02	-.19**	-.21**	1					
11. SE - W3	.04	.01	-.13**	-.07	-.05	.20**	.18**	-.22**	-.12**	.40**	1				
12. Attach - W2	-.12**	.02	-.05	-.17**	-.03	.20**	.01	-.18**	-.27**	.48**	.25**	1			
13. Attach. - W3	-.13**	.07	.02	-.01	-.04	.22**	.01	-.36**	-.18**	.28**	.50**	.40**	1		
14. Achiev - W2	-.16**	-.04	-.19**	-.18**	-.07	-.07	-.01	-.31**	-.29**	.26**	.25**	.21**	.19**	1	
15. Achiev - W3	-.18**	-.05	-.08	-.06	-.07	-.07	.01	-.29**	-.21**	.08	.19**	.09*	.21**	.43**	1
Mean	1.51	1.30	1.80	1.59	1.66	3.92	3.30	5.76	5.64	4.21	4.22	4.43	4.41	3.44	3.12
(SD)	.50	.46	.62	.52	.53	.43	.60	4.96	4.98	.64	.65	.52	.53	1.14	1.22

Note. *p < .05, **p < .01, ***p < .001. Disc= discrimination; MAV=Mexican American values; IV=individualistic values; Ext=externalizing; SE=academic self-efficacy; Attach= school attachment; Achiev = academic achievement

Table 2.

Quadratic Growth Curve Estimates in Study 2

Parameter	Estimate	Standard Error	P-value
Mean intercept	1.80	.02	.000
Mean linear slope	-.34	.0	.000
Mean quadratic slope	.14	.00	.000

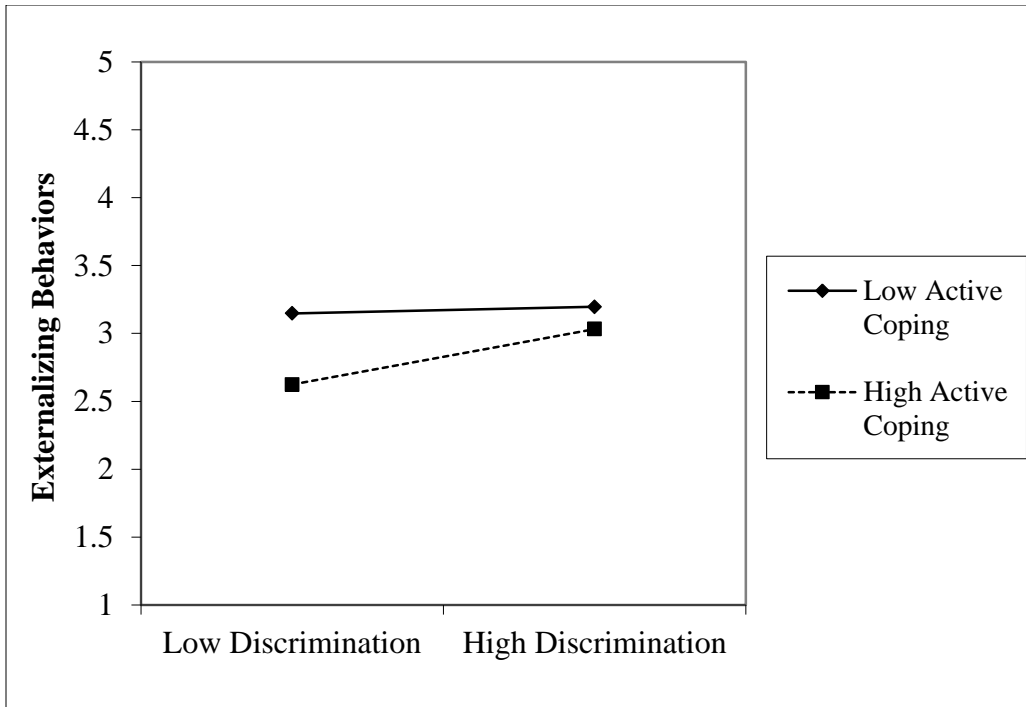


Figure 1. Moderation effects of active coping on the association between discrimination and externalizing behaviors

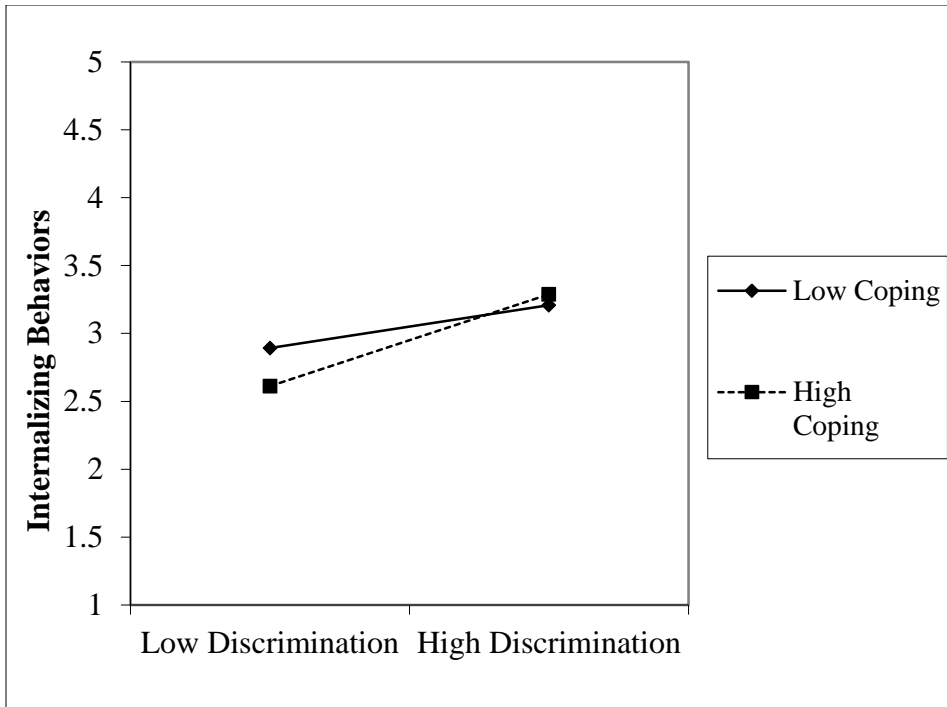


Figure 2. Moderation effects of active coping on the association between discrimination and internalizing behaviors

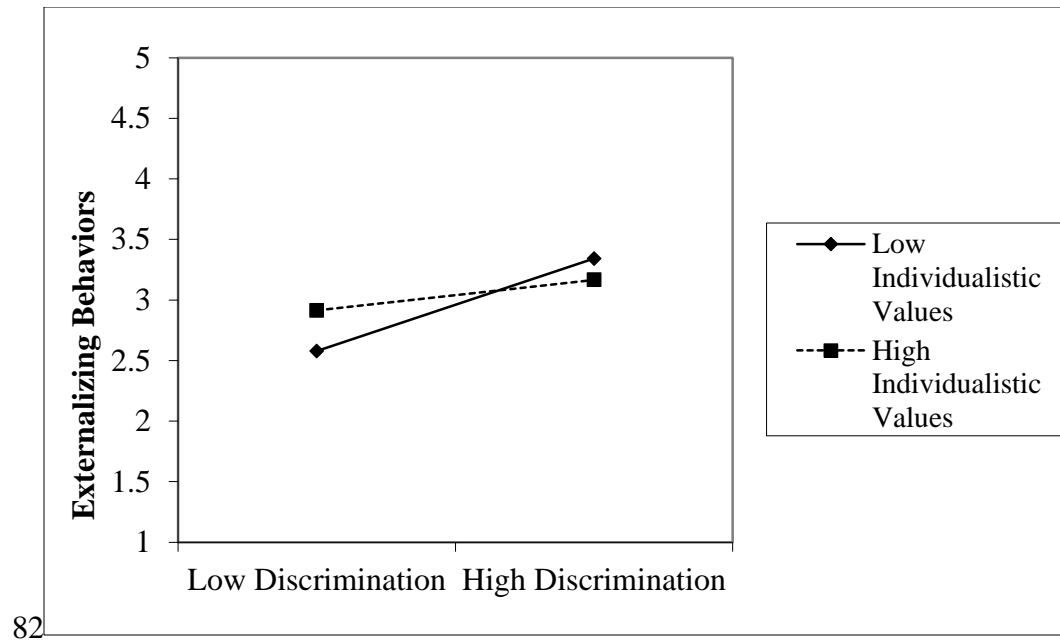


Figure 3. Moderation effects of individualistic values on the association between discrimination and externalizing behaviors

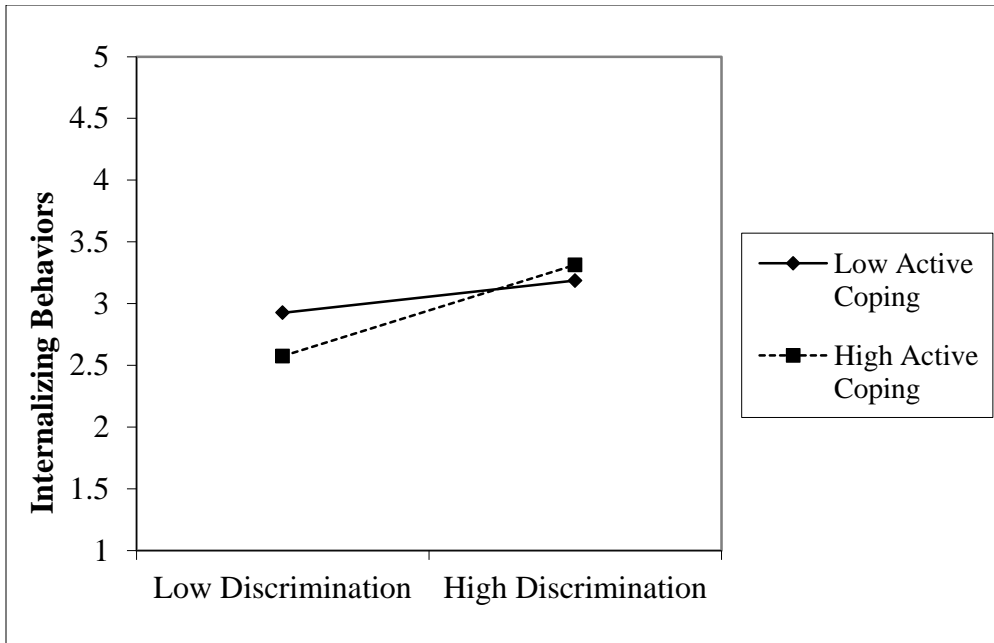


Figure 4. Moderation effects of active coping on the association between discrimination and internalizing behaviors

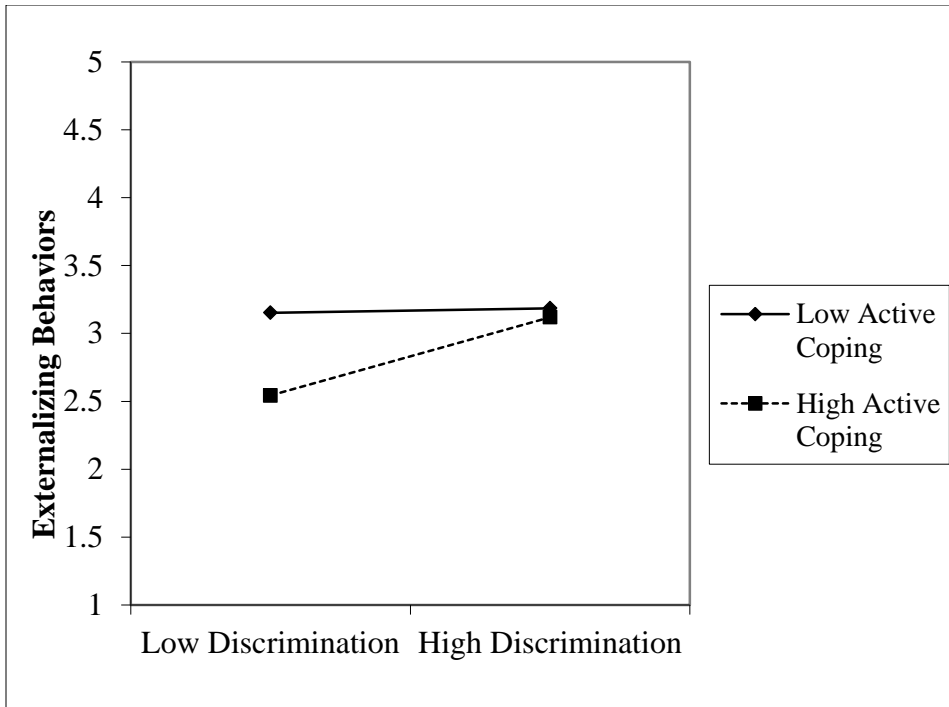


Figure 5. Moderation effects of active coping on the association between discrimination and externalizing behaviors (U.S. born)

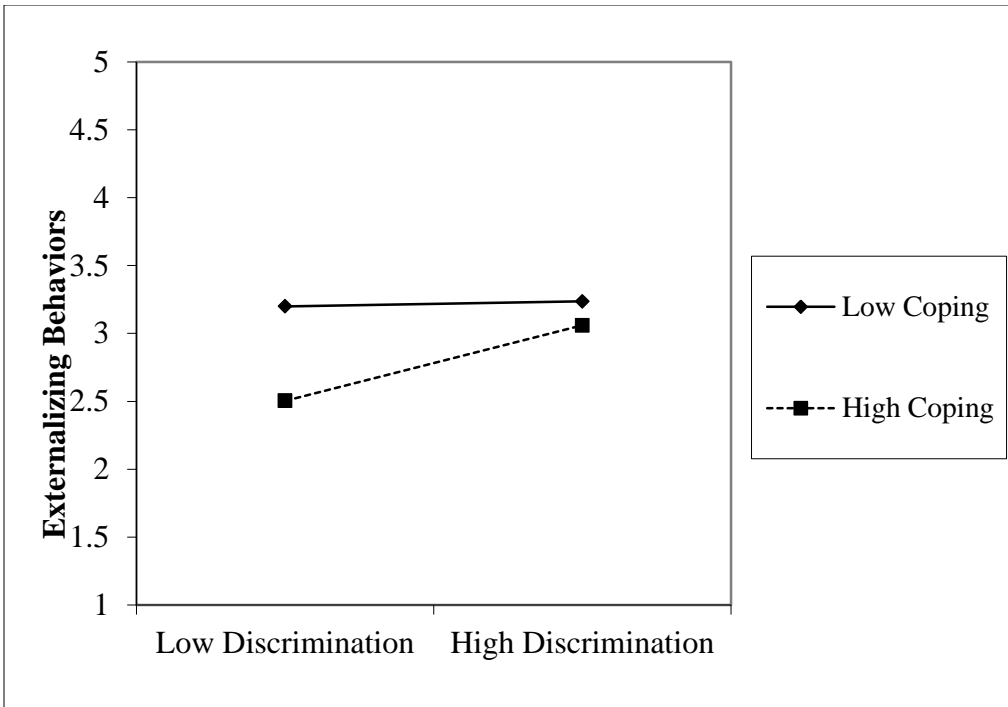


Figure 6. Moderation effects of active coping on the association between discrimination and internalizing behaviors (U.S. Born)

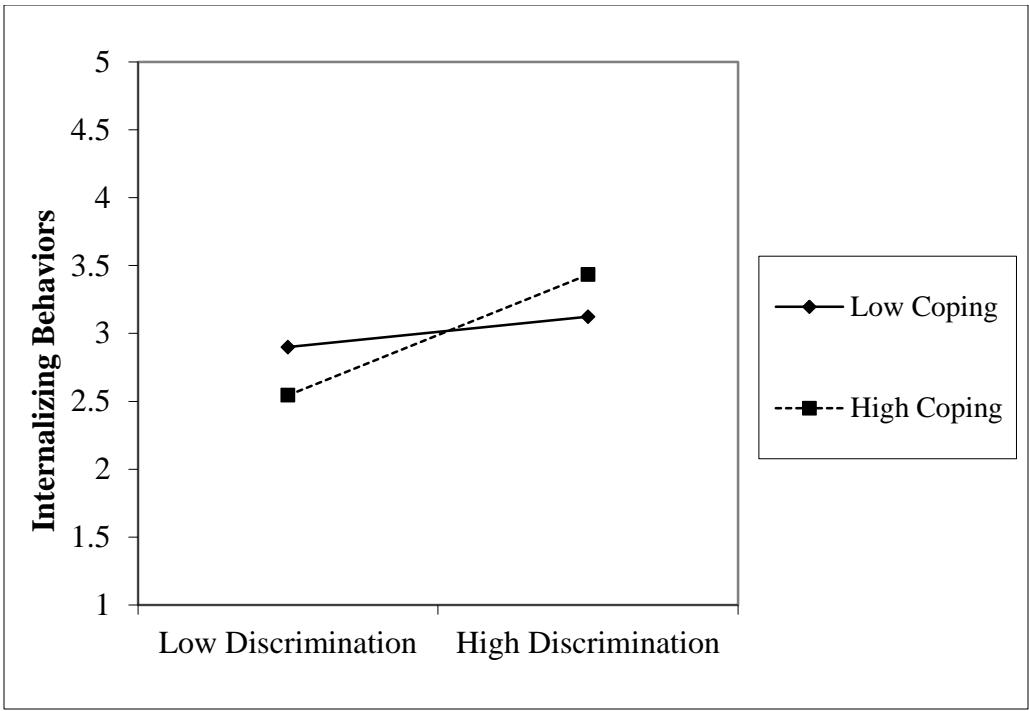


Figure 7. Moderation effects of active coping on the association between discrimination and internalizing behaviors (females)

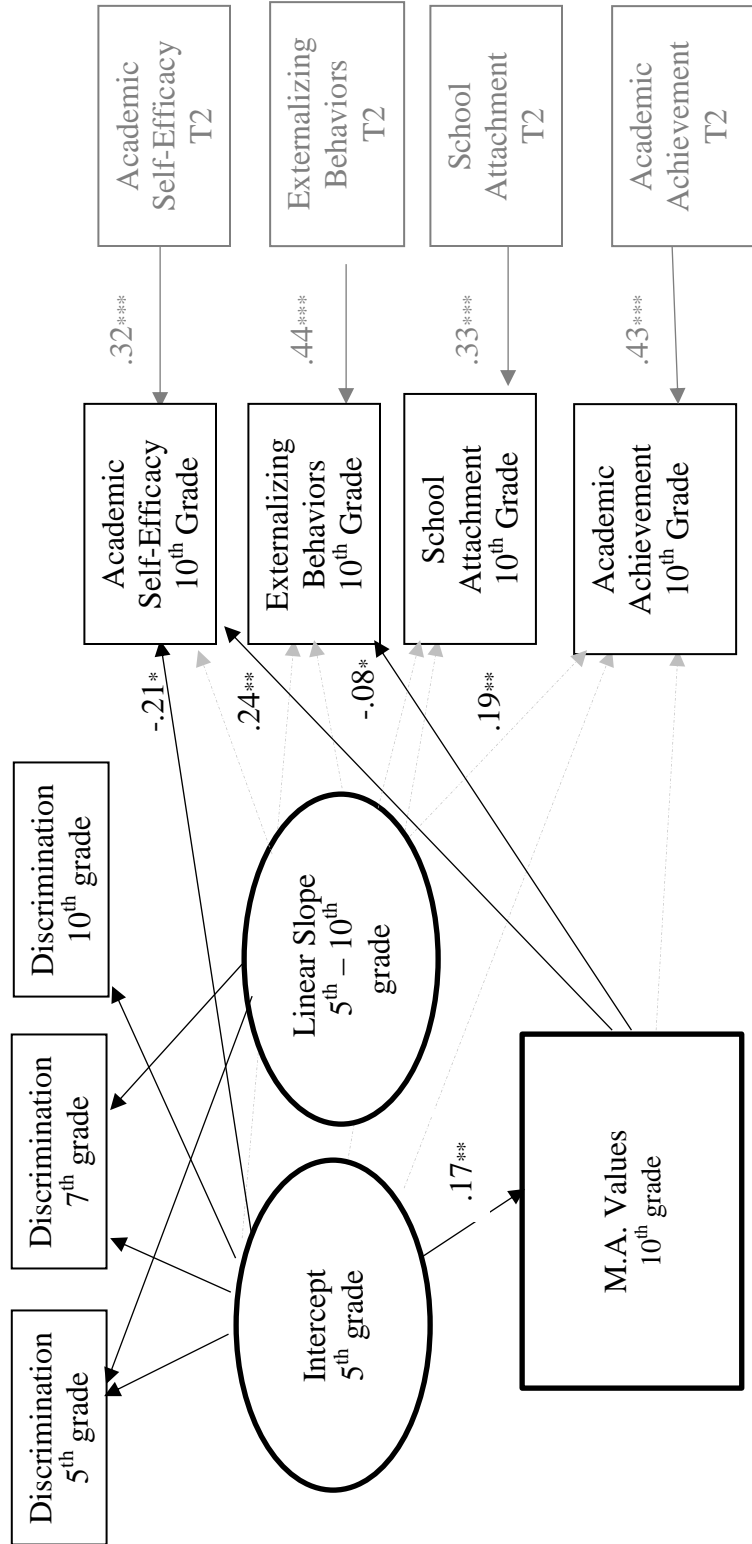


Figure 1. Standardized coefficients are presented for a longitudinal model of discrimination, Mexican American values, and adolescent adjustment. Dashed lines are not significant. $\chi^2(25)=138.26$; CFI=.90; RMSEA=.07; SRMR=.06. *** $p < .001$; ** $p < .01$; * $p < .05$.

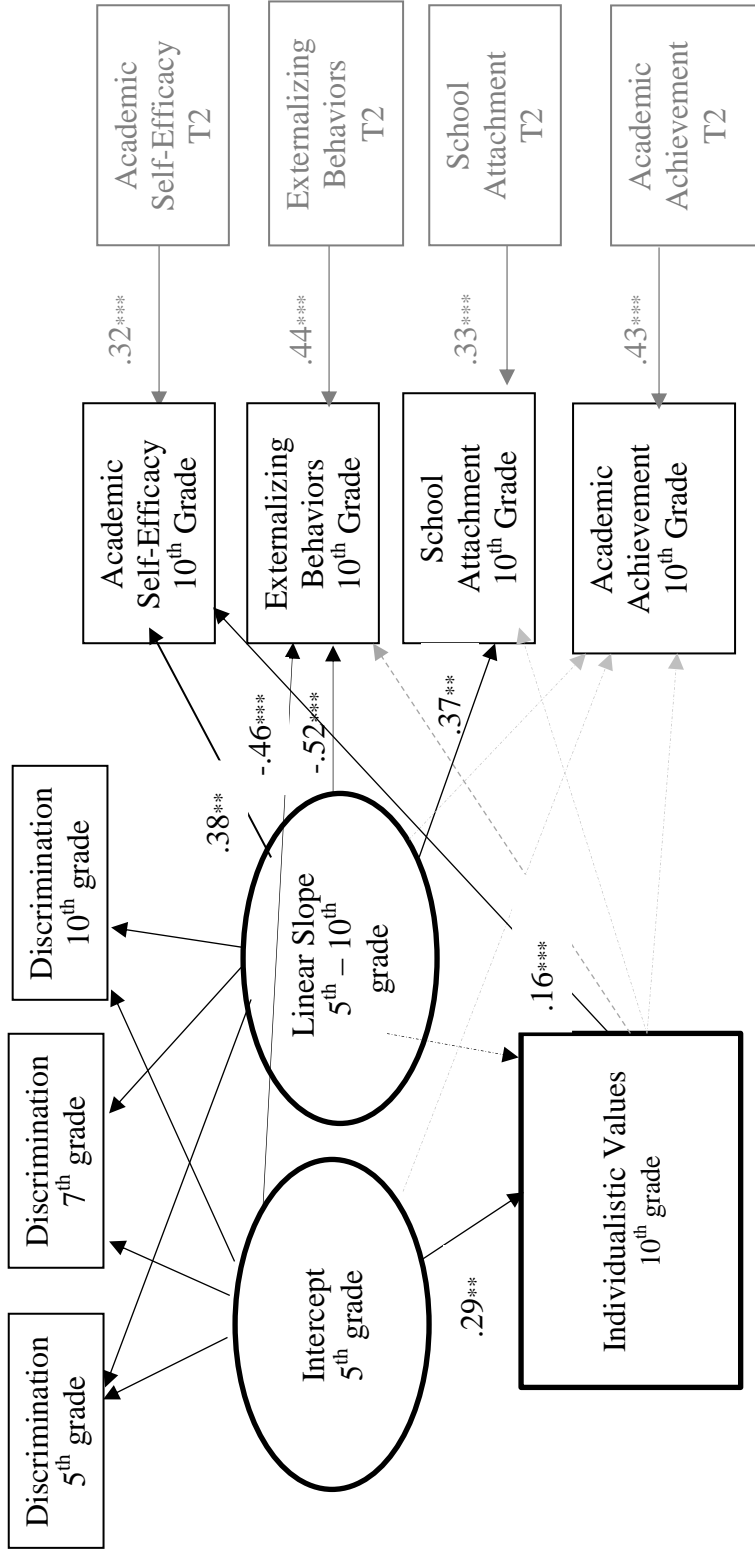


Figure 2. Standardized coefficients are presented for a longitudinal model of discrimination, individualistic values, and adolescent adjustment. Dashed lines are not significant. $\chi^2(25)=138.26$; CFI=.90; RMSEA=.07 ; SRMR=.06. *** $p < .001$; ** $p < .01$; * $p < .05$.