

FRIENDSHIP ACROSS CONTEXTS: THE IMPACT OF FRIENDS' RACE ON SCHOOL  
BELONGING

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## **ABSTRACT**

Yumeng Fang: Friendship Across Contexts: The Impact of Friends' Race on School Belonging  
(Under the Direction of Rune J. Simeonsson)

This study investigated the links between the percentage of friends of a different race in adolescents' school-based friendship networks and their sense of school belonging. Data from 9,357 adolescents (53% female; 49% White, 18% Black, 18% Hispanic, 7% Asian American) were drawn from the National Longitudinal Study of Adolescent to Adult Health. In my path analysis model, I found that adolescents with fewer friends of a different race (more same-race friends) reported higher school belonging, through the channel of higher perceived safety at school. While students with higher peer support reported higher school belonging, the racial composition of friends was not related to the level of peer support. These relationships showed some variation by students' race and ethnicity, immigrant generation status, numerical marginalization status, and the racial diversity of their school. For numerically marginalized students (i.e., who had less than 15% same race or ethnicity peers), fewer friends of a different race were also associated with lower peer support, which was linked to lower school belonging a year later. Findings suggest that in the context of diversity and inclusion in academic institutions, having more same-race friends still confer unique benefits to the well-being of young people.

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## CHAPTER I: INTRODUCTION

Adolescence is a period for forming identities, shifting social relationships, changing priorities and expectations, and transitioning from childhood to adulthood (Erikson, 1968). Peer relationships begin to play a key role in one's development of peer supports as adolescents start to spend more time with peers. Friendships are a common form of peer relationships across the life span. Friendships form an essential micro-context for adolescent development, shaping youth identity, school and civic engagement, and psychological and physical well-being (Bagwell & Bukowski, 2018). With the demographic shift in American schools, race and ethnicity become variables that cannot be ignored in the study of friendships. School composition is becoming increasingly culturally and linguistically diverse now that half of the youth population represents racial-ethnic minorities (Rogers et al., 2017). Previous studies have shown that almost across all racial groups, adolescents prefer same-race friends (Mouw & Entwisle, 2006). Same-race friendships are associated with more positive ethnic-racial identity (ERI), which buffers the detrimental health and educational outcomes of discrimination which minority youth experienced at school (Yip et al., 2019). They are also associated with higher attachment to schools (Ueno, 2009). At the same time, inter-racial contact remains one of the most effective means to reduce prejudice and tension between racial groups and increase cultural and social competency (Hodson & Hewstone, 2012). In the context of increasing diversity where organizations learn to respect and value racial and cultural differences, it remains elusive what type of friendship truly enhances a sense of belonging and inclusion.

The purpose of the current study is to explore how the race and ethnicity-match between adolescent and their friends influence school belonging, for whom, and under what circumstances. A sense of belonging refers to a feeling of being included, accepted, valued, and respected by peers. It has been identified in past studies as a powerful predictor of academic and social-emotional outcomes such as academic success, reduced delinquency, and higher self-esteem, and is particularly relevant to the unique and specific needs and challenges of adolescents (age 12-18) (Allen & Kern, 2017). Although many empirical studies have researched the downstream adjustment outcomes of school belonging, few have explored the factors that contribute to school belonging. In addition, there has been limited research on how macro-level variables moderate individual and micro-level factors in school belonging. Understanding how different socio-ecological levels interact could inform which combination of factors best supports student belonging (Allen et al., 2018). Using data from the National Longitudinal Study of Adolescent to Adult Health (Add Health; Harris, 2009), this study explores whether more same-race friends relate to higher school belonging through higher peer support and whether more cross-race friends relate to higher school belonging through higher perceived safety at school. Moreover, the present study explores how these two primary relationships under study vary as a function of individual and school demographics, such as students' race and ethnicity, numerical marginalization status, immigrant generation status, and the racial diversity level of their schools.

## CHAPTER II: LITERATURE REVIEW

### **Friendship definition and principles**

Friendships as described by children often include numerous positive features such as companionship, intimacy, loyalty, and affection (Bagwell & Bukowski, 2018). From a psychological perspective, friendships refer to a specific kind of relationship that is either dyadic or involves a small group of peers. The core of a friendship is a sense of equality and reciprocity, manifested as mutual affection and support. As opposed to other relationships such as parent-child and sibling relationships, friendships are often described as “horizontal relationships” and are often voluntary. From a sociological perspective, friends are often assumed to be peers with whom a child frequently interacts, leaving the specific definition to the children and without the assumption of reciprocity (Bagwell & Schmidt, 2011).

How are friendships formed? Theories of interpersonal attraction describe the determinants of friendship selection. One of the necessary conditions is physical proximity or propinquity. Propinquity provides opportunities for individuals to come into contact with one another; familiarity develops as a result. Therefore, individuals are more likely to associate with others who are readily available to them through the same classroom or school (Mouw & Entwisle, 2006). Although physical proximity provides students with opportunities to get to know their schoolmates, not all become friends. This is because the second principle, homophily, is also at play. Homophily refers to the phenomenon that individuals tend to associate with similar rather than dissimilar others. Therefore, friendship is more likely to form between

individuals who perceive each other to have similar attributes, attitudes, or behaviors (McPherson et al., 2001). Homophily can be based on various dimensions, including gender, race and ethnicity, socioeconomic background, school performance, peer status, and salient behaviors, such as delinquency and aggression (Juvonen, 2018).

### **Race and Ethnicity in Friendships**

The United States has shifted from being a predominantly biracial society with a white majority and African American minority to a multiracial society that includes increasing Latino and Asian populations today (Hussar et al., 2020). The 2015 United States Census projected that by 2044, the U.S. will become a “majority-minority” country with no racial and ethnic group having a numerical majority (U.S. Census Bureau, 2015). An increasing amount of studies of friendships and peer relations incorporate race and ethnicity variables, such as the formation of interracial friendships (Graham & Echols, 2018). Empirical studies on the racial and ethnic preference of friends demonstrated that for all race groups and developmental periods, students show a strong ingroup preference for same-race and ethnicity friends. Not only do White and African American students prefer same-race friends, but they also choose to make same-race friends even in a desegregated school where peers of different races are readily available (Sagar et al., 1983). Similarly, Asians and Latino youths also prefer to make friends who share the same race and ethnicity, even in diverse settings (Hamm et al., 2005). Moody (2001) calculated the odds ratios of same-race to cross-race friendship choices and reported that same-race close friends are twice as likely to be endorsed as cross-race friendships.

Although people tend to like to befriend ones of the same race and ethnicity, having friends with members of a different race and ethnicity can confer unique developmental and even societal benefits. Intergroup contact theory proposes that cross-race contact is associated with

more positive and prosocial racial attitudes (Pettigrew, 1998). A meta-analysis of more than 500 studies showed that intergroup contact, including but not limited to groups based on race and ethnicity, improves intergroup attitudes and reduces prejudice of many types (Pettigrew & Tropp, 2006). They further showed three mechanisms through which contact reduces prejudice: 1) by enhancing knowledge about the outgroup, 2) reducing anxiety about intergroup contact, and 3) by increasing empathy and perspective-taking (Pettigrew & Tropp, 2008). Among various ways of contact, cross-race friendships are a sustained form across races and ethnicities. As such, it promotes greater reductions to intergroup prejudice. Another meta-analysis examined interracial friendships in particular and reported that they are more strongly related to better intergroup attitudes than mere contact that lacked the closeness of a friendship (Davies et al., 2011). The effect, however, remains correlational. That is, it is uncertain whether intergroup friendships lead to improved intergroup attitudes, or more positive attitudes prepare individuals to choose friends outside of their racial group. Binder et al. (2009) reported a bidirectional effect: youth who embrace more interracial friendships have more positive outgroup attitudes, and that preexisting attitudes also influence individuals' friendship selection.

The benefit of interracial friendships extends beyond improving intergroup attitudes and decreasing prejudice. The ability to develop and maintain cross-race friendships is related to several positive social outcomes and even life opportunities. Lease and Blake (2005) studied the social-emotional outcomes of majority-race children with and without a minority-race friend. Children who were of the majority race in their classrooms (either black or white), and who had a cross-race minority friend were more popular, self-confident, and better leaders than their majority group peers without a cross-race friend. Among college students, merely casual interracial interactions, not to the point of close friendships, are associated with students'

leadership skills (Antonio, 2001). These findings suggest that interracial friendship for majority-race youths is associated with positive personal qualities and competencies.

Cross-race friendships for minority-race youths serve a variety of benefits as well. For example, having more friends of a different race and ethnicity was a protective factor for the negative effects of perceived ethnic discrimination experienced by minority students (Bagci et al., 2014). Graham et al. (2014) found that African American and Latino middle school students with a greater proportion of cross-ethnic friendships reported lower perceived vulnerability by feeling safer, less victimized, and less lonely. Adolescents who affiliate and engage with peers from different racial groups exhibit fewer problem behaviors than less cross-culturally competent peers (Bennett, 2007). Asian American adolescents with more cross-race friendships had higher social competence (Tran & Lee, 2011). Academically speaking, Fryer and Torelli (2010) found that black students with relatively fewer friends of their race (i.e., more friends of other race) had higher academic achievement, especially for high achieving black students with grade point average above 3.5. Interracial friendships are also believed to provide minority-race individuals with greater access to the resources and opportunities of the dominant group, thereby serving as a form of social capital which minority race students draw on for upward mobility (Wells & Crain, 1994).

Although interracial friendships are shown to be associated with unique social, emotional, and academic benefits, they are admittedly less common than same-race friendships. The reason could be that cross-race friendship may not be of similar quality as same-race friendship. Study results on the quality and stability of cross-race friendships have been mixed. Some studies using a nationally representative dataset reported that cross-race best friendships were both lower in quality (as measured by the number of shared activities) (Kao & Joyner,

2004) and less stable than same-race friendships (Rude & Herda, 2010). Same-race friendships also contribute to social-emotional wellbeing. For example, Black and Asian American youth with only cross-race best friends reported lower emotional well-being than those with only same-race friends (McGill et al., 2012). In a more recent study, Filipino Americans with more than three very good non-Filipino friends endorsed more depressive and anxiety symptoms (Chang & Samson, 2018). They further found that relational discord, which is inevitable during the negotiation process to initiate and maintain cross-racial and ethnic friendships, mediated the relationship (Chang & Samson, 2018).

Several other studies did not show this quality difference but seem to suggest that although race and ethnicity factor into the initiation of friendships, it no longer influences the quality of friendships once these cross-race friendships are formed. For example, adolescents' socio-behavioral similarity (e.g., behavior and peer experiences) is a stronger predictor of friendship stability than racial homophily (McDonald et al., 2013). Similarly, Aboud et al. (2003) found that although elementary school students prefer same-race friends, once cross-race friends are established, conferred the same level of loyalty and emotional security compared to same-race friends. Although the intimacy level and 6-month stability of cross-race friends were lower than that of same-race friends (Aboud et al., 2003).

### **Predictors of interracial friendships**

Based on the propinquity principle of friendship formation, when opportunities for interacting with students of other races and ethnicities increase, cross-race friendships should increase. That is, would racially integrated schools become breeding grounds for interracial friendships? Some earlier evidence in the 1980s following the desegregation policy after *Brown v. Board of Education* (1954) supported the propinquity principle. Hallinan and Smith (1985)

showed that as the proportion of minority race students increased in a classroom, majority-race students were more likely to make friends with them. Studies using the nationally representative Add Health dataset reported that increasing racial and ethnic diversity at the school level is associated with more cross-ethnic friendships when the school has high racial heterogeneity (Moody, 2001). Interestingly, cross-ethnic friendships are the rarest (i.e., friendship racial and ethnic segregation peaks) in moderately heterogeneous schools, for example, in schools where two equally represented groups of individuals are present (Moody, 2001).

In addition to school diversity, the relative numerical representation of minority groups, as well as instructional and organizational practices can also influence the likelihood that students form friendships across racial and ethnic boundaries. For example, when the Asian and Latino student population within a school was 10% or less, they are more likely to choose friends of their race or ethnicity and less likely to have cross-race friends (Quillian & Campbell, 2003). On the other hand, students are more likely to have cross-ethnic friendships in schools where collaborative extracurricular activities reflect the diversity of their high school (Moody, 2001). In contrast, academic tracking may have negative effects on cross-race and ethnic friendships, potentially desegregating students by limiting cross-race exposure even in ethnically diverse schools (Graham & Echols, 2018). Another study looked at the predictors for interracial friends during adulthood, and reported having more interracial contact at a younger age and attending a racially diverse school predicts the number of interracial friendships or romantic relationships as adults (Kao et al., 2019).

### **The Theory and Construct of School Belonging**

Belongingness refers to an inherent human desire to be an accepted member of a group. Based on the motivational theory of Maslow's hierarchy of needs, belongingness is a



foundational human psychological need that must be satisfied before one can achieve one's full potential (Maslow, 1943). Individuals feel a sense of belonging in communities in which they sense their importance and perceive that they can rely on other community members, or when individuals perceive shared values with other community members (McMillan & Chavis, 1986). The feeling of belonging is associated with both psychological benefits and physical health benefits. Individuals who report belonging to groups and networks report higher levels of self-esteem and greater life satisfaction (Allen & Kern, 2017). Individuals with a greater sense of belonging have faster recovery rates from infectious disease, are at lower risk for heart disease, and recover faster when heart disease does occur (Cohen & Janicki-Deverts, 2009). On the other hand, risks for not belonging is similar to the adverse health effect that occurs from smoking, obesity, high blood pressure, and greater mortality (Holt-Lunstad et al., 2010).

Educational settings such as schools play an important role for students to form groups and social networks. It is the setting where children and adolescents spend most of their lives at and create many opportunities for students to feel belong or do not belong (Allen & Bowles, 2012; Osterman, 2000). School belonging refers to the feeling of being socially accepted, respected, included, and supported by others in a school social environment (Goodenow & Grady, 1993). A sense of school belonging meets adolescents' developmental need for relatedness. School belonging is an often studied mediator between acculturative stress, particularly discrimination stress, and low academic achievement (Osterman, 2000; Roche & Kuperminc, 2012). A high perception of school belonging has been demonstrated to benefit both academic and psychosocial outcomes. For example, it is related to academic adjustment (Pittman & Richmond, 2007), enhances the motivation to learn and do well academically (Neel & Fuligni, 2013), improve attitudes toward learning (Roeser et al., 1996), and increases academic self-

efficacy (Roeser et al., 1996). These positive academic effects were in line with the stage-environment fit theory proposed by Eccles et al. (1993): a sense of efficacy and valuing of education would be enhanced when students feel a sense of comfort, familiarity, or relatedness with school relationships. In other words, academic motivation is enhanced when students' basic psychological needs such as relatedness or belonging are fulfilled. A high-level school belonging is also found to correlate with better school completion, less absenteeism, less truancy, and less school misconduct (Demant & Houtte, 2012; Hallinan, 2008). Psychologically, a good belonging to school creates happier children with better social emotional functioning, higher self-esteem, and protects against suicidal ideation, violence, bullying, and substance use (Jose et al., 2012; Law et al., 2013).

Allen and Kern (2017) proposed a multilevel framework of school belonging based upon the lens of Bronfenbrenner's (1979) bioecological model with additional emphasis given to the psychological and social aspects. The model is called the "bio-psycho-socio-ecological" model of school belonging (BPSEM)" (Allen & Kern, 2017, p54). According to this framework, the adolescents are part of a broader system, which interacts with their biological and genetic predispositions (e.g., temperament) to impact their development and adjustment. School belonging is affected by the individual's attitude, personality, emotions, and cognitive styles, the "psycho-" aspect. It is also affected by their relationships with peers, families, and teachers who form the "microsystem", the "socio-" aspect. The school's social and organizational culture (the "mesosystem") and even the broader cultural values and policies (the "exosystem") also exert an influence on an adolescent's perception of belonging to their schools, together forming the "ecological" levels.

## **Improving School Belonging**

A meta-analysis conducted by the same group of researchers identified 10 themes that influence school belonging at the student level during adolescence in educational settings (Allen et al., 2018). These are academic motivation, emotional stability, personal characteristics, parent support, peer support, teacher support, gender, race and ethnicity, extracurricular activities, and environmental/school safety. After averaging the association between each theme to school belonging, they found that teacher support and positive personal characteristics were the strongest predictors of school belonging. A systematic review also proposed a series of strategies to increase school belonging and retention of students, particularly the at-risk and marginalized students, through pedagogical practices, specific school-wide programs, relationships and climate in schools, and mental health and family variables (Pendergast et al., 2018).

Furthermore, relative ethnic group size and same-race friendships are also intricately related to the feeling of school belonging. Benner and Graham (2009) showed that during middle school to high school transition, African American and Latino adolescents reported a decrease in the feeling of school belonging when their ethnic representation declined in the new school. Students feel more strongly attached to school when many same-race peers are present (Johnson et al., 2001). Middle school students who perceived more same ethnic peers in their math class were associated with more positive attitudes about perceived competence in math and feelings of belonging in that class (Graham & Morales-Chicas, 2015). More generally, even the perception of a few students “like me” increases students’ feeling of belonging (Good et al., 2012). Ueno (2009) examined the racial composition of adolescents’ egocentric friendship networks and found that same-race friendships contribute to the feeling of school attachment more than school-level racial composition.

Another developmental antecedent to increased school belonging is ethnic-racial identity (ERI), an asset under the risk and resilience framework to protect minority youths against the negative effects of perceived racial-ethnic discrimination (Umaña-Taylor, 2016). Ethnic racial identity (ERI), which is one of the most important social identities for youths of color. ERI is defined by factors such as the individual's affect toward their ethnic-racial group, how they resolve this feeling with themselves, and their understanding and experience of their racial background (Umaña-Taylor et al., 2014). Ethnic racial identity gives youths a sense of belonging to his or her ethnic and racial groups. In addition, Mexican adolescents with higher ethnic pride were associated with increases in school belonging mediated by higher self-esteem (Hernández et al., 2017). With regards to friendships, same-ethnic friends were shown to be uniquely associated with the private regard dimension of ethnic identity (e.g., "I feel good about people in my ethnic group") (Graham et al., 2014). In addition, Asian students who have more same-ethnic friends also have a stronger ethnic identity (Chen & Graham, 2017). These studies that connect ethnic-racial identity, school belonging, and friendships are not only rare, but results are also mixed. For example, a study reported the opposite result that African American college students who have a strong racial identity were more connected to their same-race peers, have more same-race friendships, but by contrast are less connected to their school at large (Thelamour et al., 2019).

### **Peer Support and School Belonging**

A sense of school belonging as a socially grounded experience is derived from interpersonal relationships with members of the school community (Osterman, 2000). It builds on students' perceptions of whether they are liked, respected, and valued by others in the school. It includes the feeling of being valued, having shared values, and valuing their community

(McMillan & Chavis, 1986). Among the many relationships, peer relationships or friendships are composed of critical microlevel factors. The presence of good friends and peer support received from them serve as a secure base and buffer which helps children and adolescents cope with psychological challenges and the unique social ecology of school. Through these experiences, adolescents develop a stronger sense of belonging to their schools (Hamm & Faircloth, 2005; Osterman, 2000).

Throughout adolescence, in particular, peer acceptance, connection, and support start to play increasingly important roles. Supportive peers offer encouragement, care, and understanding, while unsupportive peers can be sources of stress. In the unique context of high schools, adolescents reported alienation and isolation due to a clique-dominated social setting, being minority status, or through academic avenues (Hamm & Faircloth, 2005). In these situations, students look to their friends to offset the lack of acceptance and alienation they felt. Friends provide alliance, intimacy, enhancement of worth, tangible and emotional support, and security which may be foundations of adolescents' sense that they can rely on others in the setting (Hamm & Faircloth, 2005). Empirical studies document that higher quality of friends characterized by caring friendships, positive perceptions of the relationship, acceptance, and perceived peer support were associated with higher levels of school belonging (Pittman & Richmond, 2008; Wang & Eccles, 2012).

### **Perceived Safety and School Belonging**

Based on theories on community belonging, a sense of belonging to a community such as schools involves more than merely "fitting in," but also includes emotional safety and security in the setting (McMillan & Chavis, 1986). School safety refers to exposure to and perceptions of danger in the school that threaten the students' ability to fulfill their potential in the academic

setting (Garcia-Reid et al., 2005). Sources of insecurity in a school environment can come from bullying, sexual or racial harassment, peer victimization, psychological or physical abuse in peer relationships. They may look like gossiping, excluding, teasing, or name-calling (Espelage & Swearer, 2003). A school climate with high prejudice and intolerance for differences may affect how safe adolescents feel to truly “be themselves.” These experiences of low perceived safety at school were associated with a low sense of belonging to school (Cunningham, 2007; Garcia-Reid et al., 2005; Holt & Espelage, 2003).

Friends are not created equal but vary in different features and processes (Parker & Asher, 1993). Some positive features of friendship include validation and caring, security, intimacy, help and guidance, self-disclosure, and conflict resolution. On the other hand, some negative features of friendships may be characterized by conflicts, competition, rivalry, and dominance (Berndt, 2002). Different patterns of interaction when friends come together lead to different adjustment outcomes. One such example associated with a negative outcome is deviancy training, which refers to interactions among friends that reinforce one another’s problem behavior (Dishion et al., 1995). Another example is the phenomenon of co-rumination, which is a pattern of conversation between friends characterized by an excessive discussion of problems, negative affect, rehashing problems (Rose, 2002). These qualifications show that merely the presence of friendship is not inherently beneficial or protective. It is important to go beyond the presence or absence of friends to look at the type of friends that adolescents have.

### **School Belonging Across Race and Ethnicities**

Extant literature on how demographic factors related to school belonging were less consistent (Allen et al., 2018). Bonny et al. (2000) found gender and race differences in school connectedness such that boys reported feeling more connected than girls and White students

reported feeling more connected than did Black students. Black students are often stigmatized in academic settings, leading them to be aware of and concerned with circumstances that could threaten their sense of school belonging (Walton & Cohen, 2007). In early seventh grade, Black students with relatively low academic performances are at the most risk to experience a declining school belonging (Cook et al., 2012). This effect was because as their grades fall, Black students increasingly feel the threat of confirming negative stereotypes. Later poor grades then confirm suspicions of not belonging in school, which causes a sense of belonging to fall further and limits the possibility of improved performance (Cook et al., 2012). On the other hand, one study concluded a nonsignificant effect between race (White vs. minority youth) and school connectedness, claiming the significance was an artifact of the lack of significant variance in race in the sample (Whitlock, 2007).

Hispanics are a rapidly growing population in the United States and many Latino children enter school at an educational disadvantage. Research has found that Latino children are more likely to have compromised language, cognitive, and early reading skills when beginning kindergarten than non-Latino Whites (Garcia-Reid et al., 2005). Latino adolescents additionally have higher drop-out rates than African American students and White, non-Latino students. Latino immigrant youth are seven times more likely to drop out of high school than their native-born peers (Garcia-Reid et al., 2005). This group of youth is at risk for school disengagement due to reduced parental support or risk behaviors with friends such as using drugs or joining a gang. Qualitative studies documented some reasons for Latino students' decreased school belonging. For example, feeling outside of the mainstream school culture because of widespread transfer of Latino students into remedial and alternative education programs and lack of same-ethnicity role models on the school staff (Roche & Kuperminc, 2012). However, support from

teachers, friends, and parents had positive and direct effects to improve school belonging for low-income Hispanic girls, which teacher support having the strongest influence (Garcia-Reid, 2007).

A small body of research suggested that a student's racial and ethnic background may make a difference in the role played by friendship in belonging. For Hispanic, Asian, and Black students, only a third of their most supportive friends were from the same school (Way et al., 2001). Black students were almost twice as likely White students to identify their best friend from outside of the school they attend. They also report lower levels of support from school-based friendships (Faircloth & Hamm, 2005).

### **The Social Experiences of Immigrant Students**

Research studies that look at immigrant students' integration into school settings showed that second-generation youth are the most successful in navigating their school social contexts, even at comparable or higher levels to their native peers (Reynolds & Crea, 2017; Waters & Gerstein Pineau, 2015). While first-generation youth experienced some social marginalization, second-generation youths were located in advantageous positions in social networks and were well-integrated into school institutional structures (Reynolds & Crea, 2017). The researchers speculated that the success of second-generation immigrant students could be attributed to their bicultural backgrounds, which made them particularly skilled at navigating multicultural spaces in schools. Importantly, the immigrant students' outcomes differ across racial and ethnic groups. For both first- and second-generation immigrant students, Asian youth tended to occupy the most advanced social positions, while Black and White immigrant youths were more socially marginalized, and Hispanic immigrant youth were somewhere in between (Reynolds & Crea, 2017).



In terms of school adjustment, a study on the European immigrant student population found that first-generation adolescents reported a lower sense of school belonging than second-generation adolescents (Schachner et al., 2017). While these first-generation adolescents demonstrated similar rates of behavioral problems compared to second-generation, they experienced poorer psychological conditions such as lower self-esteem and greater psychological problems. However, another strain of research documented the exact opposite: the phenomenon of “immigration paradox.” This paradox suggests that immigration may not always be a risk factor. Instead, first-generation immigrant adolescents, compared to the second generation, tend to show better grades, higher academic orientation, and more positive school engagement (García Coll & Marks, 2012).

In addition, the cultural composition of friendship groups was associated with different outcomes based on the immigrant generation of their friends. Generally, having friends of the same immigrant generation was negative to social integration for both first and second-generation students, but not native students (Reynolds & Crea, 2017). In other words, youths were rewarded socially in terms of popularity and social status when their friendship groups included fewer immigrants. Unlike same-generation friends, the same study also found that same-race friendships functioned to facilitate social integration and helped immigrant youth develop a sense of security and cohesion in their social world. Taken together, the cultural composition of friendship benefits immigrant youths when they have friends with peers of the same race but not of the same generation. The explanation offered for this phenomenon was that same-race friendships with second-generation and native peers help first-generation students gain access to social capital, resources, and opportunities of mainstream youth (Stanton-Salazar, 1997).

## **School Racial Diversity**

An ongoing focus on school racial and ethnic composition and diversity were motivated by rulings from the *Brown v. Board of Education* (1954) case, which proposed equal educational opportunities for African American children. Increasing school racial diversity was considered as a way of advancing school's educational missions. Higher diversity also means more equitable access to academic opportunities, which leads to more equitable outcomes beyond K-12 schooling such as in college enrollment, job outcomes, and earnings (Linn & Welner, 2007). Previous research on racial diversity in schools showed that a more balanced racial and ethnic composition is linked to higher academic outcomes, such that students had higher test scores in more diverse schools (Benner & Crosnoe, 2011). This pattern was particularly strong for White students, proofing that White students are not harmed by desegregation policies. In a similar vein, studies on the effect of racial mixing policies showed that a higher percentage of Black schoolmates reduced achievements for Black students while having an insignificant effect on Whites, controlling for abilities, school quality, and family backgrounds (Hanushek et al., 2009). Students in more racially balanced or integrated schools demonstrated higher mathematical outcomes, particularly for racial minority populations in the secondary grades (Mickelson et al., 2013). These studies suggest that efforts to increase school racial diversity do not hurt White students but enhances the achievement of African American students.

Research on school racial diversity was also interested in non-academic outcomes such as near-term intergroup relations. Segregated schools are likely to create or sustain negative outcomes such as intergroup hostility and stereotyping. On the other hand, many believed that school desegregation held the potential to improve intergroup relations such as reducing prejudice or stereotyping (Pettigrew, 1998). Improved intergroup relations through increased

intergroup contact was demonstrated by a large scale intergroup contact meta-analysis which included individuals of a wide range of ages (children, adolescents, adults), settings (residential, recreational, educational), and groups (disabilities, racial and ethnic backgrounds) (Pettigrew & Tropp, 2006). Under the backdrop of residential segregation, children often have their first extended opportunity to contact ones from different racial or ethnic backgrounds in schools (Farley, 1996). The intergroup contact offered by diverse schools would lead to improved intergroup relations under four conditions (Allport, 1954): equal status within the contact situation, cooperation toward mutually valued goals, the opportunity for individuals to get to know each other as individuals, and the support of relevant authorities for positive intergroup relations.

However, literature in this vein also showed that increasing school racial diversity and desegregation itself only serves as a necessary but not sufficient condition for better race relations such as reducing prejudices and stereotypes (Linn & Welner, 2007). The previously outlined four conditions are largely shaped by school and teacher practices through conscious integration efforts. In other words, it is the nature of the contact situation in schools that decides whether students benefit from a racially diverse campus. Some classes that help students benefit from a diverse campus are structured in ways that emphasize equal status between groups, facilitate cooperation, provide opportunities for individualized contact, and have educators who value intergroup contact. The benefits include eradicated myths about differences, reduced out-group fears and hostilities, reduced prejudice, and increased awareness and understanding of likenesses and shared customs, beliefs, and values (Linn & Welner, 2007).

From a social network theory perspective, school racial and ethnic diversity tampers the social capital differences between segregated schools. The social capital differences could

manifest in the availability of quality college counseling, information leading to realistic and diverse occupational aspirations, access to professional jobs, levels of parental volunteering, and school climates that favor achievement or not (Linn & Welner, 2007). School diversity was also found to relate to other positive outcomes such as lower discrimination and higher school belonging, especially for minority students. For example, greater levels of racial and ethnic diversity in both the student body and the teaching staff within a school district were found to be associated with lower levels of discrimination experienced by minority students (Rocha & Hawes, 2009). Multiculturalism, a diversity approach that embraces cultural diversity as added value, predicted smaller school belonging gaps between minority and majority students in European middle schools (Celeste et al., 2019). In a different context, residents living in more racially diverse Canadian neighborhoods demonstrated stronger national belonging but weaker in-group belonging (Wu et al., 2011).

School diversity is higher when there are more racial and ethnic groups represented on campus. But efforts to increase school diversity sometimes may cause underrepresented minorities to feel isolated and be spokespersons for their race, or “tokenized.” Such a phenomenon then exposes these underrepresented students to harassment and annuls any condition to have an “equal status” to challenge stereotypes, reduce prejudice, and any other educational benefits of a diverse student body (Linn & Welner, 2007). Numeric racial and ethnic marginalization in diverse contexts causes feelings of marginalization and serves as a challenge to well-being. Recent scholarship has found that racially marginalized students reported poorer school attachment and more depressive symptoms, which further contributed to higher substance use (Benner & Wang, 2015). Marginalized adolescents were more vulnerable to stereotyped

threat than nonmarginalized adolescents (Mello et al., 2012). Students with marginalized identities are more at-risk to be disengaged and dropping out (Pendergast et al., 2018).

### **Gaps in Research and Study Rationale**

The study of friendship in a cultural context with the consideration of ethnic and racial variables has garnered interest in recent years, but not to the pace of demographic population shifts in the U.S. (Graham & Echols, 2018). Of particular interest to this paper is the dyadic level interracial friendships. The most solid strand of research originated from intergroup contact theory (Allport, 1954; Pettigrew & Tropp, 2006), which states that intergroup contact typically diminishes intergroup prejudice. Cross-race friendships, a form of high-quality intergroup contact, are shown to be associated with multiple cognitive, social, and emotional benefits for both majority and minority students (Bagci et al., 2014; Lease & Blake, 2005). However, individuals across all races and ethnicities still show an overwhelming preference for same-race friends (Mouw & Entwisle, 2006). A previous study found that having same-race friends is associated with increased attachment to school (Ueno, 2009) and higher ethnic-racial identity (Chen & Graham, 2017), which is protective of the detrimental consequences of perceived discrimination (Umaña-Taylor et al., 2014). From an acculturative perspective, having same-race friends is associated with higher acculturation to the home culture, which relates to more peer support and less stress during immigration (Oppedal et al., 2004).

The effect of friends' racial and ethnic background match on school belonging remains unclear. Previous research concerning the race and ethnicity match of friends and school belonging had mixed results. Some studies reported that more cross-race friends predicted greater feelings of belonging to school (Bagci et al., 2014; Graham et al., 2014), while others report that more same-race friends and the presence of more same-race peers make one feel more

at home (Ueno, 2009). The cause of such mixed results could be a lack of exploration of the mediating mechanism and moderating effects for the relationship between the race and ethnicity match of friends and school belonging. Two competing theories connect the proportion of friends of a different race and ethnicity to school belonging. That is, both more same-race friends or more cross-race friends could theoretically increase school belonging through different mediators. For example, having more same-race friends may increase the quality of the friendship because of shared cultural backgrounds and struggles. These same-race friendships feature a higher understanding and more effective ways to confer emotional support, which lead to higher school belonging. On the other hand, adolescents, especially minority students, who step out of their “comfort zone” to make more cross-race friends can learn to relate to the majority group and appear less different than the school-wide mainstream culture, thereby enjoying higher school belonging.

Studies done in different contexts offered possible mediators and moderators that could clarify the mixed results between the racial and ethnic match of adolescent and their friends and school belonging. Previous studies report the association of friendship composition with a perception of school safety (Chen & Graham, 2017) and peer support (Chan & Birman, 2009). Relatedly, perceived safety and peer support are among the ecological and social factors that predict feelings of school belonging (Allen & Kern, 2017). As such, perceived school safety and peer support could be mediators through which friendship racial composition relates to school belonging. The link between the race and ethnicity of friends and school belonging could differ for different adolescent students. For example, the special benefit of having same-race and ethnic friends could be particularly salient for racial minority or marginalized students and first-generation immigrant students, who are most at risk to not belong to their schools (Juvonen,

2006; Quillian & Campbell, 2003). On a school level, it remains to be known how the relationship between friendship racial composition and school belonging differ based on school characteristics, such as school racial diversity.

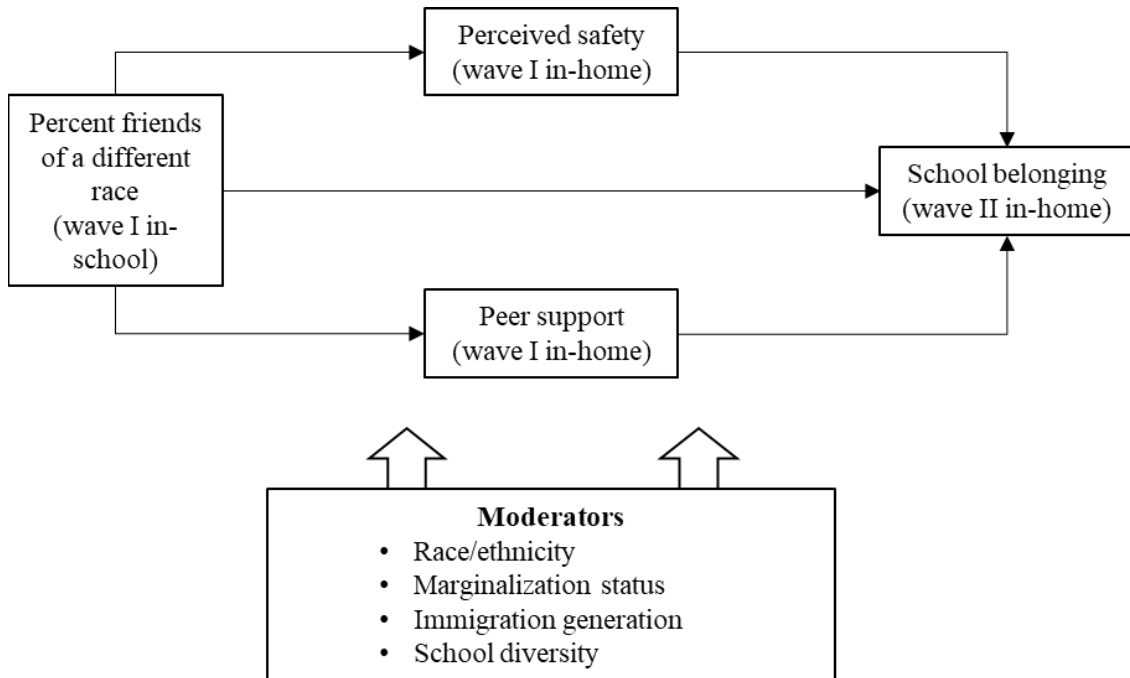
### **Statement of Purpose for the Current Study**

The purpose of the current study is to explore how the race and ethnicity-match between adolescent and their friends influence school belonging, for whom, and under what circumstances. Drawing on Bronfenbrenner's (1979) bioecological framework that people are innately intertwined within complex systems, this study integrates individual-level characteristics (race, marginalization, immigration generation) with microsystem experiences (friendships, peer support from friends, perception of school safety, school racial diversity, school belonging). To additionally integrate the previous research on a somewhat divided dichotomy of same-race and cross-race friends, it is important to quantify friendship racial composition as a continuum, rather than a cross-race vs. same-race friendship binary, such that fewer cross-race friends mean more same-race friends.

My research questions are whether more same-race friends relate to a higher sense of school belonging through higher peer support and whether more cross-race friends relate to higher school belonging through higher perceived safety at school (Research Question 1). A second question examines how these two primary relations under study vary as a function of the key individual and school demographics, specifically, for students of different races and ethnicities (White, Black, Asian, Hispanic, other), students who are numerically marginalized (i.e., having less than 15% of same-race peers at school), students who are immigrants (first-generation, second-generation, native), and for students studying in a racially diverse or non-diverse high school. The research hypotheses are:

1. Adolescents whose friendship networks consisted of more same-race friends experienced greater levels of school belonging one year later, mediated by:
  - a. Increased peer support (Hypothesis 1).
  - b. Increased perception of school safety (Hypothesis 2).
2. Adolescents whose friendship networks consisted of more same-race friends experienced greater levels of school belonging one year later, particularly for those who:
  - a. Are non-White (Hypothesis 3).
  - b. Are racially marginalized in their school (Hypothesis 4).
  - c. Are first-generation immigrants (Hypothesis 5).
  - d. Attend schools with less racial diversity (Hypothesis 6).





*Figure 1.* The conceptual model of relationships among the percentage of friends with a different race, perceived safety at school, peer support, and school belonging. Student’s race and ethnicity, marginalization status, immigration generation, and school diversity as moderators. Covariates not shown.

## CHAPTER III: METHOD

### Data and Participants

To address the research questions, analyses were conducted on data drawn from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a nationally representative sample of 20745 adolescents in grades 7 through 12 during the 1994-1995 school year (Harris, 2009). It is a longitudinal cohort study that follows individuals from Wave I to Wave V (1995-2018). Add Health used a multi-stage, stratified sampling that resulted in school-based clustered observations. One hundred and thirty-two schools (80 high schools and 52 associated feeder schools) constituted the initial sample and in-school surveys were administered to all students in grades 7 through 12 who were present at one of the sample schools on the day of the survey. The wave I sample consisted of students who were sampled from within each school for a more extensive in-home questionnaire. Respondents were followed up during 4 additional waves from April to September 1996 (wave II); April 2001 to May 2002 (wave III); April 2007 to February 2009 (wave IV); and March 2016 to May 2017 (sample 1, wave V).

The Add Health dataset includes direct measurement of the social contexts of adolescent life (e.g., peer, school, family, neighborhood) and their effects on health and health behavior. The study oversampled several ethnic groups including high socioeconomic status African Americans, Cuban, Puerto Rican, and Chinese and collected information about the nativity status of both the respondent and parents. The oversampling made the Add Health dataset unique with unprecedented diversity in race and ethnicity in a representative population of adolescents and

with a large number of youths from immigrant families. This dataset is uniquely suited to answer questions related to friendship characteristics of adolescents of different race and ethnicity and immigrant status because friendship network data are captured at each school. Students were asked to nominate up to five male and five female friends, and these nominations were then used to reconstruct the adolescents' social network. In addition, this dataset is amenable to multilevel modeling techniques that allow researchers to include school-level data with individual-level characteristics (Harris et al., 2009).

The data for the present research came from the Wave I in-school survey, the Wave I in-home interview and the Wave II in-home interview data. The Wave I in-school survey is the only wave with comprehensive friendship nomination data. This wave was the source for the construction of the independent variable (percent of cross-race friends). Most of the demographic covariates (see Table 1) also stemmed from this wave. Wave I's in-home survey contains a unique portion of parent interview data, from which some family background information such as socioeconomic status could be derived. The two mediators also came from this wave. Finally, the outcome variable, school belonging, was created from responses from the Wave II in-home survey to measure the outcome one year after friendship selection.

The Add Health design employed multistage sampling and resulted in clustered observations with the school as the cluster identifier and the primary sampling unit (Harris et al., 2009). From the selected schools, each adolescent was not chosen with equal probability, with oversampled subgroups. Thus, sampling weights were required to correct the design effects. When variables from multiple panels of data were involved, Chantala and Tabor (2010) suggested the use of the weights from the panel that was most recently collected. In this analysis, the cluster variable was the school identifier, the strata variable was the poststratification

adjustment by region, and the weights variable was the sample weight from Wave II. Only data with non-missing values of Wave II weights were included in the analysis (Chantala & Tabor, 2010). The final analysis dataset was produced by keeping the variables with a non-empty individual identifier and non-empty Wave II weights ( $N = 9,357$ ). The demographic characteristics of the adolescents were calculated by taking account of the complex survey design features and are reported in Table 1. This dataset is the basis on which missing data patterns and mechanisms were explored.

## Measures

**School belonging.** “School connectedness” or “school attachment” defined in past research using the data (Reynolds & Crea, 2017; Ueno, 2009), was assessed through three questions in wave II. On a Likert-type scale from 1 = strongly agree to 5 = strongly disagree, adolescents were asked to rate the following statements: “I feel like I’m part of this school,” “I’m close to people at this school,” “I’m happy at this school.” All items were reverse coded (e.g., 1 to 5, 2 to 4, etc.), so that higher values reflect higher belonging to school. The mean of the three items was calculated to be the school belonging composite (Cronbach’s  $\alpha = 0.78$ ;  $M = 3.78$ ,  $sd = 0.5$ ).

**Race and ethnicity.** Race and ethnicity were indicated by four dichotomous/dummy variables based on the responses in the Wave I in-school questionnaire. Race options included: White, Black or African American, Asian or Pacific Islander, American Indian or Pacific Islander, and others. Respondents also indicated whether they were Hispanic or not. In the current subset of the data, American Indian or Pacific Islander who were not Hispanics was less than 1% ( $N = 93$ ). 6% of the respondents who were not Hispanic chose more than one race ( $N = 577$ ). As a result, these two categories were recoded as other. The four dichotomous variables

were: Hispanic (claimed a Hispanic background, regardless of racial background; 18%), Black (marked black as the only race and did not claim a Hispanic background; 18%), Asian (marked Asian as their only race and did not mark a Hispanic background; 7%), and Other (non-Hispanic students who initially selected race as “other”, who marked more than one race, or Native Americans; 8%). If race was missing, the four dummy variable indicators were also coded as missing (rather than 0).

**Percentage of friends of a different race.** Every student who was present on the day the Add Health in-school questionnaire was administered filled out a friendship section. In this section, the respondents were asked to nominate up to five male and five female friends from a roster that identified all enrolled students in their school and the sister school (defined as the sample school in the same community as the student’s school). However, not all students’ names appeared on the roster from which the students identified because rosters were sometimes incomplete or contained errors, and not all students whose names were on the roster completed the in-school questionnaire. If the friend was not found on the roster, the respondent could indicate whether the friend went to the school, or the sister school, or neither. For respondents who both selected friends and received friendship selections, the percentage of friends with a different race was calculated from both their sent and receive networks. If the student only had a sent or receive network, the percentage was calculated from that one network. If the students’ race was missing, the percentage of friends with a different race was also coded as missing. In the current subset of the data, adolescents had 36% friends of a different race.

**Number of friends.** This variable was defined by the size of the student’s sent and receive network ( $M = 9.2, sd = 4.42$ ).

**Immigration generation.** Two dummy variables indicating first- and second-generation immigrant status were created. Students not born in the U.S. were coded as first-generation (9%). Students born in the U.S. with at least one foreign-born parent were coded as second-generation (13%). U.S-born students who lived with neither parent, who lived with a single US-born parent, or who lived with both US-born parents were coded as native (79%). Students who did not indicate where they were born were coded as missing.

**Peer support.** Students selected for the Wave I in-home interview portion were asked “How much do you feel that your friends care about you?”. Response options included 1 (not at all), 2 (very little), 3 (somewhat), 4 (quite a bit), 5 (very much) ( $M = 4.29, sd = 0.74$ ).

**Perceived safety at school.** On a Likert-type scale ranging from 1 = strongly agree to 5 = strongly disagree, adolescents were asked to rate the statement “You feel safe in your school”. The response was reverse coded such that higher values indicate higher perceived safety at school ( $M = 2.85, sd = 0.99$ ).

**School racial diversity.** This variable was defined as one minus the summed total of the squared proportion of students of a particular race in the school. The index ranges theoretically from 0 to 1 (current dataset ranges from 0.13 to 0.8), with values closer to 1 indicating greater racial diversity of the school overall. If two schools had the same number of racial groups, the school that had a more even distribution of students per racial group was considered more diverse than the other school. For grouping purposes, this variable was subsequently mean split into diverse and nondiverse schools.

**Racial marginalization status.** A dichotomous variable indicating whether the student’s racial representation was less than 15% in the school (Benner & Wang, 2015). First, I calculated

the percentages of the five racial categories (Hispanic, White, Black, Asian, or Other) in each school. Then, I determined the percentage of peers who did not share the student's race by matching individual races to school percentages of all other races. Finally, I created a dichotomous variable to identify each student's marginalization status (1 = marginalized [i.e., having more than 85% of peers at school from other racial and ethnic groups], 0 = not marginalized). The current sample included 17% ( $N = 1532$ ) racially marginalized students.

**School-mean family income.** A question about family income was asked during the parent interview section of the Wave I in-home interview. Numerical responses in the unit of thousands (k) were solicited ( $M = 47, sd = 49$ ). Next, the mean income for each school was calculated ( $M = 46.04, sd = 24.44$ ).

**Number of extracurricular activities.** The variable of school belonging relates to the number of extracurricular activities, such as sports teams, clubs, leadership positions, and band/orchestra (Dotterer et al., 2007). In the Wave I in-school questionnaire, the students were asked to select yes or no from a list of 33 extracurricular activities. The total number of selections was calculated as the number of extracurricular activities. On average, respondents participated in 2.51 extracurricular activities ( $sd = 2.54$ ).

**Grade-point-average (GPA).** Student's self-report letter grades (A, B, C, D, and lower) for English/Language Arts, Mathematics, History/Social Studies, Science were digitized as follows: 4 for A, 3 for B, 2 for C, 1 for D and lower. The grade-point average was the mean of those four classes ( $M = 2.9, sd = 0.79$ ).

**School size.** School size was estimated using the total number of Wave I in-school questionnaires received for each school because all students in grades 7 through 12 who were

present at one of the sample schools on the day of the survey completed the in-school questionnaire (Chantala & Tabor, 2010;  $M = 684.4$ ,  $sd = 475.3$ ).

**Age.** The variable of age was used as self-reported in the in-school questionnaire ( $M = 14.27$ ,  $sd = 1.51$ ).



Table 1

*Demographic Characteristics of Study Participants (N = 9,357)*

Variable	N (%)	N missing	% complete	M	SD	range
Wave I in-school questionnaire						
Percent cross-race friend	9143	214	97.70%	0.36	0.31	[0, 1]
Number of friends	9357	0	100%	9.2	4.42	[1, 33]
Age	9329	28	99.70%	14.27	1.51	[10, 19]
Sex	9296	61	99.30%			
Male	4389 (47%)					
Female	4907 (53%)					
GPA	8232	1125	88%	2.9	0.79	[1, 4]
Number of extracurriculars	9357	0	100%	2.51	2.54	[0, 33]
Race	9185	172	98.20%			
White	4478 (49%)					
Hispanic	1684 (18%)					
Black	1641 (18%)					
Asian	607 (7%)					
Other	775 (8%)					
Racial marginalization	9185	172	98.20%			
Marginalized	1532 (17%)					
Not marginalized	7653 (83%)					
Immigration generation	9104	253	97.30%			
Native	7151 (79%)					
Second generation	1161 (13%)					
First generation	792 (9%)					
School racial diversity	9357	0	100%	0.43	0.18	[0.13, 0.80]
School size	9357	0	100%	684.4	475.3	[29, 2350]
Wave I in-home interview						
Peer support	9312	45	99.50%	4.29	0.74	[1, 5]
Perceived safety	9266	91	99%	2.82	1.01	[1, 5]
School mean family income	9357	0	100.00%	46.04	24.44	[18, 212]
Wave II in-home interview						
School belonging	8702	655	93%	3.78	0.85	[1, 5]

## Missing Data

Figure 2 shows the percentage of missing data for all the variables and covariates. The variable with the largest amount of missing data was the covariate GPA (12%). The outcome variable school belonging was 7% missing. The main predictors percentage of cross-race friends, and friendship racial heterogeneity missed 2.29% and 0.68% of the data. Across different races, the missing data pattern for GPA was relatively balanced (White: 9.25%, Hispanic: 15%, Black: 16.5%, Asian: 7.41%, Other: 12.8%). Across different immigration generations, the missing data pattern for GPA was relatively balanced (Native: 11.9%, Second-generation: 11.3%, First-generation: 12.6%).

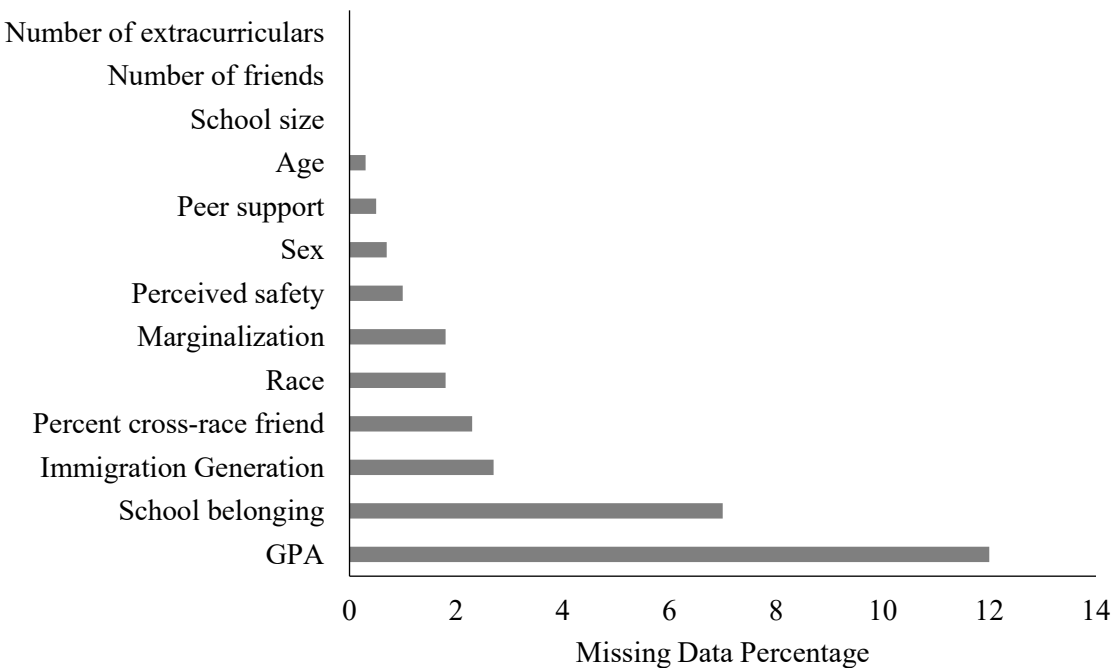


Figure 2. Percentage of missing data for each variable

Analyses of missing data were explored using the R package RBtest (Rouzinov & Berchtold, 2020). This package employs a regression-based approach on each variable with missing data based on the completely observed variables. This approach served to differentiate

whether variables were Missing Completely At Random (MCAR) or Missing At Random (MAR). The following variables were MCAR: marginalization status, immigration generation, years at the current school, age, and grade. The MAR variables were school belonging, percent of cross-race friends, friendship racial heterogeneity, race, sex, GPA, peer support, perceived safety, and socio-economic status. Whether variables were Missing Not at Random (MNAR) could only be determined by measuring some of the missing data after data collection, which was not possible given the secondary nature of this dataset.

Table 2  
*Correlation Matrix of Study Variables*

Variable or statistic	1	2	3	4
school belonging	—			
percentage of friends of a different race	-.06***	—		
perceived safety at school	.30***	-.05***	—	
peer support	.18***	-.05***	.15***	—

Note: \*\*\*  $p < .001$

### **Analytic strategy**

All descriptive statistics were calculated using R version 4.0.2 to account for the complex sampling design in the presence of stratification and clustering. Path analyses were conducted in a structural equation modeling framework to test the conceptual models. I first tested parallel mediation models to examine the relation between the percentage of cross-race friends and school belonging a year later mediated by peer support and perceived safety (Figure 3; Preacher & Hayes, 2008). Direct and indirect effects were estimated simultaneously using maximum likelihood estimation with robust standard errors (MLR). Standard errors of all indirect effects were estimated using the delta method (Muthén & Muthén, 2017).

My second set of models examined whether the relations under study varied by race, school racial diversity, racial marginalization status, and immigration status. I explored this series of moderated mediation relationships using multiple group analysis, where the interaction is applied across the path analysis model. I first estimated a free model allowing all paths/parameters to freely vary across groups. Then, I estimated a constrained model in which all parameters are fixed across groups, the same as the analysis of the pooled data. If the latter model fits the data well, then I conclude that there is no variation in the path coefficient parameters by group. If the latter model does not fit well, then I sequentially freed constrained parameter coefficients to allow them to vary across groups, until the model fits well. I then specified parameter constraints to compare the unstandardized coefficients of each path between groups via Mplus' *model constraint* command, which uses the maximum likelihood with robust standard error as the default estimator.

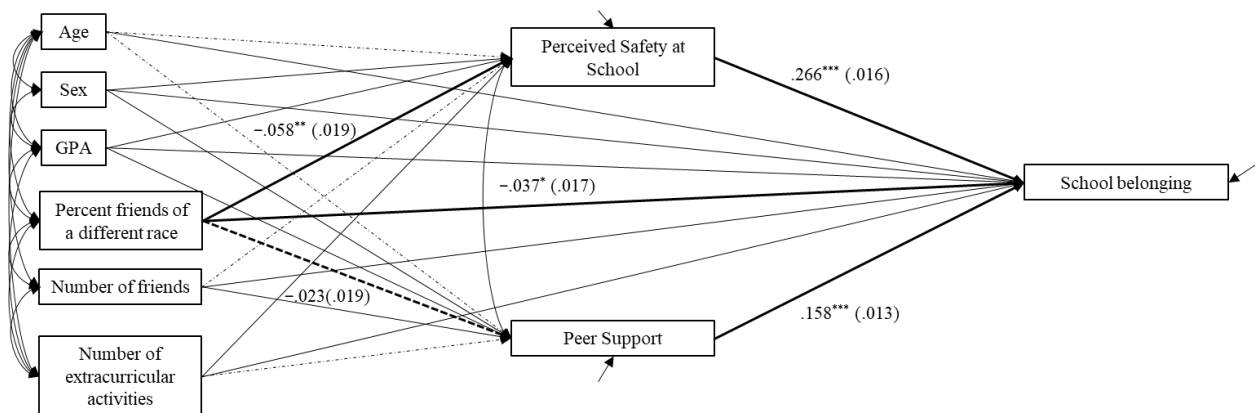
All analyses were conducted in Mplus version 8.4. The missing data of independent, dependent, mediator and moderator variables is handled using Mplus' default full-information maximum likelihood method. For Mplus to apply the full-information maximum likelihood method to covariates, the covariates must be included in the model, which invalidates model fit metrics. Therefore, the covariates' missing data had to be listwise deleted. After listwise deletion, the full dataset contained 8,028 observations, 85.8% of the original dataset of 9,357 observations. Before the analysis, a baseline model was estimated (school-belonging ICC = .026) and showed that the three level-2 covariates were not significant (school size  $p = 0.172$ , school mean family income  $p = 0.491$ , and school diversity  $p = 0.098$ ). As a result, they were excluded from the analysis and a two-level hierarchical model was not necessary. Instead, the dependency in the dataset (i.e., students nested in schools) was handled by estimating robust

standard errors with the model complex command with the sampling weight, cluster, and stratification information (McNeish et al., 2017).

## CHAPTER IV: RESULTS

### Parallel Mediator Model for the Total Sample

Hypothesis 1 and 2 stated that adolescents with fewer friends of a different race experienced higher peer support and higher safety, resulting in higher school belonging. These hypotheses were tested together using a parallel mediation model which estimated direct and specific indirect effects (Figure 3) (Preacher & Hayes, 2008). Results of the total, direct, and specific indirect effects are presented in Table 3. Results show that adolescents with more friends of a different race reported less belonging to their schools a year later, controlling for the total number of friends, the number of extracurricular activities, GPA, gender, and age (standardized total effect =  $-.056, p < .01$ ). Friend's race and ethnicity and school belonging was linked both directly (standardized direct effect =  $-.037, p < .05$ ) and indirectly through perceived school



*Figure 3.* Model Diagram. Dashed lines indicate nonsignificant paths ( $p > .05$ ). Parameter estimates (standard errors) labeled for significant paths between model variables. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

safety (standardized total indirect effect =  $-.019, p < .01$ ). Adolescents who made more cross-

race friends perceived lower safety at school ( $\beta = -.058, p < .01$ ), lower safety subsequently lowered school belonging ( $\beta = .266, p < .001$ ). The specific indirect effect through peer support was not significant ( $p > .05$ ). The level of peer support does not seem to be associated with the race and ethnicity of adolescents' friends ( $p > .05$ ), although higher peer support was related to increased school belonging ( $\beta = .158, p < .001$ ). Results from the pooled sample suggest that perceived school safety is the most important mediator (standardized specific indirect effect =  $-.016, p < .01$ ).

Table 3  
*Tests of Mediation for Path Analysis Models (Standardized)*

	$\beta$	<i>SE</i>
Total effect	-.056	.018**
Total indirect effect	-.019	.006**
Specific indirect 1 percent friends of a different race → perceived safety at school → school belonging	-.016	.005**
Specific indirect 2 percent friends of a different race → peer support → school belonging	-.004	.003
Direct effect	-.037	.017*

Note: \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$

### **The Moderating Role of Student and School Characteristics**

The second research question (hypotheses 3-6) asked whether the conceptual model (Figure 1) differentiated students' race and ethnicity, immigration generation, student racial marginalization status, and school racial diversity. I observed significant model differences among all four types of grouping characteristics. Table 4 provides estimates of the effects and paths that are significantly different across groups.

After constraining all structural parameters in the mediation model to be equal across the five subgroups of race (White, Black, Hispanic, Asian, other), I found that the overall model fit ( $\chi^2(108) = 283.435; p < .001$ ) was significantly lowered than when the parameters were allowed to freely vary across groups. The worsened model fit means that the paths (as a whole) are different across groups. A model with adequate fit to the data was obtained after allowing the following paths to vary across the five racial subgroups: direct effect path and both specific indirect effect paths [ $\chi^2(60) = 67.315, p = .24, RMSEA = .01, CFI = .99, SRMR = .028$ ].

Across racial subgroups, peer support did not mediate the relationship between the percentage of cross-race friendships and school belonging. Perceived school safety only mediated the relationship between the percentage of cross-race friendships and school belonging for White students (standardized specific indirect effect =  $-.02, p < .01$ ). Black students differed from White students on the specific indirect path via perceived safety ( $\beta = .11, p < .001$ ). Hispanic students also differed from White students on the specific indirect path via perceived safety (unstandardized  $\beta = .08, p < .05$ ). Paths that differed significantly among races and ethnicities are displayed in the first portion of Table 4. While the link between perceived safety and school belonging was significant for all races, Black students' sense of school belonging benefitted significantly less from perceived safety compared to both Hispanic students (unstandardized  $\beta = -.09, p < .05$ ) and White students (unstandardized  $\beta = -.10, p < .01$ ). The negative relation between percent of cross-race friends and perceived safety at school was only significant for White students, but not for any other specific race nor all the non-white races aggregated. Although greater peer support was significantly related to increased school belonging for students of all races except for Asian students, this relation was stronger for Black students



compared to Hispanic students (unstandardized  $\beta = .11, p < .05$ ) and White students compared to Hispanic students (unstandardized  $\beta = .11, p < .01$ ).

Across the three immigration generation groups (native, second-generation immigrants, first-generation immigrants), the fully constrained model did not fit the data well compared to a saturated model where all paths are allowed to vary freely ( $\chi^2(54) = 103.735; p < .001$ ). Therefore, the null hypothesis that the paths are the same across the immigration generation subgroups was rejected. Only the fully unconstrained path model (includes freeing the covariate paths, the residual variances, and the intercepts across subgroups) provided an adequate fit to the data (the saturated model, fit indices did not apply). For native students, more friends of a different race were associated with lower school belonging only indirectly through lower perceived school safety (standardized total effect =  $-.052, p < .05$ ; specific indirect effect =  $-.015, p < .01$ ; direct effect  $p > .05$ ). For first-generation immigrant students, more percentage of cross-race friends was related to lower school belonging only directly, with no mediation effect through either school safety or peer support (standardized total effect =  $-.192, p < .001$ ; direct effect =  $-.184, p < .001$ ). Second-generation immigrant students did not exhibit any associations among study variables. As can be seen in the second set of results in Table 4, the two paths showed significant differences among immigration generations. The direct effect path differed between native students and first-generation immigrant students (unstandardized  $\beta = .302, p < .05$ ) and between second-generation immigrant students and first-generation immigrant students (unstandardized  $\beta = .373, p < .05$ ). Only first-generation immigrant students experienced a significant negative association between the percentage of cross-race friends and school belonging. More perceived safety at school was significantly associated with more belonging at school for immigrant students of all generations, but this association was

weaker for first-generation immigrant students compared to both native students (unstandardized  $\beta = -.12, p < .01$ ) and second-generation immigrant students (unstandardized  $\beta = -.14, p < .05$ ).

Across the subgroups of students' racial marginalization status (marginalized, not marginalized), the fully constrained model did not fit the data well compared to a saturated model where all paths are allowed to vary freely ( $\chi^2(27) = 67.91; p < .001$ ). A model with the best fit to the data was obtained after allowing the specific indirect effect path through school safety to vary freely across groups [ $\chi^2(20) = 28.95, p = .08, RMSEA = .01, CFI = .99, SRMR = .037$ ]. As presented in the third set of results in Table 4, the racial majority (nonmarginalized) students with fewer cross-race friends reported higher school belonging through higher perceived safety. However, this specific indirect effect was not significant for marginalized adolescents. The association between the percentage of cross-race friends and school safety was significant for majority (nonmarginalized) students only. That is, only students who are in the racial majority group, but not the marginalized group, reported higher safety when they have a lower percentage of cross-race friends in their friendship network. The association between the percentage of cross-race friends and peer support was significant for marginalized students only. That is, only students in the racially marginalized group of the school reported a higher level of peer support when they have a lower proportion of cross-race friends.

Across two groups based on school racial diversity (diverse vs. not diverse), the fully constrained model did not fit the data well compared to a saturated model where all paths are allowed to vary freely ( $\chi^2(27) = 151.04; p < .001$ ). A model with the best fit to the data was obtained after allowing only the specific indirect effect paths through perceived school safety to freely vary across groups [ $\chi^2(20) = 22.06, p = .34, RMSEA = .005, CFI = .998, SRMR =$

.045]. As can be seen in the last sets of results in Table 4, only one significant moderation effect emerged. In schools that are both racially diverse and nondiverse, students who experienced higher safety also reported a higher sense of school belonging, but this link is stronger in a nondiverse context.

Table 4

*Significant Group Differences in Relations Among Percent Friends of a Different Race, Perceived Safety, Peer support, and School Belonging Across Race, Immigration Generation, School Racial Diversity, and Racial Marginalization Status*

Moderator	Path	Standardized coefficient estimates by group				
		Black	Hispanic	White	Asian	Other
Race and ethnicity	Percent friends of a different race → perceived safety at school → school belonging	.012	.003	-.018**	.011	.011
	1. Perceived safety at school → school belonging	.189***	.286***	.282***	.219***	.274***
	2. Percent friends of a different race → perceived safety at school	.062	.011	-.064**	.052	.041
	4. Peer support → school belonging	.209***	.094**	.169***	.136	.136**
Immigration generation	1. Perceived safety at school → school belonging 3. Percent friends of a different race → school belonging	Native	Second-Generation	First-Generation		
		.274***	.303***	.148**		
		-.033	-.009	-.184***		
Racial marginalization	Percent friends of a different race → perceived safety at school → school belonging 2. Percent friends of a different race → perceived safety at school 5. Percent friends of a different race → peer support	Marginalized	Nonmarginalized			
		.011	-.017**			
		.039	-.063**			
		-.028*	.006			
School racial diversity	1. Perceived safety at school → school belonging	Diverse School	Nondiverse School			
		.239***	.292***			

Note: \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## CHAPTER V: DISCUSSION

### **Friends' Race and School Belonging**

Belonging is a fundamental human need. School belonging during the teenage years is especially important because it fosters higher engagement, motivation, and academic achievement and serves as a protective factor for bullying, suicidal behaviors (K. Allen et al., 2018; Wormington et al., 2016). In the current study, I investigated the intersection of school and personal characteristics, seeking to understand how high school students' friendship patterns influenced school belonging. Further, I sought to establish whether the link between friends' races and school belonging was explained by perceived safety at school and peer support. In addition, I explored whether these relationships varied by key personal characteristics in relation to the school (i.e., race and ethnicity, immigration status, school racial diversity, and racial marginalization status).

First, my path analysis model with parallel mediators supported the first hypothesis that students whose friendship network included a larger proportion of friends of a different race reported lower perceived safety at school, which was further related to decreased school belonging one year later, even after accounting for sociodemographic factors such as age, sex, GPA, the total number of friends, and the number of extracurricular activities. Such finding extends the previous research that having more similar-looking individuals in an organization increases belonging to that setting (Good et al., 2012; Graham & Morales-Chicas, 2015). Staying in a familiar race "comfort zone" confers benefits to the sense of belonging. In contrast, the

finding that more cross-race friends were associated with lowered perceived safety was contrary to previous findings that more cross-race friends foster feelings of safety, particularly in minority students (Graham et al., 2014).

The findings did not support my second hypothesis, which hypothesized that a friendship network with a higher proportion of friends of the same race experienced higher peer support, which would further link to a higher level of school belonging. Even though increased peer support from friends was associated with higher school belonging a year later, the level of peer support was not influenced by the race and ethnicity match in an adolescent's friendship network. The latter finding was in contrast with previous research which found that the friendship quality of same-race friends was higher than friends of a different race (Kao & Joyner, 2004). Such contrast may have resulted from the inconsistent definition of friendship quality, which had been operationalized by the number of shared activities, intimacy, or stability, rather than the level of perceived peer support as defined in this study. The finding that the racial compositions of friends did not lead to extra peer support above and beyond controlled variables added support to previous evidence that after a cross-race friendship is formed, the quality is not different from a same-race friendship (Aboud et al., 2003; McDonald et al., 2013). It may also suggest that peer support may be the very differentiating feature between a general classmate and a friend, that is, a friend is a peer who supports socially, regardless of race and ethnicity. This lack of relationship between race of friends and peer support could inform school-wide initiatives that aim to increase belonging: peer support from peers of any racial and ethnic background will increase the school belonging of a student.

## **Moderating Effects of Race and Ethnicity**

Results from the multiple-group path analyses offered a more complex picture of how the associations linking the percentage of friends of a different race to school belonging are conditioned by race and ethnicity. As far as the perceived level of safety is concerned, an additional unit of increase in perceived school safety did not increase school belonging as much for Black students as for their White and Hispanic counterparts. This discrepancy means that Black students may experience additional, yet unique, barriers to higher school belonging as students of another race. These unique barriers could be issues that disproportionately affect black students such as inequity in school discipline (Bottiani et al., 2017). The racial discrepancy may also indicate that approaches to improve Black students' school belonging should be culturally sensitive. Previously demonstrated strategies that worked particularly well for the Black student population include adopting observational tools that critically assess belongingness opportunities, conveying such opportunities through classroom discourse, and examining those opportunities within historical contexts (Gray et al., 2018).

As far as peer support is concerned, greater peer support increased school belonging for Black, White, and Hispanic students. However, such associated benefit from peer support was the weakest for Hispanic students. This finding suggests that the same level of peer support did not help Hispanic students feel they belong to their schools as much as it did for Black and White students. This result may be due to the added layer of immigration experiences (e.g., English-Language Learner status) shared by many of the Hispanic students, which created an additional barrier to school belonging compared to Black and White students. Another important dimension of the psychosocial development of Hispanic youth is the role of family support networks. Regardless of family acculturation, Latinos of various national origins tend to be more family-

oriented than non-Latinos (Garcia-Reid et al., 2005). This emphasis on familism may suggest that Hispanic students are less influenced by peers compared to family members. Even though it appeared that greater peer support did not affect school belonging for Asian students, their experiences were not significantly different from any other racial and ethnic groups. For students of all races, despite that the race of friends did not matter for peer support, socially supportive peers could create more tight-knit school experiences for all other students.

On the other hand, only White students manifested a negative link between the percentage of cross-race friends and perceived safety at school, which suggested that White students felt safer staying within a segregated friendship circle. This finding was contrary to hypothesis three, which stated that the emotional benefit of having same-race friends to be most notable for non-White students. Previous research showed that the racial and ethnic composition of friends especially mattered for minority race students rather than majority race students, such as to foster a sense of racial identity or to reduce exposure to discrimination (Chen & Graham, 2017). The finding here could be explained by the confounding nature of race and popularity and academic orientation. For example, students who are more popular and more academically engaged tend to belong more to their school, and White students are more represented in the popular and academic-oriented groups (Ueno, 2009). Consequently, White students who have more same-race friends also experienced higher school belonging. Previous work has also documented that the perception of safety by White students was more easily impacted than that of Black students facing similar negative experiences such as bullying (Yang et al., 2021). This effect could be explained by social misfit theory which states that White students who deviate from the norm group (i.e., other White students) are more likely to experience negative adjustment outcomes, including a lower sense of school safety.



## **Moderating Effects of Racial Marginalization Status**

Only racially marginalized students, those whose race was represented in less than 15% of the entire student body, reported higher peer support when they had lower percentages of cross-race friends. This relationship was not present for nonmarginalized students. This pattern indicates that while the majority of students can receive peer support without considering the friends' race, for marginalized students, more friends of the same race mean additional support from peers. The added support from same-race friends of marginalized students may explain why it was previously found that when Asian and Latino student populations were less than 10% of their school, they are more likely to choose friends of their race (Quillian & Campbell, 2003). Interestingly, the link between friends' race or ethnicity and support was not present for any other groups besides the racially marginalized, suggesting that the concept of marginalization may be a better way of grouping students for intervention purposes than race or ethnicity. It is the racial representation relative to the school environment that matters for friendship selection to enhance support received and belongingness felt. Previous research has documented the usefulness of racial marginalization status in school-based prevention and intervention planning for both academic and social-emotional outcomes (Benner & Crosnoe, 2011). For example, greater attention to racial and ethnic balance in American schools might help curb substance use, particularly among racial and ethnic minority youths (Benner & Wang, 2015). In contrast, marginalization of underrepresented minority students could lead to racial isolation and create consequences such as token representation, stereotype threat, and unequal status between racial groups (Linn & Welner, 2007).

As far as safety is concerned, only nonmarginalized students reported that they feel less safe at school when they have more cross-race friends. This link is not present for marginalized

students. Marginalized students' safety was not influenced by their friends' race and ethnicities. In other words, having more friends of either the same or different races did not help marginalized students feel safer at school. This result was in contrast to previous findings that marginalized students who have more friends of the majority race are protected from sources of insecurity such as bullying and harassment (Mendoza-Denton & Page-Gould, 2008; Page-Gould et al., 2014). This pattern may mean that marginalized students' experience of safety is not simply achieved through either racial enclaves or integration and inclusivity. Marginalization itself creates sources of insecurity. When the taxing experience of being a numerically marginalized student is taken out, that is, when students are no longer numerically marginalized within the school, those who have more friends of the same race feel safer. Additional research is needed to clarify strategies to improve the safety and belonging of marginalized students, such as through specific programs and activities that foster interaction within the whole school community, and focuses on personalized issues such as family circumstances, mental health, trauma, and poverty (Pendergast et al., 2018).

### **Moderating Effects of Immigration Generation**

Extending prior research literature on the challenges faced by first-generation immigrant students, my results indicated that first-generation immigrant students uniquely experienced lowered belonging to school when they made more friends of a different race. This finding clarified the tension between two competing narratives of how to help newly arrived students feel they belong to their new school. Adopting an "assimilation" style of acculturation, students could be prompted to step out of the "comfort zone" to make friends of a different race. Such actions may help the newly arrived student to be familiar with the host school culture, minimize their differences, and to increase feelings of belonging. Previous research in support of this

narrative documented that diverse networks offered the reward of better person-environment fit (Ying et al., 2000). The second narrative taps into the “integration” style of acculturation theory, which emphasized that creating one’s own ethnic identities and retaining one’s unique cultural heritage through more friends of the same race or ethnicity increases the level of support and understanding experienced within the school, which increases a feeling of belonging (Chan & Birman, 2009). My findings here supported the second narrative: a key way to foster the belonging of first-generation immigrant students is not necessarily to encourage them to branch out of their comfort zone; staying within ethnic enclaves affords a sense of comfort and buffers many challenges associated with immigration, such as acculturative stress, linguistic barriers, and socioeconomic conditions, thereby helping to create more positive school experiences.

While students of all immigration generations experienced higher school belonging when they feel safer at school, this association was weakest for first-generation immigrant students compared to both native students and second-generation immigrant students. In other words, merely enhancing school safety seemed less effective for fostering school belonging for first-generation immigrant students than native and second-generation students. Further research is needed to understand the additional factors these newly arrived students have to overcome to help them feel they belong to their schools. This finding did not support the “immigration paradox” phenomenon observed by García Coll and Marks (2012). Instead, it provided evidence that first-generation immigrant students are most at-risk for suboptimal school experiences and are a group warranting attention for school-wide prevention and intervention efforts (He & Fischer, 2020; Weber et al., 2018). The school experiences of second-generation immigrant students were no different from those of non-immigrant students as far as friends, safety, and belonging are concerned. This result is consistent with the previous findings that second-

generation youth are the most successful in navigating their school social contexts, even at comparable or higher levels to their native peers (Reynolds & Crea, 2017; Waters & Gerstein Pineau, 2015).

### **Moderating Effects of School Racial Diversity**

After exploring how the model relationships differed based on individual characteristics, I further investigated whether the model relationships differed based on school-based characteristics, that is, school racial diversity. My finding revealed that the association between friends' race and ethnicity and school belonging did not differ with school racial diversity. In other words, whether the adolescent goes to a racially diverse or a nondiverse school, they all experienced higher belonging when they had more friends of the same race due to higher perceived safety. The only difference lies in the relatively weaker link between safety and belonging for students who went to a more racially diverse school. This pattern of the result was in line with previous research that suggested students' more immediate social environment (e.g., friends) mattered more for increasing educational achievement and school attachment than the more proximate, school-level racial characteristics (Benner & Crosnoe, 2011; Ueno, 2009). Moreover, my findings also strengthened the argument that increasing racial representation on school campuses alone is a necessary but not sufficient condition for a beneficial school environment (Linn & Welner, 2007; Mordechay, 2021).

### **Study Limitations and Directions for Future Research**

Despite the unique contributions of this study, several limitations warrant consideration. First, the racial and ethnic composition of the sample may have affected my power to detect possible group differences (Lubke & Dolan, 2003). Although the Add Health study oversampled

high social-economic status Blacks, Cuban, Puerto Rican, and Chinese adolescents, the sample still included a majority of White students (Chen & Harris, 2020). The analytic sample restrictions imposed in the study (i.e., students who remained in the same school across 2 years) further limited the representation of racial and ethnic minorities. Given the change of demographic composition in American schools due to increases in Latino and Asian American populations (Hussar et al., 2020), future research should revisit the racial composition of friendship networks with more racially and ethnically diverse and balanced samples. Similarly, the coding of race and ethnicities led to an overrepresented category of “other”. This category included students who were biracial or multiracial. Future research could benefit from either explicitly modeling the biracial students or narrowing it down to the one race they most identify with.

Moreover, the current study used a dataset collected from more than 20 years ago, while the demographic landscape of youth in American schools and the composition of American schools have changed dramatically in the past 20 years (Orfield & Frankenberg, 2014). The pattern of immigration and the experiences of immigrant students between the years 1994 and now have also evolved, especially in the U.S. south (Salas & Portes, 2017). Future research would benefit from a more recent social network sample to study the effect of friends’ races of immigrant students. In addition, the adolescents in the study reported being born outside of the U.S., and therefore categorized as first-generation immigrants, may be better characterized as 1.5-generation immigrants. The term 1.5-generation immigrants are used to describe people who immigrated to the United States in middle childhood (Rumbaut, 2004). They may share the experience with first-generation immigrants who immigrated as adults, but also with second-generation immigrants who spent a large portion of their developmental years in the United

States (Kim et al., 2003). The scope of this study precluded delving into these nuanced classifications of immigration generations.

Additionally, because of the secondary nature of the current analysis using the Add Health dataset, analyses were limited by the available data. For example, most of the variables of interest were drawn from self-report measures and sometimes single-item measures, which limited the clarity of the data and made the ratings subject to interpretation. Future research incorporating qualitative methods may clarify the subjective nuances in friend selection and delineate the mechanisms relating to school belonging. Moreover, while an intricate pattern of sociodemographic variables has been linked to school belonging in this study, it is important to note that the causal direction of the associations could not be determined. The associations between the themes discussed in this study remain correlational. It is also important to note that the independent variable, the percentage of friends of a different race, is a mere numeric and does not carry any valence, whereas the dependent variable, school belonging, carries intrinsic positive valence.

Future research could also consider exploring these issues within the transformative social and emotional learning (SEL) framework. Transformative SEL was intended to promote equity and excellence among children and adults anchored in justice-oriented citizenship (Jagers et al., 2019). It seeks to employ SEL to address the root cause of inequities that derived from racialized oppression in the United States and globally. The transformative SEL framework outlined five core competencies: self-awareness, self-management, social awareness, relationships skills, responsible decision making (Jagers et al., 2019). Belonging, identity, relationships, and cultural competency are a few of the areas to nurture in children and adolescents. The Add Health dataset did not include variables that could be important mediators

between friendship racial characteristics and school belonging such as ethnic-racial identity. Adolescents with more friends of the same race have a more positive ethnic-racial identity (Chen & Graham, 2017; Yip et al., 2019). Minority youths with a strong ethnic-racial identity are buffered against the negative health and educational outcomes of discrimination and are characterized by a sense of belonging to their ethnic groups (Umaña-Taylor, 2016). Further research should clarify the mediating and protective role of ethnic-racial identity.

In addition to exploring racial interaction patterns on a peer level, it would be interesting to investigate how the match of racial and ethnic identity of teacher and student could influence school belonging and other social-emotional and academic development. Adolescence is a period when relationships with nonparental adults take on increased meaning because adolescents are seeking support and guidance from adults outside of the home. Good teacher-student relationships contribute more to a student's sense of school belonging compared to peer relationships (Allen et al., 2018). Supportive teachers also play a particularly important role in school compliance, sense of school identification, and subjective valuing of learning at school in the adolescent years (Wang & Eccles, 2012). A match of teacher and child race also reduces students' externalizing behaviors (Wright et al., 2017).

Finally, race or ethnicity is only one of the many possible factors in inter-group interactions of adolescents' school experiences. Comparative research drawing from intergroup contact theory (Pettigrew, 1998) could study how other forms of intergroup contacts influence the adolescent's sense of belonging and social competency, for example, friendships across disability status (Bagci et al., 2018), special-education enrollment status, sexual identity, and family socioeconomic status.

## **Conclusion**

Adolescents' sense of belonging to school fosters a host of positive outcomes, and belonging is associated with the racial composition of their friends. Having more friends of a different race is associated with higher social competency and lower prejudice, the benefits which can permeate into the society as they grow up into adults. Despite the benefits of having more cross-race friends, more same-race friends help adolescents feel they belong more to their schools, regardless of their race, immigration generation, and diversity of their schools. The mechanism of this association was, however, different for different students. Students with more same-race friends generally feel safer at school. For marginalized students, in particular, such experience was mediated by higher levels of peer support. First-generation immigrant students are particularly sensitive to the race or ethnicity of their friends such that they need an ethnic enclave to experience a higher sense of school belonging. The findings reported here also suggest that racial categories by themselves are less meaningful than marginalization status, and possible intervention avenues should focus on students' racial marginalization status relative to their school, instead of just their races or ethnicities.



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