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The Impact of Race, School Diversity and Racial Congruence on School Connectedness

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THE IMPACT OF RACE, SCHOOL DIVERSITY AND RACIAL CONGRUENCE ON
SCHOOL CONNECTEDNESS

by

KARIE A. GASKA

Under the direction of Kelly M. Lewis, Ph.D.

ABSTRACT

School connectedness, encompassing positive feelings toward teachers and peers and a sense of belonging at school, has been touted as a critical factor in promoting student achievement and reducing youth risk behaviors. The literature has been mixed in terms of understanding the relationship between race, racial congruence and school diversity's influence on school connectedness, particularly for youth of color. The current study examines the effect of these variables on self reported feelings of school connectedness in a sample of 8,787 seventh grade students from 56 middle schools in one racially diverse school system. Multi-level modeling revealed that socioeconomic status and school racial diversity accounted for a significant portion of the variance in school connectedness. Controlling for these school level effects, race had a moderating effect on the relationship between racial congruence and school connectedness. Implications of these preliminary results on promoting school connectedness for youth of color are discussed.

INDEX WORDS: School connectedness, Adolescents, Minorities, African Americans, Racial congruence

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by

KARIE A. GASKA

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1. INTRODUCTION

School connectedness is often touted as a critical factor for promoting student achievement and reducing youth risk behaviors such as drug and alcohol use, smoking, and school dropout (Centers for Disease Control, 2010). As such, numerous interventions have been designed to increase school connectedness as a means to promote school achievement and reduce the racial achievement gap (Battistich, Schaps, & Wilson, 2004; Hyunsan Cho, Hallfors, & Sánchez, 2005; Karcher, 2008; Lewis, Sullivan, & Bybee, 2006). However, a limited amount of research has examined school connectedness specifically in youth of color who are often the recipients of such interventions in the increasingly diverse U.S. public school system. Further, understanding school connectedness among students that attend very racially diverse schools, where youth of color are not the minority, remains under examined.

The implications of the racial achievement gap are far reaching with education being one of the greatest predictors of wealth and positive health outcomes into adulthood (Lleras-Muney, 2005). While school connectedness may be part of the solution to boosting achievement for students of color, specific factors that are associated with lower school connectedness for youth of color have not been clearly identified. Initial studies in this area reported lower levels of school connectedness among Black youth with a presumption of lower connectedness among other minority youth as well (Bonny, Britto, Klostermann, Hornung, & Slap, 2000; McNeely, Nonnemaker, & Blum, 2002). However, recent research demonstrates that youth of color are often strongly connected to their schools when ecological factors are also examined. For example, researchers have found that Black and Latino youth have higher school belonging when they attend schools where there is a greater percent of same race peers (Benner & Graham,

2007). A finding like this one is critical for practitioners seeking to understand school connectedness and for schools who must consider how to reach youth who are most likely to feel marginalized. Further, it emphasizes the need to consider the impact of person-in-environment fit when attempting to alter school connectedness for youth. Given the salience of school racial congruence on other youth psychological outcomes (Benner & Graham, 2007; Byrd & Chavous, 2011; Gray-Little & Carels, 1997; Moody, 2001), the aim of the current study is to fill a gap in the literature by examining the role of race, school diversity, and racial congruence on school connectedness for Latino, Asian American, African American, and Caucasian youth attending very racially diverse schools.

In order to illustrate the unique contribution of this study, school connectedness will first be defined, followed by a review of the research that examines race and school connectedness. Next a review of the theoretical underpinnings of findings related to race, school diversity and racial congruence's influence on school connectedness are presented. Finally gaps in the literature are discussed before asserting the hypotheses of the current study and the subsequent methods and findings.

SCHOOL CONNECTEDNESS DEFINED

School connectedness is widely defined as a sense of belongingness to a school community and the belief that adults in the school care both about student learning and about them personally (Waters & Cross, 2010; "Wingspread Declaration on School Connections,," 2004). However, school connectedness has been used numerous ways in the psychological research literature; from general concepts such as how much a student feels they are part of their school to more specific definitions such as quantifying the students' perceived quality of

relationships with teachers, peers, and school staff members (Libbey, 2004). It has also been used interchangeably with concepts such as school attachment, school belongingness, and school bonding (Libbey, 2004). While adopting a common definition remains to be achieved, across the literature there is general agreement that school connectedness encapsulates the broad themes of a sense of belonging at school, positive relations with teachers and peers, and perceptions of care and safety in the school environment (Libbey, 2004; O'Brennan & Furlong, 2010; Thompson, Iachan, Overpeck, Ross, & Gross, 2006). The proposed study uses this conceptualization of school connectedness as the foundational literature to build from and examines school connectedness on both the individual and school ecological levels. Studies that have analyzed the impact of school connectedness on the individual level are considered next.

INDIVIDUAL BENEFITS OF SCHOOL CONNECTEDNESS

The individual benefits of school connectedness have been well documented. Data from the National Longitudinal Study of Adolescent Health (AddHealth), demonstrated that higher levels of school connectedness were associated with lower emotional distress, violence, suicidality, and were more protective than any other factor studied among adolescents (Resnick et al., 1997). Higher school connectedness has also been associated with higher academic achievement (Anderman, 2002), greater school retention (Bond et al., 2007), better emotional well being (Frydenberg, Care, Freeman, & Chan, 2009), decreased emotional problems (Shochet, Dadds, Ham, & Montague, 2006), and reduced participation in risk behaviors such as drug and alcohol use (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Resnick, et al, 1997).

From the many findings on the individual benefits of school connectedness, it has been conceptualized as a positive youth development asset and interventions aimed at improving

youth outcomes often include plans to increase school connectedness (Battistich et al., 2004; Hyunsan Cho et al., 2005; Karcher, 2008; Lewis et al., 2006). However, school connectedness must also be understood within the ecological context of youth and studies that fail to account for ecological variables may be missing a crucial part of understanding why students feel more connected to their schools. Understanding factors that are associated with higher school connectedness within the entire school as well as the school ecological factors that impact school connectedness for individual students informs the ability to create effective interventions to boost school connectedness.

THE ECOLOGICAL IMPACT ON SCHOOL CONNECTEDNESS

When examining the ecological variables that lead to higher school connectedness within the entire school, a variety of factors have been found in the literature. Well managed classrooms, schools with more Latino students, and schools with a greater percent of students who participate in extracurricular activities have higher reported school connectedness within the entire school (McNeely, Nonnemaker, & Blum, 2002; Thompson et al., 2006). Ecological variables can also be examined regarding their impact on individual school connectedness. Variables such as school size, school socioeconomic status, and racial diversity of the school have been examined for their effect on academic outcomes, but little research has looked at exactly how these structural factors are able to influence adolescents (Benner, Graham, & Mistry, 2008). Mediating factors, such as school connectedness, are therefore critical to examine. While the importance of examining school ecology when considering school connectedness interventions has been supported (Waters, Cross, & Shaw, 2010), variables associated with the racial make-up of schools and their interaction with students' race remain

understudied. Race, school diversity and racial congruence have proven to be important variables to consider when examining outcomes for school aged youth. Previous research on school connectedness often address race, school diversity, and racial congruence to some degree, however there are several areas of limited research that leave the relationship between these variables and school connectedness unclear.

THE IMPACT OF RACE, SCHOOL DIVERSITY, AND RACIAL CONGRUENCE ON SCHOOL CONNECTEDNESS

Race, school diversity, and racial congruence each contribute a unique piece to understanding the relationship between students and school connectedness. Race represents an individual level variable and differences between students of different racial backgrounds are often noted. School diversity is a school ecological variable that has been shown to impact individual students' connectedness to school. Finally, racial congruence is one measure of person-in-environment fit and encompasses an interaction between the individual and their school ecology. Findings around each of these variables are next examined.

Race

Race has largely been considered on the individual level in the literature with differences between students from different racial groups highlighted, but left unexplained. While school connectedness has been found to be beneficial in a variety of contexts, researchers have historically reported lower levels of school connectedness among Black youth in large, diverse, school-aged samples (Bonny et al., 2000; McNeely et al., 2002). As a consequence, it was largely assumed that Black youth were more disconnected from schools and that other youth of color would also be more disconnected from schools. For example, Bonny, et al (2000)

examined individual factors that were associated with lower school connectedness with the goal of eliciting areas for intervention using data from a sample of 1,959 Black and White students in the 7th through 12th grades. Among this large sample of adolescents, Black students had lower school connectedness than their White counterparts. Similarly, using a nationally representative sample of 71,515 adolescents from 127 schools across the country in the 7th through 12th grade, McNeely, Nonnemaker & Blum (2002) also found that Black students felt less connected to their schools compared to their White counterparts. While this trend of lower school connectedness among Black students was supported they also found a curvilinear relationship between school connectedness and racial composition of schools, as measured by the percent of students that were Black within a school. More explicitly, schools with a low or high percent of Black students had higher levels of school connectedness compared to schools that were more integrated. This finding illustrates the need to consider school ecological variables, like school racial diversity when looking at the link between race and school connectedness. Further, little research has considered how students from different racial groups experience school connectedness beyond simple mean comparisons. Recent data with more explicit analyses of ecological variables reveal that this relationship between race and school connectedness is more complex than simple group comparisons and emphasize the need to account for school level as well as student level variables (Benner & Graham, 2007, 2009; Benner, Graham, & Mistry, 2008; Thompson et al., 2006; S. Waters & Cross, 2010). Illustrating this point, Thompson et al. (2006) found that across all students, school connectedness was highest among Latino students on the individual level and highest on the school level at predominantly African American

schools contradicting previous assumptions about youth of color and school connectedness that failed to account for ecological context.

School Diversity

In the current study, school diversity is defined as the degree to which schools are heterogenous or reflect a mix of students from different racial backgrounds. The relationship between school diversity and school connectedness has been mixed. McNeely et al., (2002) found that increasing school diversity was associated with lower school connectedness while conversely, Benner and Graham (2007) found schools with higher racial diversity had higher levels of school connectedness. Supporting the negative impact of school diversity, Thompson et al.(2006) found a quadratic effect on school connectedness based on the percent of Black students in the school, indicating that schools with a large or small percent of Black students had the highest levels of connectedness, while schools with a more integrated student body (between Black and White students) had lower levels of school connectedness. Previous research on school diversity and school connectedness often had limited diversity in their samples, and often emphasized the relationship between Black and White students. Some recent studies include sizable Latino populations, but the relationship between school diversity and school connectedness in very diverse schools remains unknown. The findings that schools with large Black student bodies often had higher school connectedness on the school level shifted some researchers from considering minority status in relation to larger society to considering the particular minority/majority status of racial groups within the context of their particular schools. The need to examine racial congruence, the degree to which same race peers are present in the school environment, then is a logical next step.

Racial Congruence

Research on racial congruence and school connectedness in specific school contexts have also found mixed results. Using data from AddHealth, Johnson, Crosnoe, & Elder (2001) found a positive relationship between racial congruence and school connectedness, with students in schools with a higher percentage of same race peers feeling more attached to their schools. This relationship was for the overall sample but was not different for different racial groups. Supporting this relationship between racial congruence and school connectedness, Ueno (2009) found that the proportion of Black students in a school had a significant positive effect on school attachment for Black students. However, Ueno did not find this same effect for students from other racial groups. Similarly, mixed results came from Benner and Graham (2007) who tracked youth as they transitioned from middle school to high school, and found that African American students had a decreased sense of belonging associated with a decline in the racial congruence of the their schools. That is, as students transitioned into high schools that had fewer African American peers than the middle schools they came from, their sense of belonging also declined. Latino students, however, did not exhibit this same decline in sense of belonging.

As a whole the literature examining race, school diversity, and racial congruence supports differences in school connectedness by race, with African American students often exhibiting lower school connectedness (Bonny et al., 2000; McNeely et al., 2002). When ecological variables are considered, these differences sometimes diminish (Thompson et al., 2006). Additionally, racial congruence has been found to positively relate to school connectedness in nationally representative samples, with some support for a larger effect among African American students (Benner & Graham, 2007; Johnson et al., 2001; Ueno, 2009). Finally, school diversity

has been both positively and negatively associated with school connectedness (Benner & Graham, 2007; McNeely et al., 2002; Thompson et al., 2006). Many of these previous findings were specifically comparing African American and Caucasian students with incorporation of Latino students in some of the more recent literature. Further, most of these studies are in the context of a Caucasian majority. This leaves the relationship between race, racial congruence, and school diversity to school connectedness largely unexamined among youth from a variety of racial backgrounds attending very diverse schools. In order to make sense of these findings the underlying theoretical frameworks are also considered.

UNDERLYING THEORETICAL FRAMEWORKS

As stated above, the literature supports the existence of racial differences in school connectedness, but also that ecological variables and person-in-environment fit must be considered when looking at these differences. In order to understand why these relationships exist, an examination of the underlying theories behind them is warranted. Previous research and the current study draw on several theoretical frameworks to understand the impact of race, racial congruence, and school diversity on school connectedness. Major theoretical underpinnings include *ecological theory*, *person-in-environment fit*, *intergroup contact theory* and *insulation theory*.

Ecological Theory

First delineated by Bronfenbrenner in 1977, the ecological theory of human development posits that human development occurs transactionally as a result not only of individual factors, but also through an individual's interaction with their environment. Bronfenbrenner (1986) emphasizes that human development takes place in a variety of settings that interact with each

other. Rather than focusing solely on intrafamilial processes of parent-child interactions, Bronfenbrenner (1986) relays the importance of also understanding the mesosystem (the interaction between environments the child is in such as parental involvement in schools) and the exosystem (settings and processes that the child is not directly in, but shapes their developmental context such as the parent's workplace, the parent's social networks, and values of the neighborhood community) as well as the transactional nature of these contexts. From this perspective, youth development and school success are not due to individual factors alone, but as product of transactions and relationships within the schools, within families, and within their communities. When taking an ecological approach to understanding factors associated with student success, researchers must look beyond individual level factors associated with specific outcomes and include the ecological context of students that shape the possibilities for youth.

Ecological theory helps explain disparities in school connectedness among students from different racial groups by emphasizing the need to address the environment students are in and not rely on individual factors alone. The current study uses ecological theory as a framework for considering school connectedness and tests the amount of variance that can be found on the school level to quantify the impact of school ecology on school connectedness.

Person-in-Environment Fit

In addition to considering individual factors and the ecology of the school, examining *how* the individual interacts with their environment is a critical area of inquiry for maximizing the potential of youth. Adolescent developmental theory emphasizes that youth thrive when the environment meets their specific developmental needs. In middle school and high school this includes increasing opportunity for autonomy, competence, and relatedness—which includes

caring and supportive adults and acceptance by peers (Anderman, 2002; Eccles et al., 1993; McNeely et al., 2002b). Measures of school connectedness tap into this latter developmental need for relatedness in the school environment with racial congruence being an important component that may influence relatedness and belonging.

Previous researchers looking at person-in-environment fit with an emphasis on race often draw on the work of Rosenberg (1979) as the foundation for understanding environments that are racially/culturally congruent or incongruent for youth. Rosenberg (1979) hypothesized and found support for the theory that when racial environments are incongruent with adolescents they fare worse psychologically. Supporting this theory, more recent work by Rhodes, Roffman, Reddy, & Fredriksen (2004) found that social incongruity was associated with lower self esteem when examining a range of ecological variables longitudinally during middle school. Across the middle school years, self-esteem did not decline for low income African American students who attended largely homogenous schools, while low income European American students suffered greater losses in self esteem when they attended predominantly African American schools as opposed to predominantly European American schools with higher income peers. Similarly, Oates (2003) found that teacher/student racial congruence impacted teacher perception and ultimately student test performance. While these studies did not look at school connectedness specifically, they provide a base for understanding how racial congruity impacts how students experience their environment. The current study examines racial congruence as one measure of person-in-environment fit and considers how this may be different for students from different racial groups.

Insulation Theory and Intergroup Contact Theory

Findings that support better outcomes for youth who are in racially congruent environments often point to *insulation theory* as the underlying mechanism (Gray-Little & Carels, 1997; Rosenberg, Simmons, Project, & Societies, 1971). This hypothesizes that being in racially homogenous environments is protective, with students feeling an increased sense of belonging among same race peers and youth of color being more shielded from prejudice and negative social comparison (Gray-Little & Carels, 1997; Rosenberg et al., 1971). Additionally, early adolescence is a period particularly noted for an increase in social comparison and increased competitiveness among youth (Eccles et al., 1993) pointing to the salience of this theory.

Supporting insulation theory, Benner, Graham & Misty (2008) found that greater school diversity was related to poorer perceptions of school climate in a diverse sample of 9th grade students. Previous researchers predicted that school connectedness would be lowest in schools that are more integrated and highest in more segregated schools, generally supporting insulation theory. One of the underlying premises was in racially integrated schools, friendships tend to be more segregated (with each ethnic group having enough same race peers to be insular) resulting in lower school connectedness for all groups (McNeely et al., 2002). Additionally, there is support for racial congruence (having more same race peers) being positive related to school connectedness (Benner & Graham, 2007; Johnson et al., 2001; Ueno, 2009).

Conversely, there is also support for the notion that students fare better psychologically when they are in more racially diverse environments. For example, Gray-Little & Carels (1997) examined the effect of racial dissonance on self esteem and academic achievement for Black and White students using dissonant (less than 20% same race peers), balanced (40-60% same

race peers), or consonant (more than 80% same race peers) school racial environment with 5th, 8th, and 11th graders. They found overall racially balanced schools had the best self esteem outcomes for both Black and White students and for both Black and White 11th graders more racially balanced schools predicted higher academic achievement. Their results suggest that as students got older, there was some optimum racial balance that predicted more positive outcomes and that overall racial composition was more salient to outcomes for Black students. Similarly, Juvonen, Nishina & Graham (2006) found that classrooms with more diversity were associated with higher feelings of safety and social satisfaction for African American and Latino children, as opposed to classrooms that were more homogenous.

While insulation theory predicts negative outcomes as a result of increased opportunities for prejudice and negative social evaluation in more diverse environments, *intergroup contact theory* may provide a framework for understanding positive outcomes in racially diverse environments. Intergroup contact theory first predicted that prejudice would decrease as a result of interpersonal contact between individuals from different racial backgrounds (Allport 1954; Pettigrew, Tropp, Wagner & Christ, 2011). Additionally it is hypothesized that reduced prejudice would follow if the contact involved optimal attributes like equal status, common goals, and cooperation. In a school context, this predicted that with time children would experience less discrimination and more positive psychological outcomes as interpersonal interactions increased. If intergroup contact theory holds, we would expect that the negative psychological effects associated with increased prejudice and negative social comparison would subside over time in racially diverse school environments; this is examined in the current study.

These four theories help explain the relationships that have been found between race, racial congruence, and school diversity when examining school connectedness. *Ecological theory* helps explain differences in school connectedness by race through looking at the whole ecology of the child rather than focusing on individual characteristics alone. *Person-in-environment fit* points to the interaction between specific students and specific environments. Studies that found a relationship between racial congruence and student's race support this theoretical framework (Benner & Graham, 2007b, 2009). Both of these theories provide the broader context through which the current study considers school connectedness in a school environment.

The literature has been mixed in terms of *insulation theory* and the *intergroup contact theory*. The disparate findings in this area may be explained by insulation theory being supported in situations where youth of color are considered within a Caucasian majority with the positive effects of intergroup contact theory being more prevalent in very racially diverse environments that allow for equal status, cooperation and shared goals. In these situations the negative effects of prejudice and social comparison predicted by insulation theory may diminish over time. The current study examines intergroup contact theory and insulation theory within a very diverse racial environment to explore this hypothesis. Further, these theories were developed largely considering African American and Caucasian integration or extending to a person of color/White dichotomy, the disparate findings in this area may point to the need to modify these existing theories to address the growing diversity of U.S. schools. These and other gaps in the current literature have been discussed and are synthesized next.

GAPS IN THE CURRENT LITERATURE

While progress has been made toward understanding the impact of race, racial congruence, and school diversity on school connectedness, a number of gaps in the current literature inform the current study. First, limited representation of youth of color from various backgrounds leaves patterns of connectedness largely understudied for many students. Most research with diverse samples of students included comparisons of Black and White students, with limited emphasis on the ways in which these students may have different or similar school experiences. Additionally, few recent studies have included more diverse samples, incorporating sizable Latino populations into the analyses. Asian Americans still remain largely understudied. More research is needed to validate current findings for youth of color and examine the unique experiences youth of color may have in schools that lead to higher or lower levels of school connectedness, particularly in very diverse schools.

Second, most of the research on school connectedness and youth of color came from very large nationally representative samples of youth. While this is desirable for understanding patterns across youth in general, it may mask the experience of marginalized groups whose experiences get lost in aggregated data and who are often examined within the context of being the minority. Research that focuses specifically on very diverse schools is scarce and future analyses must look at these specific contexts to understand how connectedness to schools may be facilitated or hindered in light of the growing diversity of U.S. schools.

Third, early research emphasized individual factors associated with school connectedness without examining the ecology of the student. Using this approach, youth of color were often found to have lower school connectedness. When researchers incorporated ecological variables

into their analyses, patterns in school connectedness for youth of color are better understood beyond assumptions based on race alone. The importance of examining ecological factors such as racial congruence, school diversity, and school socioeconomic status has been brought to the forefront and complex analyses using multilevel modeling and linear growth curves are beginning to emerge to examine multiple ecological factors that interact to influence school connectedness. The current study builds upon this foundational literature to examine patterns among more diverse student bodies.

Finally, some findings on youth of color and school connectedness are contradictory and others need further validation past what currently exists in the literature. Racial differences have historically been observed in school connectedness studies however, in some recent literature no differences were found between racial groups on school connectedness when other predictors were put in the model (Karcher & Sass, 2010; Thompson et al., 2006). Further, increasing school diversity has been both positively and negatively associated with school connectedness (Benner & Graham, 2007b; Thompson et al., 2006). One hypothesis for these contradictory findings is that the decrease in school connectedness occurs in contexts with limited intergroup contact but over time and with increased diversity prejudice and negative social comparison subside. Continued testing of the relationship between school diversity and school connectedness and examining if these findings are similar across racial groups should be a part of future analyses.

Also, while it seems that racial congruence can play a large role in school connectedness, more research is needed to validate these findings and patterns need to be explored for different racial groups. While Benner and Graham (2007) examined African Americans, Latinos, Asian

Americans, and Caucasians in their studies, only African Americans and Latinos experienced a decline in racial congruence leaving this factor largely unexamined in Asian American and Caucasians samples. These limitations leave several areas for needed research

JUSTIFICATION FOR THE CURRENT STUDY

School connectedness remains one of the most influential factors on student achievement and one of the most protective factors against youth risk behavior. Given its importance in the lives of school-aged youth, it is critical to examine school connectedness among youth of color in the increasingly diverse schools today. Current limitations in the literature underscore the need to expand research on very diverse school environments. While many studies have elicited broad areas that can maximize school connectedness for youth, these techniques might not reach youth who are most likely to feel marginalized. Similarly, while these techniques might work for the majority of students in America, that assumes a Caucasian majority. Many U.S. schools do not reflect this Caucasian majority and more research on diverse schools is needed to have an inclusive body of literature on school connectedness. Current contradictory findings about the influence of school diversity on school connectedness and the emerging literature on racial congruence are critical to conceptualizing the school experience.

The current study aimed to bridge some of these gaps in the literature by examining school connectedness among a very diverse sample of middle school students from one county in California. The current study answers the research question: How does school ecology effect school connectedness, particularly as it relates to diversity and racial composition? Drawing on previous findings and predicting that prejudice and negative social comparison would be diminished in this particular sample, the main hypotheses to be tested were:

- 1) **Hypothesis 1:** Ecological variables will predict a significant amount of variance in school connectedness beyond individual level variables. See Figure 1.
- 2) **Hypothesis 2:** School diversity will be positively related to school connectedness. See Figure 2.
- 3) **Hypothesis 3:** Racial congruence will be positively related to school connectedness. See Figure 3.
- 4) **Hypothesis 4:** Race will moderate the relationship between racial congruence and school connectedness. See Figure 4.

2. METHODS

This cross-sectional study used data from an existing data-set collected during the 2008-09 school year.

PARTICIPANTS

Data were collected from 11,392 students in the seventh grade from one California county school system, representing 71% of the population of seventh graders in the county. This was an ideal school system to investigate because of its diverse student population (California Department of Education, 2010). Additionally, this is a school system that has been largely integrated for decades with most schools not having one clear racial majority. These conditions increase the likelihood that equal status and positive cross racial contact occur. For the purposes of this study, only students who identified as Asian/Pacific Islander, Latino/Hispanic, Black/African American, or White/Caucasian were included in the analysis leaving a final sample of 8,762 students. Of these participants, 49% were male and 51% were female; 31%

identified as Hispanic or Latino, 13% identified as Black or African American, 37% identified as Asian, Native Hawaiian, or Pacific Islander, and 19% identified as White or Caucasian. This gender and racial distribution approximates the distribution within the entire county school system.

PROCEDURES

Passive parental consent was obtained following California educational policy procedures. Passive consent included written notice sent to parents/guardians about the survey who could then notify the school if they did not want their child to participate in the survey. Students were informed that their participation in the study was totally voluntary. No student in the selected classrooms was required to participate and even if parents consented, the student could still refuse to participate. In addition, students did not have to answer every question once they began the survey.

The survey was administered to students during regular school hours at 56 separate middle schools, from 15 school districts. Data from students attending alternative schools were collected separately and not included in the present sample. During one class period, students were surveyed in a group format. Classroom teachers administered the survey, following a detailed script prepared specifically for the study, and instructions given by the California Department of Education to ensure the protection of all student and parental rights to privacy and maintain confidentiality.

MEASURES

California Healthy Kids Survey

The California Healthy Kids Survey (CHKS) is a youth self-report risk surveillance and resilience questionnaire that was developed for the California Department of Education (CDE). CHKS is the largest statewide survey of resiliency, protective factors, and risk behaviors in the nation and is frequently used to guide the development of health, prevention, and youth development programs as well as to better understand the relationship between students' health behaviors and academic performance (West Ed, 2010). The survey includes a core module administered to all participants and various supplemental modules that school districts or schools can choose to administer to accompany the core battery. There are separate elementary and secondary school modules, and data are collected annually from 5th, 7th, 9th, and 11th graders across the state of California.

The core module for middle school students consists of 114 questions (see appendix A). The survey includes a demographic section; a school connectedness subscale; youth resilience and developmental supports subscales; a section on drugs, alcohol, and tobacco; a section on bullying, violence, and harassment; and finally one question that asks the participant how truthful they were in completing the survey. The current study incorporated data from the self-reported racial group and the school connectedness subscale. A description of how these variables are assessed follows.

Racial/Ethnic Group

Self-reported racial/ethnic group is assessed in three questions on the CHKS measured on a nominal scale. Students are first asked if they are of Hispanic or Latino origin. Second, they

are asked their race with the following options: American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Pacific Islander; White; Mixed (two or more) races.

School Connectedness

School connectedness was assessed using the School Connectedness Subscale (SCS) on the CHKS. The SCS is a 5-item scale original designed for the National Longitudinal Study of Adolescent Health (McNeely et al., 2002b; Resnick et al., 1997b) to measure the bond students' feel toward school; that is, psychological and not academic, behavioral, or cognitive engagement (Libbey, 2004). Responses are anchored on a 5-point likert-type scale from 1= strongly disagree to 5=strongly agree. Students are asked "How strongly do you agree or disagree with the following statements about your school" and presented with the following statements: I feel close to people at this school; I am happy to be at this school; I feel like I am part of this school; The teachers at this school treat students fairly; and I feel safe in my school. Previous research provides data supporting the validity and reliability of the SCS across sociocultural groups (Furlong et al., 2010) and that the scale loads on to one factor with a Cronbach's alpha of .83 (S. Waters & Cross, 2010).

Archival Data from the California Department of Education

The California Department of Education (CDE) provides archival data on its website regarding a variety of school and student demographics. Schools report these data to the CDE several times throughout the year. The following school demographics are included in the proposed study.

Ethnic Diversity Index

The Ethnic Diversity Index was created by the California Department of Education to assess how evenly distributed students are **within a school** based on seven different ethnic group categories (American Indian/Alaskan Native, Asian, Native Hawaiian/Pacific Islander, Filipino, Hispanic/Latino, Black/African American, and White). Scores on the EDI range between 0 and 100, with 0 representing the least even distribution among these seven ethnic groups (all students in the school represent only one ethnic group), and 100 representing a perfectly even distribution among these seven ethnic groups. The formula for calculating the EDI is based on the distance from a given point to the point of even distribution, where all coordinates are $1/7$.

$$EDI = 100 - \frac{50\sqrt{42}}{3} * \sqrt{(x_1 - \frac{1}{7})^2 + (x_2 - \frac{1}{7})^2 \dots (x_7 - \frac{1}{7})^2}$$

The current highest EDI score in the state of California is 78. Student diversity will be measured using the school's EDI score from the 2008-09 school year.

School Socioeconomic Status

School socioeconomic status is approximated by the percent of the student body that does not qualify for free and reduced lunch as a decimal between 0 and 1. The Free-Reduced Price Meal (FRPM) percentage is based on the number of students eligible for Free-Reduced Price Meal programs divided by enrollment from the California Basic Education Data System (CBEDS) data collection. These data are reported annually by the school on a given day in October of each school year.

$$FRPM \% = \frac{\text{Number of students eligible for Free-Reduced Price Meal}}{\text{Enrollment from CBEDS}}$$

In order to more easily interpret findings so that an increase in this variable meant an increase in school socioeconomic status, SES was computed as $1 - \text{FRPM}\%$ to get the percent of students not eligible for free and reduced price meals.

Racial Congruence

Racial congruence was constructed as the percent of students within the school that are of the same racial group as the individual student as a number between 0 and 1. For example, an African American student attending a school that had a 30% African American student body would have a racial congruence score of .3.

DATA ANALYSIS

Prior to conducting the main analyses a check of the assumptions of multilevel modeling and multiple linear regression was conducted. Race and gender were dummy coded. Dummy codes were created for African Americans, Latinos, and Caucasians, leaving Asian Americans as the reference group (the largest racial group represented in the sample). All variables were plotted and examined for normal distribution, linearity and homoskedasticity. The dependent variable, school connectedness has a significant negative skew. Rather than transform the dependent variable, maximum likelihood parameter estimates (MLR) were used in the analysis in Mplus version 6.1. MLR parameter estimates are robust to non-normality and non-independence of observations.

A zero-order correlation matrix was used to examine associations among the variables of interest (See Table 1). Of concern was whether racial congruence, ethnic diversity index, and SES were correlated to a level where multicollinearity would pose a problem in the analyses.

While significant correlations exist among the variables of interest, none are so correlated that multicollinearity is a problem; it therefore made sense to use all variables in the model.

The main analyses were conducted in five stages using a build up approach. First a null model was run to calculate the intra-class correlation coefficient (ICC). This step tested whether there were significant differences between groups at the school level and determines if multi-level modeling is necessary. Second, a model with individual characteristics (race, gender, racial congruence) and school level characteristics (SES and EDI) was created. Third, a model with interaction terms was created to test the moderating effect of race on the relationship between racial congruence and school connectedness. This was done by creating three product terms with the dummy coded variables for race multiplied by the racial congruence variable. Fourth, a model with interaction terms and polynomial terms was created to examine nonlinear relationships between racial congruence and school connectedness for different racial groups. Polynomial terms were created by multiplying the racial congruence variable by itself (quadratic term) and then multiplying this term by the interaction terms for each racial group. The final model removed non significant relationships and includes individual characteristics, interaction terms, and school level characteristics. In order to probe the moderating effect of race, the final model was run 3 times, switching which racial group acted as the reference group. All multi-level analyses were conducted using Mplus version 6.1. A conceptual model of the relationships tested can be found in Figure 1.

3. RESULTS

DESCRIPTIVE STATISTICS

Students in the study reported relatively high levels of school connectedness ($M=18.05$, $SD=3.89$) compared to other national samples (Bonny et al, 2000; citation). Mean school connectedness scores by racial group can be found in Table 2. Schools in the analysis had an average participant size of 148 students. Of the 56 schools used in the analysis 22 had Latinos as the largest racial group in the school, 15 schools had Caucasians and 9 schools each had Asian American or African American as the largest racial group. The Ethnic Diversity Index of the schools was relatively high ($M=50.9$, $SD=13.56$) and ranged from 14 at the most homogenous school to 75 at the most diverse school. Overall a mean of 54% of students in each school qualified for free and reduced lunch with a low of 0% at one school and 91% at the most socioeconomically disadvantaged school.

MULTILEVEL MODELING RESULTS

In order to answer the research question: how does school ecology effect school connectedness, particularly as it relates to diversity and racial composition?; A multilevel model was constructed to delineate the variance for individual and school level factors. Results from the multilevel analysis are next reported by each individual hypothesis.

Hypothesis 1: Ecological variables (student diversity, school SES) will predict a significant amount of variance in school connectedness beyond individual level variables (race, gender, racial congruence). The Intra-class correlation coefficient for the null model was .089, indicating that 8.9% of the variance in school connectedness was attributed to between school differences, supporting the original hypothesis. Further the design effect was 11.14, indicating the need to look at the clustering effect of school in this sample. Beyond student level

characteristics, school SES and School diversity both predicted a significant amount of variance in school connectedness. School diversity was negatively related to school connectedness ($B = -.027$, $SE = .01$, $p = .003$). This indicates that, on average, a .027 point reduction in school connectedness is associated with every one unit increase in EDI. School SES had the largest effect on school connectedness of all predictor variables ($B = 2.41$, $SE = .4$, $p < .001$). For every one unit increase in school SES, school connectedness increases 2.41 points on average. Since the unit of measure for School SES was between 0 and 1, this indicates that between the highest levels of school SES and the lowest levels there is a difference of 2.41 points on school connectedness. See Table 3 for results for full model results.

Hypothesis 2: School diversity will be positively related to school connectedness. The hypothesis that school diversity would be positively related to school connectedness was not supported. In the final model, beyond the student level effects and controlling for school SES, school diversity was negatively related to school connectedness ($B = -.027$, $SE = .01$, $p = .003$), indicating that for every one unit increase in school ethnic diversity index (EDI), school connectedness went down by .027 points.

Hypothesis 3: Racial congruence will be positively related to school connectedness. The hypothesis that racial congruence would be related to school connectedness was not supported. In the model with no interaction terms present the effect of congruence on school connectedness was not significant ($B = .395$, $SE = .31$, $p = .20$). Further analyses, reported next, revealed the moderating effect of race on this relationship, however there is no support for a universal effect across racial groups.

Hypothesis 4: Race will moderate the relationship between racial congruence and school connectedness. The final model that was tested addressed the moderating effect of race on the relationship between racial congruence and school connectedness and supported this hypothesis. In the model that did not include interaction terms, there was no significant effect of racial congruence on school connectedness when looking across groups. However, when the interaction terms were added, it became clear that the relationship between racial congruence and school connectedness was significant for some racial groups.

In order to probe the interaction of race and racial congruence on school connectedness a fourth dummy coded variable for Asian American students was created. The model was then rerun with African Americans as the reference group and again with Latinos and finally Caucasians as the reference group. The simple slope of racial congruence on school connectedness for Asian American/Pacific Islanders is -1.083 ($SE = .64$, $p = .09$), for African Americans $-.274$ ($SE = 1.19$, $p = .76$), for Latinos 1.102 ($SE = .89$, $p = .05$) and for Whites 1.946 ($SE = .97$, $p < .01$). Graphs of these interactions can be found in figure 2, which show a differential effect of racial congruence on school connectedness for different racial groups. Further, a possible quadratic effect was noted for Asian Americans who had a marginally significant quadratic effect when examining the full model ($p = .055$). A final model was rerun with Asian American students only, to probe this relationship. A significant quadratic effect was found, indicating that initially school connectedness increased with racial congruence, then at some point the slope of racial congruence on school connectedness changed direction for Asian Americans ($B = -5.13$, $SE = 2.3$, $p = .03$).

4. DISCUSSION

This study attempted to address the research question: How does school ecology influence school connectedness, particularly as it relates to diversity and racial composition? Previous research emphasized the need to look at school ecological variables that impact school connectedness for youth (Waters, Cross, & Shaw, 2010); however looking at variables associated with race, school diversity, and understanding the person-in-environment fit as it relates to racial composition is an underemphasized area in the literature.

The first hypothesis, that school ecological variables would predict a significant amount of variance in school connectedness beyond individual level variables was supported. Results of the current study add to the literature by further supporting the inclusion of school ecological variables when considering school connectedness, emphasizing that a significant portion of the variance in school connectedness can be found on the school level. In particular the relatively large effect of school SES on school connectedness emphasizes that how connected students feel to their school largely remains directly related to the socioeconomic environment. This further validates previous research that suggests that if it is not directly being examined, school SES must be considered as a covariate or control variable (Waters et al., 2010; Waters, Cross, & Runions, 2009) when looking at school connectedness. This finding is not surprising, as SES has been connected to academic outcomes and school connectedness repeatedly in the literature with schools with higher SES students having better quality teaching, supplies, and academic programs.

Contrary to the second hypothesis, that school diversity would predict an increase in school connectedness among this sample, higher school diversity predicted declines in school

connectedness. However, a relatively small change in school connectedness was associated with increases in racial diversity. This finding may support the underlying notion in the theoretical literature that as diversity increases, friendship segregation increases resulting in lower connectedness for all (McNeely et al., 2002). However the relatively small effect compared to other studies (McNeely et al., 2002; Thompson et al., 2006) may support intergroup contact theory with the effects of prejudice and negative social comparison diminishing. One cautionary statement in interpreting the meaning behind this finding is the limited range in diversity in the current sample. This study intentionally used very diverse U.S. schools, with a limited number of schools on the low end of diversity. The mean EDI in the sample was 51, indicating very high levels of racial diversity. There were a very limited number of schools that had an overwhelming racial majority by any one group. This does not mirror most American schools which currently remain largely segregated by race and class (Pettigrew, 2004), but it also provides a model for thinking about the increasingly diverse school system in the U.S.

It was not only ecological variables that predicted school connectedness but also understanding the person-in-environment fit. Previous literature emphasized that many findings on the relationship between race and school based outcomes need to consider not only school ecological context but how well particular students interact with their environments (Byrd & Chavous, 2011). This study looked at racial congruence as one aspect of person-in-environment fit. The third hypothesis, that racial congruence would be positively associated with school connectedness was not supported. The null finding around racial congruence across the sample emphasized that there is not one dominant pattern that holds for all students on the impact of racial congruence, contrary to earlier findings (Johnson et al., 2001). The null finding does make

sense when considering a moderating relationship was predicted for race and, in fact, racial congruence functioned differently for different racial groups. This finding supports the notion that theoretical models of connectedness and intergroup contact in a school environment may need to predict different patterns among different racial groups. Previous literature emphasizes universal models of connectedness and belonging or theories with a minority/majority paradigm (particularly Black/White dichotomies). However, new theories that understand specific experiences for Black/African American, Asian American/Pacific Islander, Latino, and White students need to be further developed.

As originally hypothesized (hypothesis 4), race did moderate the relationship between congruence and school connectedness. The relationship between racial congruence and school connectedness functioned differently for Latino, Asian American, White, and African American students. The strongest relationship in this model was for White students where racial congruence was positively related to school connectedness. Since there was a correlation between being White and School SES in this sample there was concern that the effect of being in more racially White schools actually was just accounting for being in schools of higher SES. However, being in schools with higher SES was correlated with both White and Asian American/Pacific Islander students, while being in schools with lower SES was correlated with Black and Latino students. If the effect of race was merely a function of school SES we would expect White and Asian American students to exhibit similar results when examining the effect of racial congruence on school connectedness and Black and Latino students to exhibit a similar pattern, as has been the case when examining an array of school outcomes ((Benner & Graham, 2007b; Benner et al., 2008). However, the results suggest that White and Latino students have a

similar pattern in the relationship between racial congruence and school connectedness, while African American and Asian American students tended to have a similar pattern. This suggests that racial effects are not merely a function of SES, but it also leaves the question of why this pattern was exhibited. One hypothesis is that racial salience is higher for African Americans and Asian Americans. Higher racial salience has been previously found for African Americans (Byrd & Chavous, 2011) and perhaps this also extends to Asian Americans. Conversely, Whites and Latinos may feel lower racial salience. While Whites are the majority in larger society, Latinos in this sample are often the largest racial group in the schools they attend possibly diminishing the salience of race.

The general negative trend for Asian Americans in their relationship between racial congruence and school connectedness is one that has been shown in previous research (Ueno, 2009), however it had not been seen in schools that had such a large proportion of Asian Americans (nine schools in the current sample had an Asian American majority). Ueno (2009) hypothesized that intragroup competition may be one of the underlying processes behind this finding. Support for a quadratic trend in the current study suggests that school connectedness increases as Asian American students move from being a small minority within a school to having some critical mass of same race peers. However, at some point the effect of having same race peers diminishes and school connectedness decreases. This supports theories on diversity that suggest there is some ideal racial balance within schools that promotes equal status and positive intergroup contact.

The null finding for African American students when examining racial congruence and school connectedness was contrary to earlier studies that found a positive effect of racial

congruence for African Americans (Benner & Graham, 2007b; Johnson et al., 2001; Ueno, 2009). Additionally, African American students had lower levels of school connectedness across contexts compared to all other groups. While in earlier studies, school ecological variables help explain lower school connectedness for African American students, the current study did not account for this finding. This suggests that perhaps there are other systemic issues countywide that cause African American students to feel more disconnected to schools. While there was no effect of racial congruence, these finding speaks to the need to consider school racial environment when trying to increase school connectedness.

Latino students showed a significant positive relationship between racial congruence and school connectedness. As more same race peers are in the school environment, Latino students tend to feel more connected to their schools. Previous research has been mixed on this relationship with no relationship between racial congruence and feelings of belonging found in some studies (Benner & Graham, 2007) and a positive relationship found in others (Benner & Graham, 2009). Results of the current study aid in solidifying the positive relationship between having same race peers and school connectedness for Latinos. Possibly, as a result of increased sense of belonging and support among same race peers.

While some of the results of this study support insulation theory, others also support intergroup contact theory. While Caucasian and Latino students felt more connected to schools as racial congruence increased, Asian American and African American students did not exhibit this same pattern. Additionally, school connectedness decreased with increased diversity, but far less than has been documented in nationally representative samples. These results emphasize the need to expand current theoretical approaches to intergroup contact. While insulation theory and

the intergroup contact theory form the foundation for understanding diverse environments, they were mostly conceptualized with the interaction of two groups in mind, most usually African American and White integration. Findings emphasize the need to expand intergroup contact theories to include very racially diverse environments.

LIMITATIONS

Some limitations in the current study must be noted in order to fully consider the implications of the findings. First, the sampling used must be considered. CHKS is administered during the school day. Some districts use passive parental consent, while others require active consent. While the response rate was over 70% across the sample, it may have been skewed toward students that are more likely to be connected to school. Students who are in regular attendance at school, with parents who are active in their lives, may be more likely to have completed the CHKS survey. While the results are useful, it is important to consider what students may not be represented in the data.

Second, the current study purposely used a very racially diverse school system leaving a limited range for that factor. Findings for the effect of school diversity do not include a comparison of very homogenous to very diverse. Most of the schools were relatively diverse, with a very limited number of more homogenous schools and no schools that were completely dominated by one racial group. While the findings are useful for considering other school systems, findings cannot be generalized to all schools, which largely remain segregated by race and class.

Third, the data examined were not created with this particular study in mind. Future research on diversity and racial congruence could specifically look at measures of intergroup

contact, racial salience, and racial climate. In this study racial congruence was used to estimate the availability of same race peer networks and the effect of having a supportive racial environment. Similarly school diversity (EDI) was used to examine intergroup contact, however it is merely the opportunity for students to engage with one another. Future studies could use more specific measures of intergroup contact to test this assumption.

Finally, while it is useful to think about how students of different racial groups react to diverse environments, caution should be used when trying to apply these findings to individuals. While race is salient for many students, their multiple identities inform their experience. The intersection of race, ethnicity, gender, class, and sexuality (along with a myriad of other factors) often dictate how they interact with their environment and one measure of person in environment fit cannot encapsulate these multiple factors. Additionally, while this study attempted to integrate a wider variety of groups than has been previously studied, it did not encapsulate all the racial diversity that exists in U.S. public schools. Despite these limitations the results of the current study fill a gap in the literature around understanding very diverse schools and school connectedness. Further, implications for policy and practice can be considered as a result of the present study.

IMPLICATIONS FOR POLICY AND PRACTICE

While diversity is beneficial for students for a number of reasons including higher achievement, reduced racial isolation, increased social networks and increased success in subsequent diverse environments (such as in college or in the workplace) (Adan & Felner, 1995; Schofield, 2001), there is a need to consider how the racial environment acts differently for different students. How it may help or hinder attempts at all school approaches to school

connectedness and how maximum conditions can be met for positive intergroup contact (equal ground, respect, etc.). While it may be tempting to interpret findings around racial congruence to promote school segregation, the other negative aspects of school segregation far outweigh the small gains in school connectedness that are found. The current study instead attempts to look at what is needed in racially diverse environments to promote school connectedness. Further, findings from the current study suggest that racial congruence is not always beneficial to students across all groups.

Many schools are taking whole school approaches to increasing school connectedness (Rowe & Stewart, 2011) however; schools may need to consider how perceived differences in school connectedness fall along racial lines and what students are most likely to feel marginalized. While school districts often include school connectedness in their plans to close the achievement gap for students of color, including plans that address racial climate and perceived discrimination are not always included. Understanding how the racial context of the school influences school connectedness for youth of color is a first step to developing more specific interventions in diverse school systems. One particular approach for diverse schools may be to promote a positive racial climate where the optimum conditions for intergroup contact are present. Increasing opportunities for students to have equal status, for cooperation to occur, and working on a shared outcome may help these efforts. Curricula and activities that promote mutual understanding, while validating and upholding each groups contribution to the school should be explored.

School connectedness remains one of the most influential youth protective factors that promote positive outcomes and reduces the risk of youth risk behaviors. While it is important to

include interventions designed to increase school connectedness the current study underscores the need to examine race, racial congruence, and school diversity when designing such interventions.

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TABLES

Table 1. Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Within (Student)									
(1) School Connectedness (SCS)									
(2) Racial Congruence	.061**								
(3) Gender	.075**	.022*							
(4) Black/ African American	-.14**	-.235**	-.006						
(5) Latino	-.039**	.067**	.03**	NA					
(6) Asian/PI	.061**	.069**	-.023*	NA	NA				
(7) White	.089**	.036**	-.003	NA	NA	NA			
Between (School)									
(8) SES	.183**	.057**	.004	-.238**	-.357**	.304**	.262**		
(9) EDI	-.081**	-.478**	.005	.003	-.01	.046	-.047	.049**	

* $p < .05$ ** $p < .01$

Table 2. School connectedness by racial group

Racial Group	M	SD
Black/African American	16.6	4.36
Latino	17.82	3.83
Asian American	18.35	3.67
Caucasian	18.77	3.83
Total Sample	18.05	3.89

Table 3. Student and school level predictors of school connectedness

<i>Predictors</i>	<i>Model 1</i>		<i>Model 2</i>	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<i>Individual Level</i>				
<i>Sex</i>	.60*	.09	.60*	.09
<i>Black/ African American</i>	-1.227*	.18	-1.56*	.35
<i>Latino</i>	-.16	.13	-.90*	.31
<i>White</i>	-.052	.12	-1.15*	.38
<i>Racial Congruence</i>	.395	.31	-1.083	.64
<i>Black x Congruence</i>			.809	1.19
<i>Latino x Congruence</i>			2.185*	.89
<i>White x Congruence</i>			3.029*	.97
<i>School Level</i>				
School SES	2.362*	.45	2.44*	.41
School Diversity	-.02*	.009	-.017*	.01

* $p < .05$

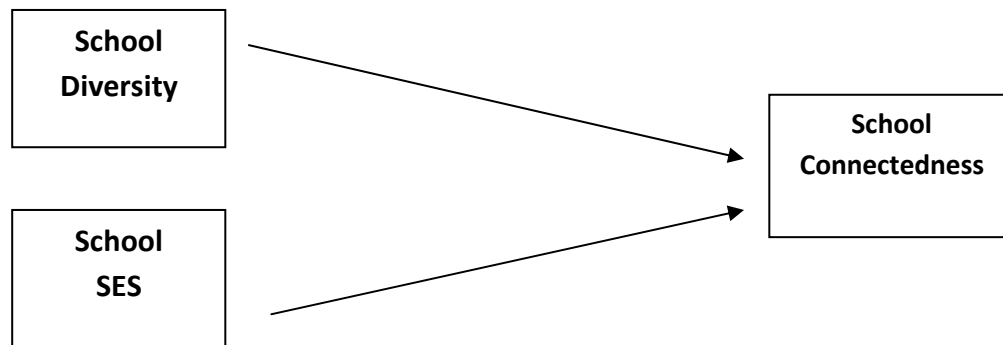
FIGURES**Level II -School**

Figure 1. *Hypothesis 1:* Ecological variables will predict a significant amount of variance in school connectedness beyond individual level variables.

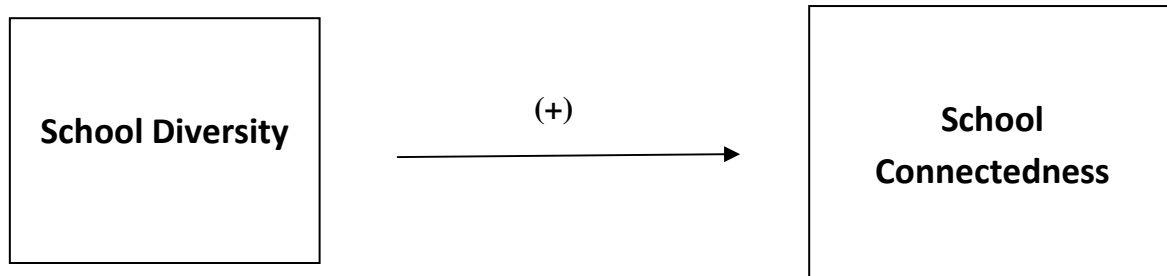


Figure 2. *Hypothesis 2:* School diversity will be positively related to school connectedness.

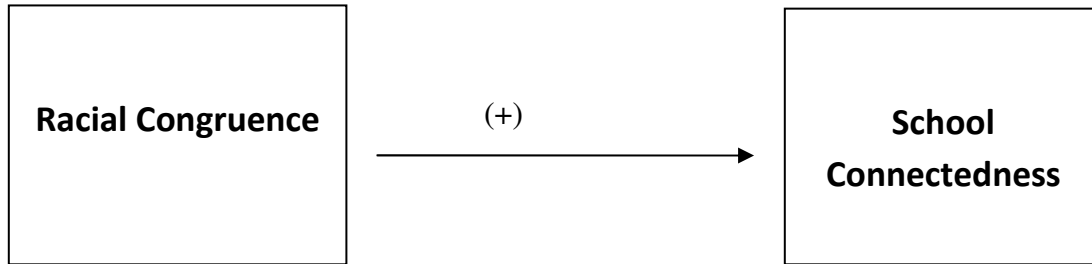


Figure 3. *Hypothesis 3:* Racial congruence will be positively related to school connectedness.

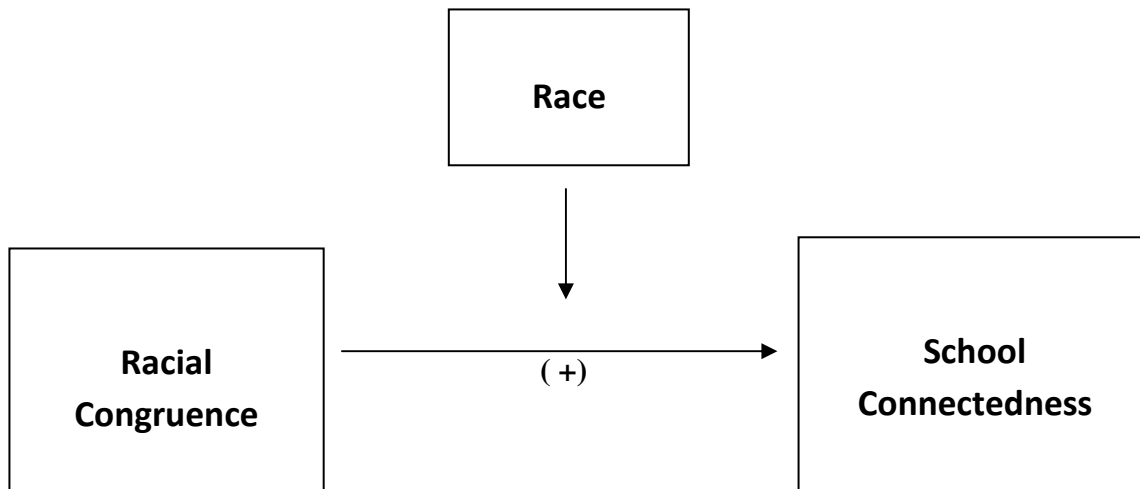
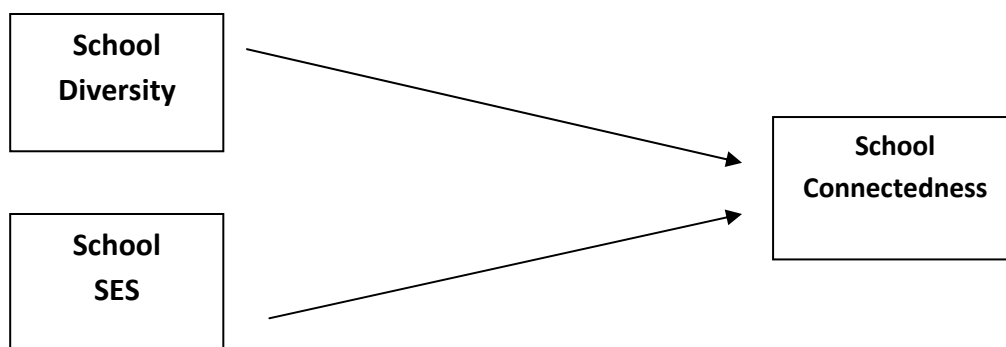


Figure 4. *Hypothesis 4:* Race moderates the relationship between racial congruence and school connectedness



Level II -School

Level I- Student

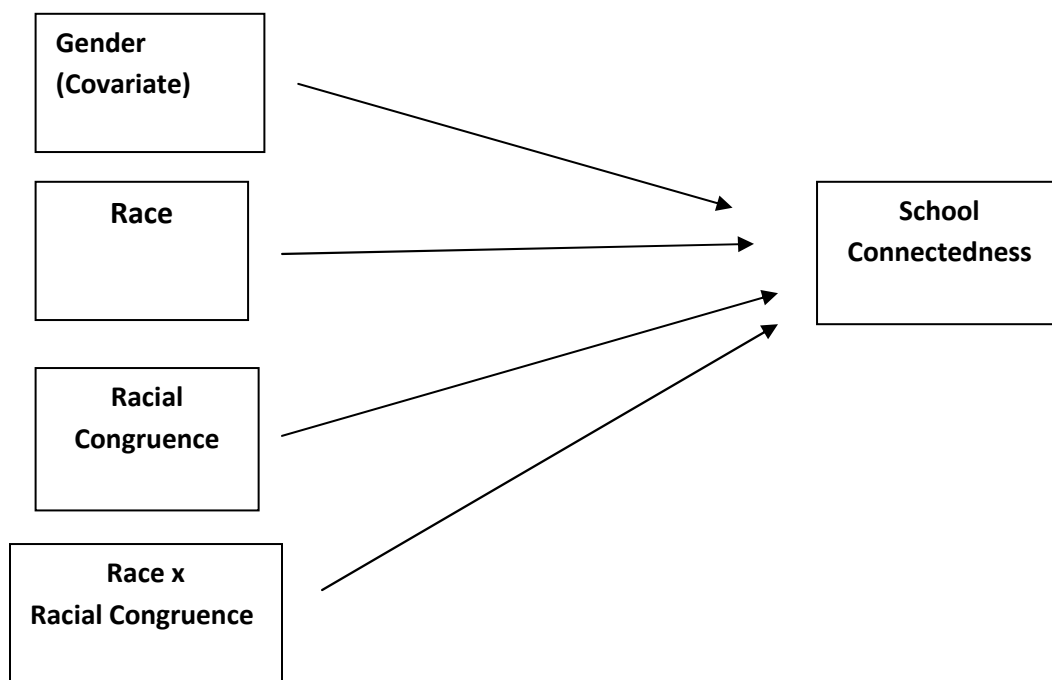


Figure 5. Conceptual Model of Multi Level Analysis

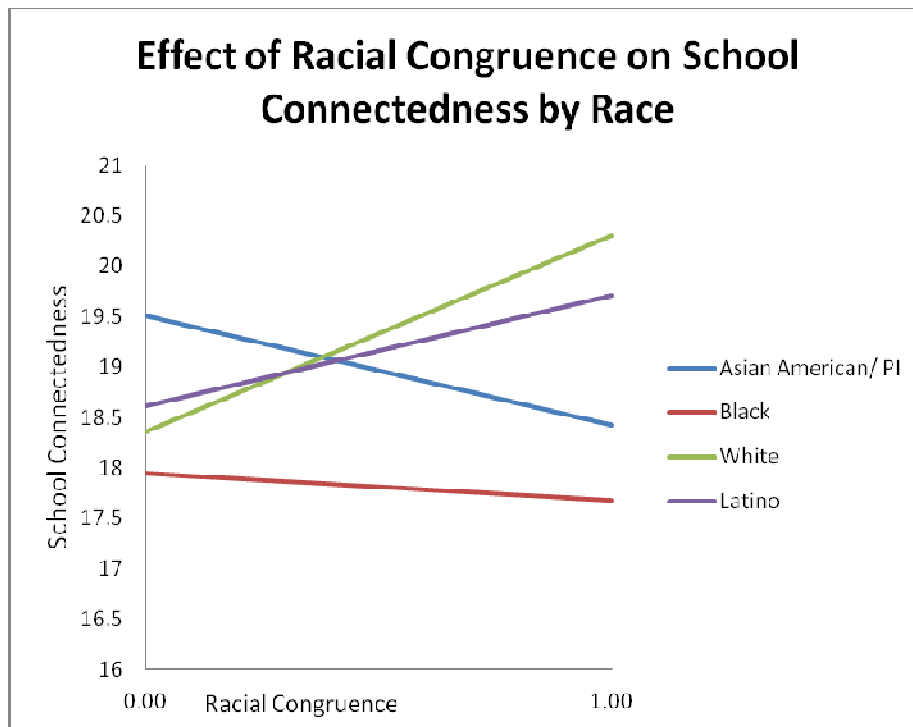


Figure 6. The Effect of Racial Congruence on School Connectedness by Race

APPENDIX: CALIFORNIA HEALTHY KIDS SURVEYCALIFORNIA *healthy kids* SURVEY

◆ Module A ◆

Middle School Questionnaire**2010–2011**

This survey asks about your behavior, experiences, and attitudes related to health, well-being, and schooling. It includes questions about use of alcohol, tobacco, and other drugs; bullying and violence; and what you do at school and how you feel about it.

You do not have to answer these questions, but your answers will be very helpful in improving school and health programs. **You will be able to answer** whether or not you have done or experienced any of these things.

Please do not write your name on this form or the answer sheet. Do not identify yourself in any other way.

Please mark all of your answers on the answer sheet. Fill in the bubbles neatly with a **#2 pencil**. Do not write on the questionnaire. Mark only one answer unless told to *“Mark all that apply.”*

This survey asks about things you may have done during different periods of time, such as during your **lifetime** (for example, did you ever do something?), or the past **12 months**, or **30 days**. Each provides different information. Please pay careful attention to these time periods.

Thank you for taking this survey!

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◆ Module A ◆

Begin by writing your school's name at the top of the answer sheet.

- A1. Fill in the bubble for the letter "M."
 A2. Fill in the bubble for the number "4."

Next, we would like some background information about you.

- A3. How old are you?
 A) 10 years old or younger
 B) 11 years old
 C) 12 years old
 D) 13 years old
 E) 14 years old
 F) 15 years old
 G) 16 years old
 H) 17 years old
 I) 18 years old or older
- A4. What is your sex?
 A) Male
 B) Female
- A5. What grade are you in?
 A) 6th grade
 B) 7th grade
 C) 8th grade
 D) 9th grade
 E) 10th grade
 F) 11th grade
 G) 12th grade
 H) Other grade
 I) Ungraded
- A6. Are you of Hispanic or Latino origin?
 A) No
 B) Yes
- A7. What is your race?
 A) American Indian or Alaska Native
 B) Asian
 C) Black or African American
 D) Native Hawaiian or Pacific Islander
 E) White
 F) Mixed (two or more) races

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- A8. If you are Asian or Pacific Islander, which groups best describe you? (*Mark all that apply.*) If you are not of Asian/Pacific Islander background, mark "A. Does not apply."
- | | |
|---|--|
| A) Does not apply; I am not Asian or Pacific Islander | H) Korean |
| B) Asian Indian | I) Laotian |
| C) Cambodian | J) Vietnamese |
| D) Chinese | K) Native Hawaiian, Guamanian, Samoan, Tahitian, or other Pacific Islander |
| E) Filipino | L) Other Asian |
| F) Hmong | |
| G) Japanese | |
- A9. In the past three years, were you part of the Migrant Education Program or did your family move to find work in agriculture?
- A) Yes
B) No
C) Don't know

Next, please mark on your answer sheet how TRUE you feel each of the following statements are about your SCHOOL and things you might do there.

How strongly do you agree or disagree with the following statements about your school?

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
A10. I feel close to people at this school.	A	B	C	D	E
A11. I am happy to be at this school.	A	B	C	D	E
A12. I feel like I am part of this school.	A	B	C	D	E
A13. The teachers at this school treat students fairly.	A	B	C	D	E
A14. I feel safe in my school.	A	B	C	D	E

At my school, there is a teacher or some other adult ...

	Not At All True	A Little True	Pretty Much True	Very Much True
A15. who really cares about me.	A	B	C	D
A16. who tells me when I do a good job.	A	B	C	D
A17. who notices when I'm not there.	A	B	C	D
A18. who always wants me to do my best.	A	B	C	D
A19. who listens to me when I have something to say.	A	B	C	D
A20. who believes that I will be a success.	A	B	C	D

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◆ Module A ◆

At school, ...

	Not at All True	A Little True	Pretty Much True	Very Much True
A21. I do interesting activities.	A	B	C	D
A22. I help decide things like class activities or rules.	A	B	C	D
A23. I do things that make a difference.	A	B	C	D

The next statements are about what might occur outside your school or home, such as in your NEIGHBORHOOD, COMMUNITY, or with an ADULT other than your parents or guardian.

Outside of my home and school, there is an adult ...

	Not At All True	A Little True	Pretty Much True	Very Much True
A24. who really cares about me.	A	B	C	D
A25. who tells me when I do a good job.	A	B	C	D
A26. who notices when I am upset about something.	A	B	C	D
A27. who believes that I will be a success.	A	B	C	D
A28. who always wants me to do my best.	A	B	C	D
A29. whom I trust.	A	B	C	D

Outside of my home and school, ...

	Not at All True	A Little True	Pretty Much True	Very Much True
A30. I am part of clubs, sports teams, church/temple, or other group activities.	A	B	C	D
A31. I am involved in music, art, literature, sports, or a hobby.	A	B	C	D
A32. I help other people.	A	B	C	D
A33. Did you eat breakfast today?				
A) No				
B) Yes				

◆ Module A ◆

The next questions ask about the use of alcohol, tobacco, marijuana, and other drugs *without a doctor's order* (prescription for medical reasons).

Keep the following definitions in mind.

- **One drink of ALCOHOL**, or alcoholic drink (beverage), means one regular size can/bottle of beer or wine cooler, one glass of wine, one mixed drink, or one shot glass of liquor.
- Questions about alcohol do **not** include drinking a few sips of wine for religious purposes.
- **DRUG** means any substance, including pills and medications, used to get "high" ("loaded", "stoned", or "wasted") other than alcohol or tobacco.

During your life, how many times have you used or tried ...

		Number of Times					7 or more times
		0 times	1 time	2 times	3 times	4–6 times	
A34.	a cigarette, even one or two puffs?	A	B	C	D	E	F
A35.	a whole cigarette?	A	B	C	D	E	F
A36.	smokeless tobacco (dip, chew or snuff such as Redman™, Skoal™, or Beechnut™)?	A	B	C	D	E	F
A37.	one full drink of alcohol (such as a can of beer, glass of wine, wine cooler, or shot of liquor)?	A	B	C	D	E	F
A38.	marijuana (pot, weed, grass, hash, bud)?	A	B	C	D	E	F
A39.	inhalants (things you sniff, huff, or breathe to get "high" such as glue, paint, aerosol sprays, gasoline, poppers, gases)?	A	B	C	D	E	F
A40.	derbisol (DB, derbs, or dirt)?	A	B	C	D	E	F
A41.	any other illegal drug or pill to get "high"?	A	B	C	D	E	F

During your life, how many times have you been ...

		Number of Times					7 or more times
		0 times	1 time	2 times	3 times	4–6 times	
A42.	very drunk or sick after drinking alcohol?	A	B	C	D	E	F
A43.	"high" (loaded, stoned, or wasted) from using drugs?	A	B	C	D	E	F
A44.	drunk on alcohol or "high" on drugs on school property?	A	B	C	D	E	F

◆ Module A ◆

About how old were you the first time you did any of these things?

	Never	Years of Age									
		10 or under	11	12	13	14	15	16	17	18 or over	
A45. Had a drink of an alcoholic beverage (other than a sip or two)	A	B	C	D	E	F	G	H	I	J	
A46. Smoked part or all of a cigarette	A	B	C	D	E	F	G	H	I	J	
A47. Used smokeless tobacco or other tobacco products	A	B	C	D	E	F	G	H	I	J	
A48. Used marijuana or hashish	A	B	C	D	E	F	G	H	I	J	
A49. Used any other illegal drug or pill to get "high"	A	B	C	D	E	F	G	H	I	J	

During the past 30 days, on how many days did you use ...

	0 days	1 day	2 days	3-9 days	10-19 days	20-30 days
A50. cigarettes?	A	B	C	D	E	F
A51. smokeless tobacco (dip, chew or snuff)?	A	B	C	D	E	F
A52. at least one drink of alcohol?	A	B	C	D	E	F
A53. five or more drinks of alcohol in a row, that is, within a couple of hours?	A	B	C	D	E	F
A54. marijuana (pot, weed, grass, hash, bud)?	A	B	C	D	E	F
A55. inhalants (things you sniff, huff, or breathe to get "high" such as glue, paint, aerosol sprays, gasoline, poppers, gases)?	A	B	C	D	E	F
A56. any other illegal drug or pill to get "high"?	A	B	C	D	E	F

During the past 30 days, on how many days on school property did you ...

	0 days	1 day	2 days	3-9 days	10-19 days	20-30 days
A57. smoke cigarettes?	A	B	C	D	E	F
A58. have at least one drink of alcohol?	A	B	C	D	E	F
A59. smoke marijuana?	A	B	C	D	E	F
A60. use any other illegal drug or pill to get "high"?	A	B	C	D	E	F

During the past 12 months, ...

	No	Yes
A61. have you talked with at least one of your parents [or guardians] about the dangers of tobacco, alcohol, or drug use?	A	B
A62. have you heard, read, or watched any messages about not using alcohol, tobacco, or drugs?	A	B

◆ Module A ◆

A63. How do you like to drink alcohol?

- A) I don't drink alcohol
 B) Just a sip or two
 C) Enough to feel it a little
 D) Enough to feel it moderately
 E) Until I feel it a lot or get really drunk

How much do people risk harming themselves physically and in other ways when they do the following?

	Great	How Much Risk or Harm		None
		Moderate	Slight	
A64. Smoke cigarettes occasionally	A	B	C	D
A65. Smoke 1–2 packs of cigarettes each day	A	B	C	D
A66. Drink alcohol occasionally	A	B	C	D
A67. Have five or more drinks of an alcoholic beverage once or twice a week	A	B	C	D
A68. Smoke marijuana occasionally	A	B	C	D
A69. Smoke marijuana once or twice a week	A	B	C	D

How difficult is it for students in your grade to get any of the following substances if they really want them?

	Very Difficult	Fairly Difficult	Fairly Easy	Very Easy	Don't Know
	A70. Cigarettes	A	B	C	D
A71. Alcohol	A	B	C	D	E
A72. Marijuana	A	B	C	D	E

Think about a group of 100 students (about three classrooms) in your grade.

About how many students have done the following?

	Number of Students										
	0 (none)	10	20	30	40 (half)	50	60	70	80	90	100 (all)
A73. Smoke cigarettes at least once a month	A	B	C	D	E	F	G	H	I	J	K
A74. Ever tried marijuana	A	B	C	D	E	F	G	H	I	J	K

How do you feel about someone your age doing the following?

	Neither Approve Nor Disapprove	Somewhat Disapprove	Strongly Disapprove
	A75. Smoking one or more packs of cigarettes a day	A	B
A76. Having one or two drinks of any alcoholic beverage nearly every day	A	B	C
A77. Trying marijuana or hashish once or twice	A	B	C
A78. Using marijuana once a month or more	A	B	C
A79. Carry a weapon to school	A	B	C

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◆ Module A ◆

- A80. How do you think your close friends would feel about your smoking one or more packs of cigarettes a day?
- A) Neither approve nor disapprove
 - B) Somewhat disapprove
 - C) Strongly disapprove
- A81. In your life, how many times have you ridden in a car driven by someone who had been drinking alcohol?
- A) Never
 - B) 1 time
 - C) 2 times
 - D) 3 to 6 times
 - E) 7 or more times

Next are questions about violence, safety, harassment, and bullying.

During the past 12 months, how many times on school property have you ...

	0 times	1 time	2 to 3 times	4 or more
A82. been pushed, shoved, slapped, hit, or kicked by someone who wasn't just kidding around?	A	B	C	D
A83. been afraid of being beaten up?	A	B	C	D
A84. been in a physical fight?	A	B	C	D
A85. had mean rumors or lies spread about you?	A	B	C	D
A86. had sexual jokes, comments, or gestures made to you?	A	B	C	D
A87. been made fun of because of your looks or the way you talk?	A	B	C	D
A88. had your property stolen or deliberately damaged, such as your car, clothing, or books?	A	B	C	D
A89. been offered, sold, or given an illegal drug?	A	B	C	D
A90. damaged school property on purpose?	A	B	C	D
A91. carried a gun?	A	B	C	D
A92. carried any other weapon (such as a knife or club)?	A	B	C	D
A93. been threatened or injured with a weapon (gun, knife, club, etc.)?	A	B	C	D
A94. seen someone carrying a gun, knife, or other weapon?	A	B	C	D

C A L I F O R N I A *healthy kids* S U R V E Y

◆ Module A ◆

During the past **12 months**, how many times **on school property** were you harassed or bullied for any of the following reasons? [You were **bullied** if *repeatedly* shoved, hit, threatened, called mean names, teased in a way you didn't like, or had other unpleasant things done to you. It is **not bullying** when two students of about the same strength quarrel or fight.]

	0 times	1 time	2 to 3 times	4 or more
A95. Your race, ethnicity, or national origin	A	B	C	D
A96. Your religion	A	B	C	D
A97. Your gender (being male or female)	A	B	C	D
A98. Because you are gay or lesbian or someone thought you were	A	B	C	D
A99. A physical or mental disability	A	B	C	D
A100. Any other reason	A	B	C	D

A101. How safe do you feel when you are at school?

- A) Very safe
- B) Safe
- C) Neither safe or unsafe
- D) Unsafe
- E) Very unsafe

A102. In a normal week, how many days are you home after school for at least one hour without an adult there?

- A) Never
- B) 1 day
- C) 2 days
- D) 3 days
- E) 4 days
- F) 5 days

A103. During the past 12 months, how many times did other students spread mean rumors or lies about you on the internet (i.e. Facebook™, MySpace™, email, instant message)?

- A) 0 times (never)
- B) 1 time
- C) 2–3 times
- D) 4 or more times

A104. Do you consider yourself a member of a gang?

- A) No
- B) Yes

A105. During the past **12 months**, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?

- A) Does not apply; I didn't have a boyfriend or girlfriend during the past 12 months
- B) No
- C) Yes

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A106. During the past 12 months, did you ever feel so sad or hopeless almost everyday for two weeks or more that you stopped doing some usual activities?

- A) No
- B) Yes

A107. During the past 12 months, how would you describe the grades you mostly received in school?

- A) Mostly A's
- B) A's and B's
- C) Mostly B's
- D) B's and C's
- E) Mostly C's
- F) C's and D's
- G) Mostly D's
- H) Mostly F's

A108. During the past 12 months, about how many times did you skip school or cut classes?

- A) 0 times
- B) 1–2 times
- C) A few times
- D) Once a month
- E) Once a week
- F) More than once a week

During the past 12 months, how often have you bet/gambled, even casually, for money or valuables in the following ways?

	Not at all	Less than once a month	1 to 3 times a month	Once a week or more
A109. Card or dice games (such as poker, blackjack, or craps)	A	B	C	D
A110. Personal skill games (such as pool, darts, or video games)	A	B	C	D
A111. Betting on sports	A	B	C	D
A112. Lottery (scratch cards or numbers)	A	B	C	D
A113. Bet or gambled in any other way	A	B	C	D

A114. How many questions in this survey did you answer honestly?

- A) All of them
- B) Most of them
- C) Only some of them
- D) Hardly any