THE INFLUENCE OF SCHOOL CONTEXT ON ETHNIC IDENTITY AND DEPRESSION IN EARLY ADOLESCENCE

by

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A DISSERTATION

Presented to the Department of Counseling Psychology and Human Services
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

June 2012

DISSERTATION APPROVAL PAGE

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Degree awarded June 2012

DISSERTATION ABSTRACT

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Ethnic identity is an essential component of youths' sense of self and is influenced by social relationships and experiences. Despite the large amount of time adolescents spend in the school environment and with their peers, little is known about the influence of the overall school context on ethnic identity development. This study examined the direct and indirect effects of sixth grade school context (defined by negative peer relationships and school environment) on ethnic identity development and depression in ninth grade. Using cross-lagged analysis, the bidirectional impact of discrimination experiences on ethnic identity development was also explored. These relationships were also examined separately for European American youth, youth of color with one ethnicity, and multiethnic adolescents.

For all adolescents, less negative peer relationships were related to higher ethnic identity level. Ethnic identity was also positively associated with later adolescent depression. In addition, school environment was related to ethnic identity development for European American and adolescents of color; for youth of color with one ethnicity, ethnic identity also predicted later depression levels. School context was not found to be associated with ethnic identity development for multiethnic adolescents, although

negative relationships were related to higher depression levels for this group. Finally, the cross-lagged model of ethnic identity and discrimination suggested no bidirectional influence between these two variables.

This study supports existing studies on the importance of ethnic identity on adolescent development. It also provides much needed knowledge of how the school context contributes to adolescent ethnic identity and depression. Furthermore, these findings contribute to the growing body of literature on the developmental trajectories of multiethnic adolescents. Findings from this study have implications for intervening at the school level. Promoting cultural sensitivity among students and staff can decrease negative peer interactions (e.g., bullying) and other negative social experiences, thereby decreasing the risk of poor academic and psychological outcomes for adolescents at risk of experiencing adversity.

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Stormshak, E. A., Margolis, K., Huang, C., & Dishion, T. J. (*in press*). A family-centered, school-based intervention strategy for strengthening student behavioral and academic adjustment. In B. Kelly, & D. F. Perkins (Eds.).

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Huang, C. Y., & Stormshak, E. (2011). A longitudinal examination of early adolescence ethnic identity trajectories. *Cultural Diversity and Ethnic Minority Psychology, 17*, 261-270.

Ho, J., Liang, J., Martinez, J., Huang, C. Y., & Yeh, M. (2006). Racial and ethnic disparities in mental health care for youth. In F. Columbus (Ed.), *Racial and Ethnic Disparities in Health and Health Care*, (pp. 149-203). Hauppauge, NY: Nova Science Publishers.

ACKNOWLEDGMENTS

I would like to thank my graduate advisor, Elizabeth A. Stormshak, for her support in the development and completion of this project. I would also like to thank my committee members, Drs. Thomas Dishion, Benedict McWhirter, and Laura Lee McIntyre, for their assistance in throughout this process.

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CHAPTER I

INTRODUCTION

According to the United States Census (2010), an estimated 28% of the United States population consists of people who report their race and ethnicity to be other than White. This number increased by a total of 27.3 million people (9.7%) in the past decade (Humes, Jones, & Ramirez, 2011), and is projected to increase even more in the next 40 years. In fact, the Hispanic American population alone is projected to increase from 30 million to 200 million by 2050, at which time half of the U.S. population will be from a minority ethnic minority group (Hall, 1997). The number of people with multiple racial and ethnic backgrounds is also on the rise, increasing by one-third since 2000 (U.S. Bureau of the Census, 2010). This shift in the ethnic makeup of the American people suggests that the majority of youth in this country will develop in the context of ethnic minority minorities, prompting researchers to better understand this context and determine the best ways to enhance the development of American youth.

Ethnic identity is an essential component of a healthy identity and is associated with many positive psychological outcomes in adolescence, especially for youth of color (Phinney & Chavira, 1992; Romero & Roberts, 2003; Rumbaugh Whitesell, Mitchell, Spicer, & The Voices of Indian Teens Project Team, 2009; Yasui, Dorham, & Dishion, 2004; Yip & Fuligni, 2002). Ethnic identity is defined as a person's sense of identity to their own cultural group, and is based on theories from social psychology (Tajfel & Turner, 1986) and developmental psychology (Erikson, 1968). It has been studied by researchers as a contributor to a well-established self-concept for minority youth and is associated with positive outcomes, such as self-esteem and academic achievement

(Phinney & Chavira, 1992; Roberts et al., 1999; Rumbaugh Whitesell et al., 2009; Smith, Levine, Smith, Dumas, & Prinz, 2009). Additionally, adolescents with a high level of ethnic identity report lower levels of substance (Robbins, Szapocznik, Mayorga, Dillon, Burns, & Feaster, 2007; Rumbaugh Whitesell et al., 2009).

Ethnic identity has also been found to be associated with positive psychological adjustment (Yasui et al., 2004). More specifically, high levels of ethnic identity is related to lower levels of youth depression, internalizing, and externalizing symptomatology for ethnic minority youth (Yasui et al., 2004). In addition, adolescents with higher ethnic identity have been found to have fewer depressive symptoms and aggressive behaviors (McMahon & Watts, 2002). Furthermore, increases in adolescent racial identity has been found to be associated with a decrease in depressive symptoms (Mandara, Gaylor-Harden, Richards, & Ragsdale, 2009), further supporting the view that ethnic identity is a protective and resiliency factor among ethnic minority youth.

Ethnic Identity Development

Existing models highlight the significance of parental and familial relationships and early life experiences on ethnic identity formation. These present ethnic identity as a fluid construct that begins to develop in early childhood and continues to develop into adulthood (Phinney, 2006; Phinney & Ong, 2006). Ethnic identity can be seen not only from a developmental perspective, but also as a process that is susceptible to context, in that social and environmental factors contribute to a sense of connection to one's ethnic group (Phinney, 1992; Roberts et al., 1999). The influence of family socialization, as well as experiences outside of one's family, presents adolescents with social cues that help mold their interpretations of their race and ethnicity in the world (Garcia Coll,

Lamberty, Jenkins, McAdoo, Crnic, Wasik, et al., 1996). This conceptualization of ethnic identity is based on the social psychology model of social identity, in which a person's self-concept is defined by identification with a social group and the emotional significance of attachment to that group (Tajfel, 1981). Based on this foundation, one commonly accepted model of ethnic identity is proposed by Phinney (1989), who defines ethnic identity in three stages: (a) commitment and attachment—the extent of an individual's sense of belonging to his or her group, (b) exploration—engaging in activities that increase knowledge and experiences of one's ethnicity, and (c) achieved ethnic identity—having a clear sense of group membership and what one's ethnicity means to the individual.

It is well-established in the literature that the healthy formation of an achieved ethnic identity is dependent on one's early experiences with parents and caregivers. This large body of literature on racial socialization (the process through which caregivers shape their children's attitudes and understanding about their race/ethnicity) supports existing models of ethnic identity development by demonstrating that these early processes impact children's knowledge of their own ethnic backgrounds (Murray & Mandala, 2002). Indeed, parents transmit their ethnic identity to their children though parenting (Inman, Howard, Beaumont, & Walker, 2007). More specifically, parents who teach and prepare their children to live in a diverse world are more likely to have adolescents with higher ethnic identity and improved skills for coping with discrimination (Phinney & Chavira, 1992; Wills, Murry, Brody, Biggons, Gerrad, Walker, & Ainette, 2007; Umaña-Taylor, Vargas-Chanes, Garcia, & Gonzales-Backen, 2008). Studies have found that youth who received positive messages about ethnic pride

from their parents felt more connected to others from their own ethnic background (Umaña-Taylor et al., 2008). Also, parents who provide more racial socialization and support for the development of a healthy ethnic identity had better relationships with their children (Lamborn & Felbab, 2003). Similarly, parental support of ethnic identity development acted as a predictor of an achieved identity for African American and Latino adolescents (Hall & Brassard, 2008).

Compared to youth in the majority ethnic minority group, minority youth grow up in social environments that often highlight their ethnic background. As a result, their awareness of their own and other people's ethnicities activate the formation of an ethnic identity. However, as children get older, their awareness of the social inferences of ethnicity grows, and comprehension of concepts such as discrimination and prejudice become more concrete. By early adolescence, children's working knowledge about ethnicity and their own ethnic identity increase in relevance as they begin to spend more time with peers and people outside of their familial context (Phinney, 1989). In fact, research has found that levels of ethnic affirmation increased during the transition into middle school for adolescents, especially African American and Latino youth (French, Seidman, Allen, & Aber, 2006). Other studies examining the longitudinal growth of ethnic identity has found that the majority of youth remain stable (Huang & Stormshak, 2011) or increase in ethnic identity levels over early adolescence (Huang & Stormshak, 2011; Matsunaga, Hecht, Elek, & Ndiaye, 2010) and middle adolescence (Pahl & Way, 2006). Furthermore, studies have found a tendency for middle school youth to segregate themselves by their ethnicity and race compared to elementary school (Seidman, Abert, & French, 2003; Tatum, 1997). Thus, the emerging salience of ethnicity, along with the

biological, psychological, and social changes during early adolescence, underscores the importance of examining ethnic identity and its impact on adolescent well-being in this critical developmental period.

Discrimination Experiences and Ethnic Identity

Given the significant impact of ecology and context on ethnic identity development, it is vital that social experiences such as discrimination be examined. These experiences are considered to be stressors for youth, and have been linked with negative outcomes, especially during adolescence when biological, cognitive, and social changes are also occurring (Dubois, Braxton-Burk, Swenson, Trevendale, & Hardesty, 2002). In fact, racial discrimination has been proposed to influence developmental trajectories for minority youth (Garcı´a Coll et al., 1996). Studies examining discrimination have found that youth who report higher levels of discrimination had lower self-esteem and more depression (Fisher, Wallce, & Fenton, 2000; Dubois et al., 2002). In addition, low academic performance and high substance use are associated with higher levels of discriminatory experiences (Whitbeck, Hoyt, McMorris, Xiaojin, & Stubben, 2001; Wong, Eccles, & Sameroff, 2003). This is especially relevant for ethnic minority minority youth, since they are more likely to experience discrimination than youth from majority backgrounds. Indeed, studies examining the prevalence rates of perceived discrimination have found this to be true - one study found that almost half of their Puerto Rican youth reported at least one incidence of racial/ethnic discrimination directed at them, and about half of them worried about being discriminated against in the future (Szalacha et al., 2003). Another study found that approximately half of their ethnic minority youth (e.g., African American and Hispanic) reported being hassled in stores,

viewed as dangerous, and perceived as not smart based on their ethnicity (Fisher et al., 2000). A recent qualitative study found that all while all youth, regardless of ethnic background, were able to recognize ethnic bias in middle school, African American and Latino youth were more able to recognize it in the fourth grade compared to European American youth (Brown, Alabi, Huynh, & Masten, 2011).

Given the potency of peers and other social factors in adolescence, it is reasonable to expect these factors to play a role in ethnic identity development. Additionally, the powerful experiences of discrimination may likely influence this association. However, few studies have explored the impact of extrafamilial relationships on ethnic identity development, or considered how discrimination may factor into that relationship. To understand how these concepts may be related, relevant research is discussed below.

Peer Relationships, Discrimination, and Ethnic Identity

Peer relationships, which evolve from family relationships, play a powerful role in adolescent development and outcomes (Dishion, French, & Patterson, 1995; Dishion & Stormshak, 2007). For example, youth with peers who engage in substance use are more likely to use substances themselves, as it serves as a strong incentive to maintain these relationships (Dishion & Owen, 2002). Research has established that grouping together aggressive youth and youth who engage in antisocial behaviors result in iatrogenic effects (Dishion & Andrews, 1995). Conversely, increasing and promoting attachments with prosocial peers has been found to weaken the bonds adolescents' have with their antisocial peers (Fraser, 1996). Since the influence of peers becomes increasingly important in a child's life at this early adolescent phase, it is reasonable to conclude that

peer relationships, both positive and negative, influence one's ethnic identity development.

Existing studies have shown that adolescents report the lowest levels of ethnic identity when they are engaging with different-ethnicity peers (Kiang & Fuligni, 2009). In addition, recent research has indicated that ethnic identity occurs within context, and that ethnic minorities express their ethnic identity differentially depending on whether they are engaging with same-ethnicity or different-ethnicity peers (Kiang, Harter, & Whitesell, 2007). For instance, studies have discovered that Chinese adolescents are more likely to feel more Chinese when participating in cultural activities and engaging with peers who are ethnically diverse (Yip & Fuligni, 2002). These findings suggest that the awareness of ethnicity by youth impacts their behaviors.

However, this increased awareness of ethnicity also indicates heightened sensitivity to negative ethnic and race-related messages and with others, such as those defined by discrimination experiences and unfair treatment by others (Rivas-Drake, Hughes, & Way, 2009). Indeed, experiencing discrimination by others is a predictor of ethnic identity increase in adolescence (Pahl & Way, 2006). Furthermore, experiences of peer discrimination resulted in an increase in ethnic identity exploration. Research also suggests that implicit negative group stereotypes exist in schools – ethnic minority students were rated as having lower social statuses and less favorable characteristics by their peers (Graham, Taylor, & Hudley, 1998; Verkuyten & Kinket, 2000). Whether intentional (e.g., teasing, hitting) or covert (e.g., ignoring, social exclusion), peer discrimination in the context of school has a great impact on youth development and outcomes, as it has the potential to come from multiple sources. Peer rejection and

harassment based on ethnic backgrounds is associated with negative ethnic identity beliefs (Romero & Roberts, 2003). In another study, African American youth reported feeling others' hostility toward them at school (Green et al., 2006).

To further highlight the significance of peers during adolescence, one study found that only discrimination from peers, and not adults, was associated with adolescents' own perceptions about their ethnic group (Rivas-Drake, Hughes, & Way, 2009). This is particularly alarming, as Rivas-Drake and colleagues (2009) have found that the more negative ethnic messages youth received from multiple sources (e.g., peers, teachers, neighbors), the more it impacted youth's perceptions of their own ethnicity. Thus, ethnicity-based discrimination experienced in the context of the larger school climate has a considerable value on youth development and implications for outcomes, and warrants further examination.

School Environment, Discrimination, and Ethnic Identity

Experiences of discrimination in the school environment are well-documented in the literature. Research in schools have found that many students report discrimination experiences by adults in the school context (Fisher et al., 2000); specifically, as many as 46% of African American and 50% of Hispanic/Latino students reported receiving lower grades based on their race and ethnicity. Discrimination from school administrators has also been reported by youth of color (Fisher et al., 2000; Rivas-Drake, Hughes, & Way, 2009). Overwhelming evidence points to differential treatment of students by teachers and school administration as the cause - disparities in the number of office referral rates and types of referrals for minority youth have been found by numerous studies, with findings indicating overrepresentation of minority students in these areas (Kaufman,

Jaser, Vaughan, Reynolds, Di Donato, Bernard, & Hernandez-Brereton, 2010; Skiba, Peterson, & Williams, 1997; Tenebaum & Ruck, 2007). More specifically, African American and Latino youth are more likely to receive office referrals when compared to European-American youth (Skiba et al., 1997; Townsend, 2000). This is true even in schools with a predominately African-American population and with a majority of same-ethnicity teachers and staff (Townsend, 2000). This is unsettling, as it suggests that aspects of internalized discrimination may be at play. In addition, African American and Latino youth are more likely to receive negative referrals than positive referrals compared to their European-American peers (Tenebaum & Ruck, 2007). Similarly, Latino and African American youth are more likely to be referred to the office compared to Asian American youth (Kaufman et al., 2010).

Disparities in referral types were also found, with Latino and African American youth receiving significantly more referrals for delinquency, aggression, disrespect, and attendance than other youth (Kaufman et al., 2010). Once referred, minority youth are at higher risk of receiving harsher consequences such as suspension and expulsion (Skiba et al., 1997). Furthermore, self-reports of racial discrimination by students were supported by school observational data that showed classroom management and disciplinary strategies of teachers and school administrators were more harsh for ethnically diverse students (Gregory, 1995).

The disparities found in office referrals are only partly indicative of the relationship between a teacher and student. The literature on school connectedness presents the significant role that teachers play in youth academic and psychological outcomes (Roeser Eccles, & Sameroff ,2000). Specifically, student perceptions of

teacher support as well as opportunities to learn in the school and classroom are associated with self-esteem and depressive symptoms (Colarossi & Eccles, 2003; Way, Reddy, & Rhodes, 2007). Teachers' expectations of a student's academic performance also contribute to youth's perceptions of a supportive teacher-student relationship. As evidenced by a classic social psychology experiment by Rosenthal and Jacobson (1966), teachers unintentionally behaved differently based on the academic expectations they had of the students in their classroom. Specifically, students who the teachers expected to do well received advantages that promoted their learning, such as more opportunities to respond it the classroom, more feedback from their teacher, and more positive reinforcement and praise. These expectations have the potential to further perpetuate discrimination in schools, as disparities have also been found in expectations of student performance based on ethnic group. Teachers have higher behavioral expectations of European-American youth than minority youth, with the exception of Asian Americans (Tenebaum & Ruck, 2007). These unfair expectations for school performance based on ethnic group may be detrimental to development. In fact, Asian American youth experience higher pressure to succumb to the "model minority" stereotype (Greene et al., 2006), and some studies have found higher reports of perceived discrimination by adults and peers from Asian American adolescents (Green et al., 2006; Rosenbloom & Way, 2004). Research has also found that European American students report higher levels of perceived support than Chinese American and African American students (Jia, Way, Ling, Yoshikawa, Chen, Hughes, Ke, & Lu, 2009; Wentzel, 1994). These inequalities in teacher expectations may lead to an unfair learning environment, further highlighting experiences of discrimination for youth of color.

In summary, discrimination experiences occur in the context of school, frequently with peers, teachers, and school staff. As a result, it is essential that peer relationships and the environmental aspects of the school context (e.g., school climate) be considered in the context of ethnic identity development.

Multiethnic Youth

The number of interracial dating and marriages are on the rise in the United States, and the number of multiethnic children is on a steady climb (Cooney & Radina, 2000; Spencer, Icard, Harachi, Catalano, & Oxford, 2000). In fact, the 2010 U.S. Census report showed that the population of people with two or more races increased by one-third from 2000 to 2010, culminating to 3 million people in the U.S. (Humes, Jones, & Ramirez, 2011). Research with biracial adults suggests that higher ethnic identity is associated with better outcomes (Luck, Taylor, Nanney, & Austin, 2010). More specifically, biracial adults with more integrated identities had higher self-esteem and lower depression compared to those who strictly identified with one of their ethnicities or did not believe in an ethnic identity. A recent study on multiracial adolescents found that racial identity is fluid, with the majority of youth changing their racial identification across time (Terry & Winston, 2010). While research on multiethnic youth is rapidly growing in recent years, little is still known about the developmental trajectories of these youth (Choi, Harachi, Gillmore, & Catalano, 2006; Udry, Li, & Hendrickson-Smith, 2003).

Existing studies on this population suggest that developmental trajectories and outcomes may differ slightly compare to youth with one racial/ethnic group. Multiethnic adolescents report higher rates of substance use and aggressive behaviors, and are at a

higher risk for general health problems, academic concerns, and engaging in negative activities (Choi et al., 2006; Jackson & LeCroy, 2009; Udry et al., 2003). In addition, research has found that multiracial adolescents have higher rates of substance use in adulthood and are a higher risk for high lifetime substance use compared to their mono-racial/ethnic peers (Chavez & Sanchez, 2010; Jackson & LeCroy, 2009). Additionally, multiethnic youth were found to be more aware of ethnicity-related issues at an earlier age than youth of color with one ethnicity, likely due to the awareness of these issues by the people with whom they interact and the potential feelings of marginality as a result of these (Choi et al., 2006). A recent study found that the majority of multiethnic adolescents experienced a moderate decline in their ethnic identity level over the early adolescent years, while the majority of minority adolescents experienced an increase (Huang & Stormshak, 2011). Furthermore, a strong sense of ethnic identity was found to actually increase the likelihood of engaging in aggressive behaviors for multiethnic adolescents instead of serving as a protective factor (Choi et al., 2006).

Existing research also suggest that youth from multiple ethnic backgrounds may experience more difficulties in their identity development due to various familial factors (Crawford & Alaggia, 2008). More specifically, mixed-ethnic youth may not receive the support they need to develop an achieved identity because their parents, who typically identify with one single racial/ethnic group may not have the necessary awareness and/or willingness to talk about issues related to their children's ethnic identities (Crawford & Alaggia, 2008). Terry & Winston (2010) found that the majority of multiracial adolescents who aligned strongly with just one of their racial backgrounds reported not talking about race at home. These findings, which are generally contrary to those found

for adolescents of color, suggest the experiences for these youth impact their development in different ways than youth with one ethnicity, and are deserving of further inquiry.

The Present Study

As demonstrated by existing literature, social relationships and experiences shape and contribute to youth ethnic identity and mental health outcomes. In addition, a breadth of research shows that discrimination is frequently experienced by youth of color in schools. Despite this knowledge, a surprisingly small number of studies have investigated the impact of the larger school context on ethnic identity development and its impact on adolescent mental health. Thus, the present study examined the role of the school context (e.g., negative peer relationships, school environment) in the development of ethnic identity during early adolescence and its relationship to adolescent depression. Specifically, the study aimed to:

1. Examine the influence of the school context on ethnic identity development.
2. Investigate the bidirectional relationship between ethnic identity and discrimination over time.
3. Examine the impact of the school context and ethnic identity on adolescent depression.
4. Examine differences between European American, youth of color with one ethnicity, and multiethnic adolescents.

The current study aims were examined using the models captured in Figures 1 and 2 (see the Appendix for all figures). It was hypothesized that 1) more positive peer relationships and a positive school environment in sixth grade is associated with higher

levels of ethnic identity and less depression in ninth grade. In addition, the study hypothesized that 2) positive peer relationships, a positive school environment and higher ethnic identity contribute to lower levels of depression in ninth grade. Finally, the current study hypothesized the 3) the model will fit well for adolescents of color with one ethnicity, but not for European American and multiethnic adolescents.

CHAPTER II

METHODS

The present study utilized existing data from a large, multi-wave, longitudinal intervention study (Project Alliance 2 [PAL 2]; DA 018374). The PAL 2 study was designed to prevent the development and growth of adolescent problem behaviors by supporting families and adolescents in the transition from middle school to high school. The study included 593 adolescents and their families across three public middle schools in an urban area of the Pacific Northwest. During the sixth grade year, parents of sixth grade students were invited to participate in the study, and 80% of all parents agreed during this recruitment. Consent forms were mailed to parents or sent home with students. Students were followed through middle school and into the first year of high school (4 years).

At recruitment, the sample comprised 51% male participants and 49% female participants, and the racial/ethnic composition was as follows: European American, 36%; Latino/Hispanic, 18%; African American, 15%; Asian/Pacific Islander, 9%; American Indian, 2%; and biracial/mixed ethnicity, 19%. More than 80% of youth were retained across the 4 years of the study.

Participants

The subsample included 593 adolescents, consisting of 51.5% male (n = 305) and 48.5% female (n = 287). The mean age at sixth grade 11.90 years, and the ethnic composition were as follows: 15% African-American adolescents (n = 90), 18.1% Latino adolescents (n = 107), 14 % Asian/Pacific Islander American (n = 53), 2.4% American Indian/Native American (n = 15), 19.3% multiethnic adolescents (n = 114), and 36.1%

European American adolescents (n = 213). For the present study, participants who self-identified as a person of color with one ethnicity (e.g., only African American, only Latino) were combined into one group to allow for comparison between European American and multiethnic adolescents. This resulted in 264 adolescents, comprising 44% of the sample.

Measures

All study variables were measures using the Child and Family Center Youth Survey (Dishion, Stormshak, & Kavanagh, 2000). The Youth Survey includes a range of items assessing for adolescent social, emotional and behavioral well-being. All survey measures can be found in the Appendix (see Figures 4-11).

Demographic information. Adolescents provided demographic information about their age, gender, ethnicity, and parents provided information on socioeconomic status.

Ethnic identity. The Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) was used to measure adolescents' commitment to and achievement of ethnic identity in ninth grade. The MEIM has been shown to be reliable for adolescents (α = .81; Roberts et al., 1999). Items are rated on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree) and included statements such as "I know what being in my ethnic group means to me" and "I feel good about my cultural or ethnic background." The ethnic identity mean score is obtained by summing across all the items in the measure.

This study used an eight-item short version of the MEIM to obtain adolescent self-report of levels of ethnic identity. Recent studies have found that the MEIM may

have an underlying 2-factor structure and argued for using a condensed version of the MEIM in place of the original 14-item version (Phinney & Ong, 2006, 2007). The present study utilized ethnic identity in sixth and ninth grades (waves 1 and 4). In this sample, the MEIM has a reliability of .90 at wave 1, .90 at wave 2, .93 at wave 4, and .92 at wave 4.

Discrimination experiences. This measure was used to determine the amount of discrimination experienced by youth. Adolescents rate how bothered they were by unfair treatment they experienced by teachers, peers, police, and other people, for racist statements made toward them, and for feeling invisible because of their race. Data was collected at sixth-ninth grades, and were includes in the models for analyses. This measure is reliable in this sample (α = .84, .81, .84, .86 at waves 1-4, respectively).

Perception of peers. This 7-tem youth self-report measure assesses adolescents' perceptions of the peers at their school. Each item ranged on a scale from one to five, and had a descriptive word used to describe the peers. Items were *Unfair-Fair*, *Mean-Nice*, *Cold-Warm*, *Unfriendly-Friendly, Bad-Good*, *Cruel-Kind,* and *Dishonest-Honest*, and higher scores indicate more favorable perceptions of other students. Grade six (wave 1) of this measure was included as part of the latent variable for Negative Peer Relationships. This measure is reliable (α = .91).

Problems with peers. This 4-item measure is used to assess for the frequency of problems experienced by adolescents with other students in the past month. On a scale ranging from "Never of Almost Never" to "Always or Almost Always," youth rate their level of agreement to questions such as 'I had a problem with other students", "Students called me names, swore at me, or said mean things to me", and "A student hit, pushed, or

fought me." Waves 1 was included in the analysis and partially comprised the latent variable of Negative Peer Relationships. Reliability of the measure is .77 at Wave 1.

Teased by peers. This 5-item measure is used to assess for the frequency of teasing experienced by youth at their school. Adolescents rate the their level of agreement on a scale ranging from "Never of Almost Never" to "Always or Almost Always" on items such as "I was teased by kids at school for no reason" and "I was ignored by kids I wanted to hang out with." The measure in sixth grade (wave 1) was included the latent variable measuring Negative Peer Relationships and had a Cronbach alpha of .78.

Perception of teachers. This variable partly comprised the latent construct of School Environment. This 7-item youth self-report measure assesses adolescents' perceptions of their teachers at school. On a scale of one to five, youth rated their perceptions of their teachers on the following descriptive words: Unfair-Fair, Mean-Nice, Cold-Warm, Unfriendly-Friendly, Bad-Good, Cruel-Kind, and Dishonest-Honest, with higher scores indicate more favorable perceptions of other students. This measure is reliable in this sample ($\alpha = .91$).

School climate. To assess for school climate, this 9-item measure was used to partially make up the latent construct of School Environment. Questions on this measure evaluate for adolescents' positive experiences at school, including availability of teachers, amount of praise received, and opportunities to be involved in extracurricular activities. Youth rate their experiences on a 5-point Likert scale ranging from "Never to Almost Never" to "Always or Almost Always." The reliability of the measure at wave 1 was .73.

School safety perception. Youth report of how they safe they perceive their school in sixth grade (wave 1) was used as part of the School Environment latent variable. Adolescents rate their level of agreement from "Strongly Agree" to "Strong Disagree" to 7 items. Examples of these items include "I feel safe in the school hallways", "I feel safe in the school restroom", "I feel safe in the classroom", and "I feel safe outside the school." This measure was reliable ($\alpha = .88$).

Adolescent depression. Youth completed a 14-item scale as a part of the larger survey used in previous research to assess diagnostic symptoms of depression (Metzler et al., 2001). Adolescents reported on items that describe their feelings and ideas in the past month, such as feeling sad or depressed, cranky or grumpy, or having sleep problems. Items were measured on a 5-point Likert scale, ranging from (1) Never or almost never, to (3) About half the time, to (5) Always or almost always. Wave 1 of this measure was used as a control variable while Wave 4 depression (ninth grade) was the outcome. Both waves were found to be reliable with the current sample (αs = .95).

Data Analysis

To test the study hypotheses, the current study utilized a cross-lagged model to determine the longitudinal relationship between ethnic identity and discrimination from sixth to ninth grades (see Figure 1). The use of cross-lagged models are recommended when the measurement of constructs are available at multiple time points, which allows for the ability to control for the autocorrelation within a construct when predicting subsequent scores of the same construct (e.g., ethnic identity from year to year); this allows for improved accuracy in predicting the directionality among constructs (Duncan, 1975).

In addition, a structural equation mediation model was tested to determine the mediational role of youth ethnic identity in the relationship among sixth grade negative peer relationships, the school environment at grade six, and ninth grade depression level while controlling for depression in sixth grade (see Figure 2) – direct and indirect effects were examined as part of this model to determine study hypotheses. Lastly, differences in model fit and model parameters were examined for European American, youth of color with one ethnicity, and multiethnic adolescents.

All analyses were analyzed using Mplus Version 6.0 software. Mplus 6.0 uses the maximum likelihood estimation (ML) method to estimate the model and obtain the variance-covariances of the parameters (Muthén & Muthén, 2010). The ML estimation method automatically treated missing data using the listwise deletion (Muthén & Muthén, 2010). The current study employed the following indices to assess model fit: Comparative Fit Index (CFI; Hu & Bentler, 1999), with values greater than .95 indicating good model fit; Root Mean Square Error of Approximation (RMSEA; Hu & Bentler, 1999), with values less than .08 indicating reasonable model fit; and Standardized Root Mean Square Residual (SRMR; Hu & Bentler, 1999), with values less than .06 indicating good fit. A model was determined to fit well if the criterion were met. In evaluating the statistical significance of individual model parameters (e.g., factor loadings, correlations), a statistical significance level of .05 was employed. Finally, unconditional models were run for the full sample (including all participants), followed by each ethnic group (i.e., European American adolescent, adolescents of color with one ethnicity, multiethnic youth) separately.

CHAPTER III

RESULTS

Descriptive statistics for all variables were examined, including mean, standard deviation, and frequency distributions, to examine the tenability of assumptions required for the proposed statistical analyses (see Table 1; see the Appendix for all tables). Correlations between independent variables were evaluated with a bivariate correlation matrix and found to be small to moderate, providing evidence that multicollinearity was not a problem (see Table 2). Extreme skew and kurtosis values were examined. The majority of study variables were found to be within the recommended limits of -+3.0 to 3.0 for skew values, and -10.0 to +10.0 for kurtosis values (Kline, 2005). However, youth experiences of discrimination at Waves 1, 3, and 4 (*skew*s = 3.61, 3.03, and 3.30; *kurtosis* = 17.40, 12.04, and 13.90) failed to meet this criteria, suggesting the presence of outliers. Despite this, the use of the ML method is robust and able to accurately estimate the model despite a non-normal distribution (Kline, 2005).

Directionality of Ethnic Identity and Discrimination

To examine the influence of discrimination experiences on ethnic identity development, and the influence of ethnic identity level on discrimination, cross-lagged path analysis was conducted (see Figure 1 for model depiction). This model fit well for the full sample, χ^2 (7) = 9.88, $p > .05$, *CFI* = .99, *RMSEA* = .03, *SRMR* = .06. In addition, the paths from ethnic identity at Wave 1 to Wave 2 (β = .48), Wave 2 to Wave 3 (β = .53), and Wave 3 to Wave 4 (β = .30) were all statistically significant, *p*s < .001. Similarly, the paths from discrimination at Waves 1 to 2 (β = .43), 2 to 3 (β = .46), and 3 to 4 (β = .57) were also statistically significant, *p*s < .001. However, the paths indicating

the influence of ethnic identity level on discrimination experiences, and vice versa, were not statistically significant (*p*s > 05). Table 3 displays the parameters of this model.

Group differences were examined for this model. For European American adolescents, this model fit well, χ^2 (14) = 29.93, $p < .05$, *CFI* = .93, *RMSEA* = .08, *SRMR* = .06. Surprisingly, the model only fit marginally well for minority adolescents with one ethnicity, χ^2 (14) = 45.45, $p < .001$, *CFI* = .90, *RMSEA* = .10, *SRMR* = .07, and did not fit for multiethnic adolescents, χ^2 (14) = 41.12, $p < .001$, *CFI* = .85, *RMSEA* = .14, *SRMR* = .07. An examination of the model parameters for each ethnic group revealed similar findings as the full sample model.

These results suggest a lack of directional influence between ethnic identity and discrimination from sixth to ninth grade for early adolescents, and are consistent with the non-significant correlations between these variables. Thus, discrimination was excluded from further analyses.

Peer Relationships and School Environment

Confirmatory factor analyses were conducted for the latent predictor variables prior to testing the full model (see Figure 3). The 2-factor model defining the latent variable of Peer Relationships (indicated by youth report of their perception of their peers, the amount of teasing by peers, and problems with peers), and the latent variable of School Environment (indicated by youth perception of their teachers, the overall school climate, and youth perceptions of school safety) did not fit the full sample well, χ^2 (14) = 105.71, $p < .001$, *CFI* = .88, *RMSEA* = .11, *SRMR* = .06.

However, differences on model parameters were found based on ethnicity. For European American adolescents, this 2-factor model fit improved slightly compared to

the full sample, χ^2 (8) = 39.89, $p < .001$, *CFI* = .92, *RMSEA* = .14, *SRMR* = .06. In addition, the model fit very well for adolescents of color, χ^2 (8) = 13.57, $p > .05$, *CFI* = .97, *RMSEA* = .05, *SRMR* = .04. Finally, this model did not fit well for multiethnic adolescents, χ^2 (8) = 30.79, $p < .01$, *CFI* = .87, *RMSEA* = .16, *SRMR* = .08. Table 4 presents the estimates and variances for these models.

Full Model

The mediating role of adolescent ethnic identity level in the relationship between school context (i.e., peer relationships and school environment) and adolescent depression was tested (see Figure 3 for model depiction). The overall model fit showed relatively good fit, χ^2 (30) = 114.37, $p < .001$, *CFI* = .92, *RMSEA* = .07, *SRMR* = .07. An examination of the model parameters found significant direct effects (see Table 5). Direct effects in the model revealed a negative and statistically significant relationship between peer relationships and ethnic identity, β = -.17, p = .05; adolescents with more negative peer relationships in sixth grade report lower levels of ethnic identity. Additionally, ethnic identity was negatively and significantly related to depression in 9th grade, β = -.12, $p < .05$, suggesting that adolescents with higher levels of ethnic identity had lower depression. The remaining direct effects were not statistically significant, and no indirect effects were found.

European American adolescents. This model was tested for European American youth. The model fit similarly for this subsample compared to the full model, χ^2 (30) = 68.60, $p < .001$, *CFI* = .92, *RMSEA* = .08, *SRMR* = .06. For European American youth, a significant direct effect was found for the relationship between school environment and ethnic identity (β = .49, $p < .05$); a positive school environment is

associated with a positive ethnic identity. No direct effects were found from the predictors and ethnic identity to the outcome of depression for European Americans (see Table 6). Similarly, no significant indirect effects were found for this group.

Adolescents of color with one ethnicity. The model fit similarly for ethnic minority adolescents with one ethnicity, χ^2 (30) = 59.63, $p < .000$, *CFI* = .92, *RMSEA* = .06, *SRMR* = .06. Parameter estimates significant direct effects. School environment was significantly related to ethnic identity ($\beta = .40$, $p < .01$. School environment was also found to be significantly related to later depression, $\beta = -.28$, $p < .05$. Additionally, ethnic identity level was found to relate to later depression for these adolescents ($\beta = -.21$, $p < .05$). Peer relationships are not significantly associated with ethnic identity or depression (*p*s > .05) and no indirect effects were found.

Multiethnic adolescents. The mediation model for multiethnic adolescents did not fit well, χ^2 (30) = 67.36, $p < .001$, *CFI* = .83, *RMSEA* = .11, *SRMR* = .08. No direct effects were found for the relationships from the predictors to ethnic identity; however, peer relationships was statistically significant in predicting later depression, $\beta = .36$, $p = .05$). No significant indirect effects were found for the multiethnic adolescents.

To summarize the findings of this study, significant direct effects were found and differed for each group. In the model with all adolescents, peer relationships was found to predict ethnic identity levels, showing that positive peer interactions can facilitate ethnic identity development. However, this finding did not hold when examining the ethnic groups separately. Peer relationships are associated with later depression only for the multiethnic adolescents.

School environment was positively associated with ethnic identity levels for European American and minority adolescents with one ethnicity but not multiethnic adolescents or the model with the full sample. These findings suggest that school contextual factors, such as student-teacher relationships and opportunities in schools, may have more impact on ethnic identity development for European American and single-ethnicity youth of color. Further highlighting the school context, school environment was a significant predictor in later depression for adolescents with one ethnicity.

Ethnic identity was found to predict later depression for single-ethnicity minority adolescents; this was also true when running the model with the full sample but not for European American and multiethnic adolescents separately. Finally, the results indicated no significant indirect effects from school context to depression via ethnic identity.

CHAPTER IV

DISCUSSION

This study examined the influence of the overall school context on adolescent ethnic identity development, and the influence of these factors on later adolescent depression. In addition, the bidirectional influence of discrimination on ethnic identity over time was explored. The influence of ethnic identity in the relationship between school context and adolescent depression was also investigated. Finally, differences of these relationships between European American, ethnic minority adolescents with one ethnicity, and multiethnic adolescents were examined.

Ethnic Identity and Discrimination

Results from the cross-lagged model assessing the directional influence of ethnic identity and discrimination over time indicated that while ethnic identity level in sixth grade is related to ethnic identity levels in later years, it is not predictive of later experiences of discrimination at school. Similarly, higher levels of discrimination in sixth grade are related to higher levels of discrimination at later years in early adolescence, but discrimination does not influence ethnic identity level. This finding was surprising and did not support the study hypothesis, as existing literature often presents ethnic identity and discrimination as interrelated. A possible explanation for this may be that discrimination may not be influential enough during the early adolescent years to impact ethnic identity levels. In addition, it is likely that youth are still separating discrimination experiences during this age period as they are developing their ethnic identities. In fact, a recent study found that the majority of youth in late childhood and early adolescence are more aware of gender bias than ethnic bias (Brown et al., 2011).

Another possibility for the lack of bidirectionality for discrimination and ethnic identity can be the fact that many adolescents are not experiencing a drastic level of ethnic identity growth during early adolescence (Huang & Stormshak, 2011). A recent study found that an estimated 30% of early adolescents from a diverse sample remained stable in their ethnic identity levels from sixth to ninth grades, and while 40% of the adolescents increased in ethnic identity levels, these youth had high initial levels of ethnic identity (Huang & Stormshak, 2011). It is likely that adolescents are not experiencing discrimination at a frequency intense enough to trigger ethnic identity growth during early adolescence. Based on this hypothesis, it can be expected that the bidirectional influence of discrimination on ethnic identity, and ethnic identity on discrimination, would become more relevant once adolescents enter into late adolescence and adulthood.

School Context and Ethnic Identity

The peer relationships aspect of the overall school context contributed to adolescent ethnic identity. More specifically, adolescents with less negative peer relationships had higher levels of ethnic identity. Higher ethnic identity was also associated with lower levels of depression in high school. This makes sense, as youth who experience their school environment as positive are more likely to feel supported by their teachers, feel more connected to their schools, and therefore more likely to experience positive outcomes (Jia et al., 2009; Way, Reddy, & Rhodes, 2007). In fact, existing research supports this finding – adolescents who perceive higher levels of support from their teachers, a positive school climate, and more school connectedness have better academic and psychosocial outcomes such as depression (Way, Reddy, & Rhodes, 2007; Witherspoon, Schotland, Way, & Hughes, 2009). Additionally,

adolescents who perceive higher levels of teacher support at school have higher self-esteem (Jia et al., 2009), suggesting the school environment plays a role in helping adolescents development a healthy sense of self.

No indirect effects were found, indicating that ethnic identity did not play a role in the relationship between school context and later adolescent depression. This is surprising and is contrary to existing studies showing ethnic identity to be a protective factor against negative outcomes (Whitesell et al., 2009); it further highlights the need for further investigations of the school context and the need for improved understanding of how other school contextual factors (e.g., discrimination) may influence psychological outcomes for early adolescents.

Ethnic Group Differences

The current study hypothesized that the relationship among school context, ethnic identity, and adolescent depression would differ for European American, minority adolescents with one ethnicity, and multiethnic adolescents. Results partially supported this hypothesis – this model did not fit well for multiethnic adolescents, further demonstrating that developmental trajectories for adolescents with multiple ethnicities may differ from European American adolescents and from youth of color with one ethnicity (Choi et al., 2006; Udry et al., 2003). Contrary to study hypotheses, however, was the model fit for European Americans, which indicated good fit for these adolescents. To better understand the differences between these groups, the discussion below will focus on differences found among the study variables.

European American adolescents. Only one significant direct effect was found for European American adolescents in this model. School environment was found to

relate to ethnic identity for European American youth; specifically, a positive school environment was related to higher levels of ethnic identity. Interestingly, European Americans are often not present in studies examining adolescent ethnic identity based on the argument that ethnic identity is less salient and prominent for these youth as compared to minority youth (Phinney, 2006). Thus, this study finding suggests European American youth may be more aware of their ethnic identity during early adolescence than previously expected. Actually, a study examining youth awareness of bias found that by middle school, European American youth were equally aware of ethnic bias as African American and Latino youth (Brown et al., 2011). Moreover, recent studies have suggested that in diverse communities, race and ethnicity may be just as salient for majority youth as it is for minority youth (Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009); this is especially true when a large portion of the youth with European descent identify as coming from a cultural group that has experiences with discrimination (e.g., Jewish).

Adolescents of color with one ethnicity. For adolescents of color, early school environment was found to significantly predict ethnic identity as well as later depression level. More specifically, a positive school environment in sixth grade was associated with higher ethnic identity levels, and associated with lower depression in ninth grade. Ethnic identity level was also found to predict later depression. These findings support existing research that ethnic identity is a critical piece of a healthy identity and is associated with psychological well-being for ethnic minority adolescents (Fisher et al., 2000; Yasui et al., 2004). As a healthy sense of ethnic identity has been found to be associated with coping over time for adolescents (Umaña-Taylor, et al., 2008), this

finding presents a possibility that ethnic identity can potentially act as a protective factor from a negative school context, emphasizing the need to facilitate ethnic identity growth for adolescents of color.

Multiethnic adolescents. While the full model did not fit well for multiethnic youth, negative peer relationships are found to be a significant predictor of later adolescent depression. Specifically, multiethnic youth who reported more negative peer relationships experienced more depression in high school. Given that school environment was not significantly associated with any variables, it can be deduced that peers play a particularly influential role in the school experiences of multiethnic adolescents, especially since this finding was only significant for this group. For example, peers may provide additional support for these youth during early adolescence, a period of increasing identity and ethnic identity exploration. This can be especially true based on the theory from previous researchers that youth with multiple ethnicities may not receive sufficient support from their parents and caregivers on identity their development (Crawford & Alaggia, 2008), requiring adolescents to seek this support in their social context. In addition, research on the friendships of multiracial adolescents have found that the majority of multiracial adolescents who were more aligned with just one of their ethnicities (e.g., just Black or just White instead of Black and White) had single ethnicity peers (e.g., only Black or White friends) while adolescents who had more integrated identities had a mix of single and mixed ethnicity friends (Terry & Winston, 2010). Since multiethnic adolescent identity development is complex, it is plausible that multiethnic adolescent seek peer relationships that assist in their exploration and expression of their ethnic identity.

Conclusions and Limitations

In summary, school context, defined by peer interactions at school, school climate, teacher support, and school safety, plays a significant role in youth development during early adolescence. School environment was particularly significant for adolescent ethnic identity for the majority of adolescents (i.e., European American, youth of color with one ethnicity), while peer relationships was especially relevant for multiethnic adolescents psychological well-being. This study contributes to the large existing body of literature on ethnic identity by confirming the significance of a healthy ethnic identity on adolescent development and mental health outcomes. In addition, it provides much needed knowledge of how social ecologies other than family characteristics contribute to ethnic identity development.

Limitations exist in this study that warrant mentioning. While the sample of the study was diverse, the adolescents in this study reside in the Pacific Northwest, a region that may not reflect the same diversity of larger metropolitan areas in the U.S., such as Los Angeles or New York City. In examining ethnic group differences within a school context, the ethnic diversity of this region should be considered in the interpretation of results as they may differ with a sample from another region in the country. Future studies should consider replication and exploration of similar research questions in more ethnically diverse cities. In addition, a key limitation of the current study was the use of only youth report on the study variables. Subsequent studies can build upon these findings by including additional measures of school context, such as teacher report of teacher-student relationships. Direct observation of school variables (e.g., peer and teacher interactions, discrimination acts, school safety) would provide a wealth of

information to the future studies interested in capturing the optimal portrayal of peer relationships and the overall school environment.

In conclusion, implications of this study include the enhancement of our understanding of how school context influences adolescent ethnic identity and depression. More specifically, understanding how, and to what extent, ethnic identity is influenced by school factors allows for prevention scientists to develop and incorporate components into preexisting school wide interventions (for example, Positive Behavior Supports; Sugai & Horner, 2002) that can aid in the formation of a healthy identity by ways such as promoting cultural sensitivity among all students and staff, decreasing bullying and other negative social peer interactions, and improving the overall school environment. Promotion of these positive attributes can thereby decrease the risk of poor academic and psychological outcomes for adolescents at risk of experiencing adversity.

APPENDIX

TABLES AND FIGURES

Table 1

Means, Standard Deviations, and Normality of Study Variables by Ethnicity

	Mean	SD	Skew	Kurtosis	European American Mean	Youth of Color Mean	Multiethnic Mean
1. Perception of Peers Wave 1	3.19	.95	-.24	-.293	.123	.283	.12
2. Teased by Peers Wave 1	1.76	.771	.291	.571	.831	.691	.84
3. Problems with Peers Wave 1	2.14	1.05	.91	.10	2.12	2.11	2.29
4. Perception of Teachers Wave 1	4.04	.89	-.17	1.20	4.15	3.87	3.99
5. School Climate Wave 1	3.62	.81	-.35	-.41	3.87	3.45	3.59

Table 1 (Continued)

Means, Standard Deviations, and Normality of Study Variables by Ethnicity

	Mean	SD	Skew	Kurtosis	European American Mean	Youth of Color Mean	Multiethnic Mean
6. School Safety Wave 1	3.80	.86	-.65	-.01	3.83	3.78	3.81
7. Ethnic Identity Wave 1	2.96	.78	-.54	-.67	2.73	3.10	3.03
8. Ethnic Identity Wave 2	2.99	.76	-.53	-.44	2.70	3.19	2.99
9. Ethnic Identity Wave 3	2.94	.83	-.56	-.50	2.60	3.25	2.91
10. Ethnic Identity Wave 4	2.96	.83	-.55	-.56	2.59	3.21	3.02

Table 1 (Continued)

Means, Standard Deviations, and Normality of Study Variables by Ethnicity

	Mean	SD	Skew	Kurtosis	European American Mean	Youth of Color Mean	Multiethnic Mean
11. Discrimination Wave 1	1.23	.45	3.61	17.40	1.18	1.26	1.24
12. Discrimination Wave 2	1.26	.44	2.43	6.54	1.22	1.31	1.30
13. Discrimination Wave 3	1.24	.44	3.03	12.04	1.14	1.29	1.30
14. Discrimination Wave 4	1.20	.39	3.30	13.90	1.11	1.27	1.23
15. Depression Wave 1	1.84	.77	1.40	2.16	1.86	1.77	2.00
16. Depression Wave 4	2.00	.84	1.25	1.39	1.88	1.97	2.06

Table 2

Correlations among Study Variables

	1	2	3	4	5	6	7	8
1. PPR	--							
2. TPR	-.43**	--						
3. PBP	-.41**	.59**	--					
4. PTR	.30**	-.13**	-.15**	--				
5. SCC	.27**	-.22**	-.21**	.38**	--			
6. SCS	.37**	-.35**	-.29**	.27**	.42**	--		
7. EI1	.15**	-.11**	-.04	.24**	.14**	.18**	--	
8. EI2	.07	-.19	-.08	.14**	.07	.11*	.47**	--

Note. PPR = Perception of Peers; TPR = Teased by Peers; PBP = Problems with Peers; PTR = Perception of Teachers; SCC = School Climate; SCS = School Safety; EI1 = Ethnic Identity Wave 1; EI2 = Ethnic Identity Wave 2; $^{**}p < .01$, $^{*}p < .05$.

Table 2 (Continued)

Correlations among Study Variables

	1	2	3	4	5	6	7	8
1. PPR	.18**	.10*	-.21**	-.15**	-.05	-.07	-.29**	-.14**
2. TPR	-.11*	-.13**	.43**	.32**	.17**	.09*	.33**	.19**
3. PBP	-.10*	-.07	.36**	.34**	.18**	.13**	.4$**	.16**
4. PTR	.10*	.06	-.15**	-.13**	-.17**	-.15**	-.14**	-.14**
5. SCC	.03	-.01	-.19**	-.08	-.10*	-.15**	-.21**	-.08
6. SCS	.06	.07	-.24**	-.20**	-.16**	-.15**	-.22**	-.13**
7. EI1	.31**	.28**	-.00	.03	.02	.004	-.03	-.05
8. EI2	.52**	.46**	-.01	.01	-.02	.10*	-.04	-.05

Note. EI3 = Ethnic Identity Wave 3; EI4 = Ethnic Identity Wave 4; DISC1 = Discrimination Wave 1; DSIC2 = Discrimination Wave 2; DISC3 = Discrimination Wave 3; DSIC4 = Discrimination Wave 4; DEP1 = Depression Wave 1; DEP4 = Depression Wave 4. $^{**}p < .01$, $^{*}p < .05$.

Table 2 (Continued)

Correlations among Study Variables

	1	2	3	4	5	6	7	8
9. EI3	--							
10. EI4	.58**	--						
11. DISC1	.07	.04	--					
12. DISC2	.04	-.03	.41**	--				
13. DISC3	.03	-.01	.17**	.46**	--			
14. DISC4	.00	-.03	.16**	.37**	.34**	--		
15. DEP1	-.12**	-.10*	.25**	.28**	.19**	.16**	--	
16. DEP4	-.14**	-.13**	.15**	.18**	.20**	.14**	.29**	--

Note. EI3 = Ethnic Identity Wave 3; EI4 = Ethnic Identity Wave 4; DISC1 = Discrimination Wave 1; DSIC2 = Discrimination Wave 2; DISC3 = Discrimination Wave 3; DSIC4 = Discrimination Wave 4; DEP1 = Depression Wave 1; DEP4 = Depression Wave 4. **$p < .01$, *$p < .05$.

Table 3

Parameters for Cross-lagged Path Model of Ethnic Identity and Discrimination

	Estimate (β)	Standard Error	Critical Ratio	P Value
EI1 ->EI2	.40	.06	6.52	***
DISC1 -> DISC2	.47	.06	8.08	***
EI1 -> DISC2	-.05	.07	-.76	n.s.
DISC1 -> EI2	-.08	.07	-1.13	n.s.
EI2 ->EI3	.36	.07	5.44	***
DISC2 -> DISC3	.50	.05	9.25	***
EI2 -> DISC3	-.05	.07	-.84	n.s.
DISC2-> EI3	.05	.07	.73	n.s.
EI3 -> EI4	.51	.06	9.26	***
DISC3 -> DISC4	.21	.07	3.13	**
EI3 -> DISC4	-.11	.07	-1.48	n.s.
DISC3 -> EI4	-.11	.06	-1.82	n.s.

Note. EI1 = Ethnic Identity Wave 1; EI2 = Ethnic Identity Wave 2; EI3 = Ethnic Identity Wave 3; EI4 = Ethnic Identity Wave 4; DISC1 = Discrimination Wave 1; DSIC2 = Discrimination Wave 2; DISC3 = Discrimination Wave 3; DSIC4 = Discrimination Wave 4. *** $p < .001$, ** $p < .01$, * $p < .05$, n.s. = non-significant finding.

Table 4

Standardized Loading for the 2-Factor Confirmatory Model of School Context

	All Youth		European American		Multiethnic		Youth of Color	
	B	S.E.	β	S.E.	*β*	S.E.	*β*	S.E.
Negative Peer Relationships								
PPR	.56*	.04	.72*	.05	.52*	.06	.55*	.08
TPR	-.73*	.04	-.79*	.04	-.60*	.06	-.81*	.06
PBP	-.77*	.03	-.77*	.04	-.76*	.06	-.77*	.06
School Environment								
PTR	.47*	.05	.53*	.07	.43*	.07	.31*	.12
SCC	.63*	.04	.72*	.06	.58*	.07	.55*	.09
SCS	.67*	.04	.65*	.06	.68*	.07	.86*	.09

*N*ote. 1 = European American; PPR = Perception of Peers; TPR = Teased by Peers; PBP = Problems with Peers; PTR = Perception of Teachers; SCC = School Climate; SCS = School Safety; *All loadings were significant at less than .001.

Table 5

Table 5

Direct and Indirect Effects for the Full Model for All Adolescents

	Direct Effects		Indirect Effects	
	Ethnic Identity	Depression	Ethnic Identity	Depression
Negative Peer Relationships	.01	-.03	---	-.001
School Environment	.29*	-.09	---	-.01

Note. ***$p < .001$, **$p < .01$, *$p < .05$.

Table 6

Direct and Indirect Effects for the Full Model for European American Adolescents

	Direct Effects		Indirect Effects	
	Ethnic Identity	Depression	Ethnic Identity	Depression
Negative Peer Relationships	.63	-.47	---	.17
School Environment	1.07*	.57	---	-.28

Note. ***$p < .001$, **$p < .01$, *$p < .05$.

Table 7

Direct and Indirect Effects for the Full Model for Adolescents of Color with One Ethnicity

	Direct Effects		Indirect Effects	
	Ethnic Identity	Depression	Ethnic Identity	Depression
Negative Peer Relationships	.35	.21	---	.03
School Environment	.76**	-.45	---	-.06

Note. ***$p < .001$, **$p < .01$, *$p < .05$.

Table 8

Direct and Indirect Effects for the Full Model for Multiethnic Adolescents

	Direct Effects		Indirect Effects	
	Ethnic Identity	Depression	Ethnic Identity	Depression
Negative Peer Relationships	-.24	.47**	---	.01
School Environment	-.16	.34	---	.004

Note. ***$p < .001$, **$p < .01$, *$p < .05$.

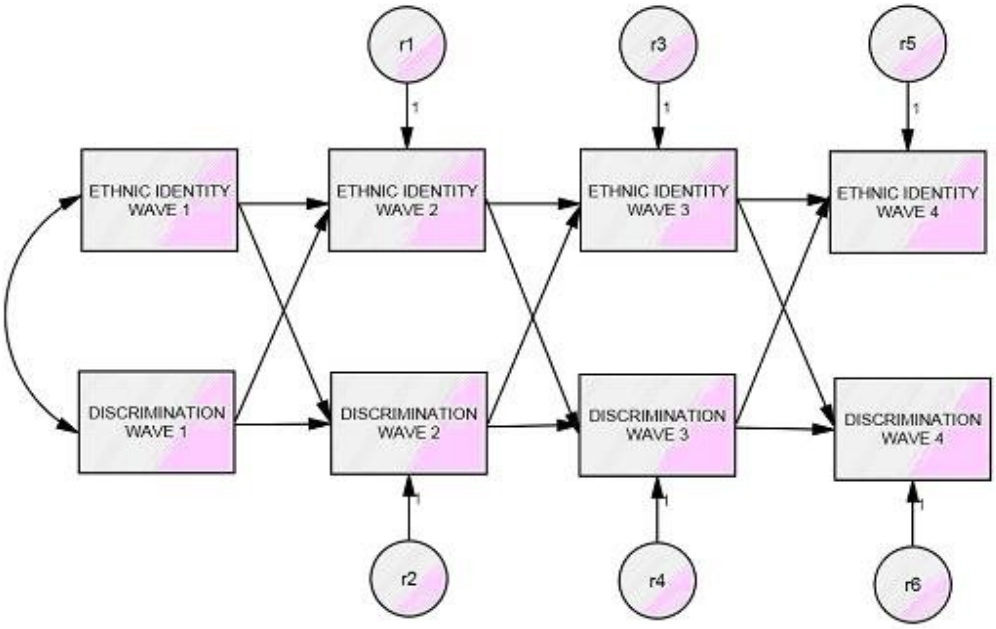

Figure 1. Cross-lagged path model indicating the bidirectional influence of ethnic identity and discrimination.

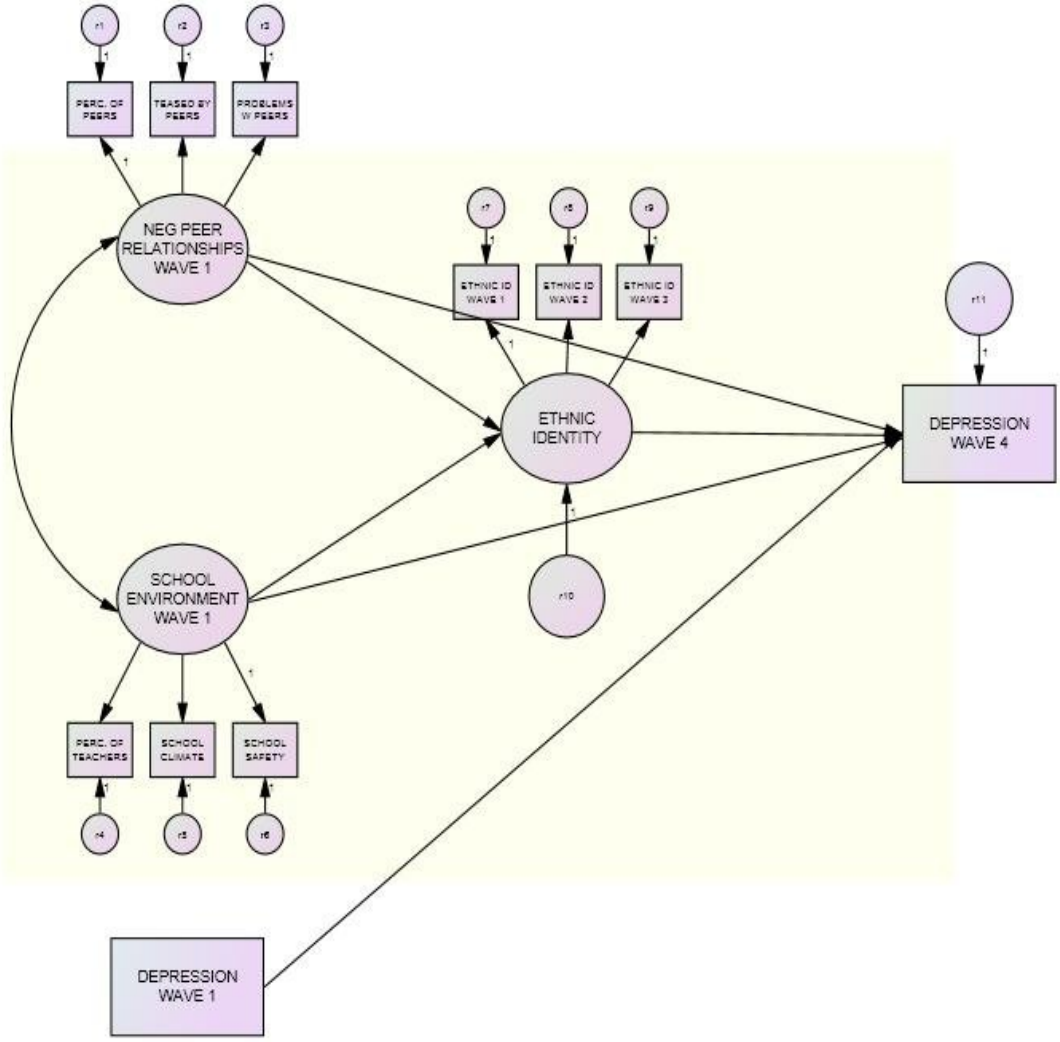

Figure 2. Conceptual model indicating the influence of ethnic identity on the relationship between school context in 6th grade (e.g., Peer Relationships and School Environment) on adolescent depression in 9th grade, controlling for depression in 6th grade.

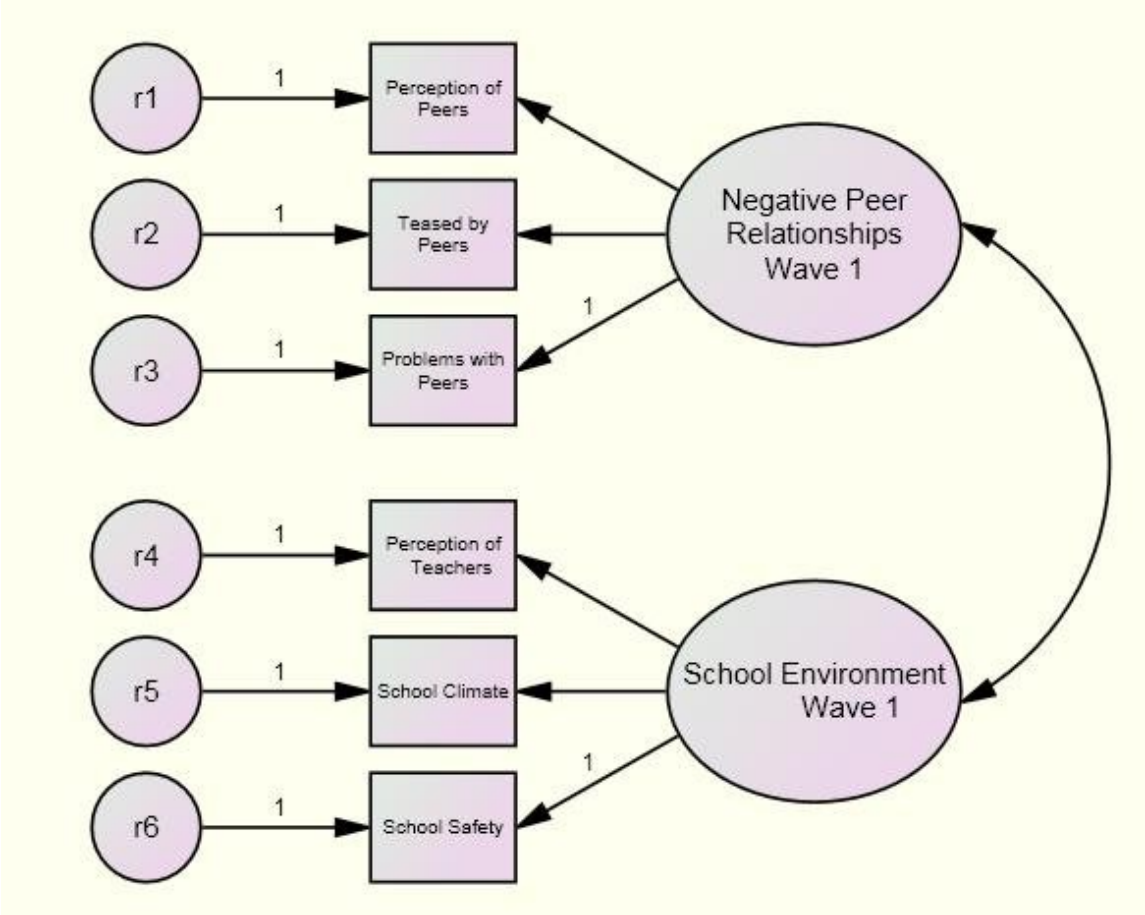

Figure 3. The 2-factor model of school context as indicated by negative peer relationships and school environment.

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