

# **Cross-ethnic Friendships in Multiethnic Educational Settings: Consequences for Psychological, Academic and Motivational Outcomes among Young Adolescents**

Thesis submitted

by

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## **Declaration**

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I, Sabahat Cigdem Bagci, confirm that the work presented in this thesis is my own.

Sabahat Cigdem Bagci



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## Acknowledgements

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Looking back at the day I decided to embark on a PhD degree in the UK, I realize now that I did not know anything about real hard-work, self-motivation, commitment, and achievement back then. This process has contributed substantially to my ‘personal resilience’, by teaching me how to bounce back from difficulties and cope with adversity and challenges, how to create something on my own, how to collaborate with people and take initiatives at the same time, how to adjust to new situations and learn from mistakes. I feel that I have become not only an independent researcher, but a more thoughtful and motivated individual who is now stronger than ever.

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## **Abstract**

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Cross-ethnic friendships are likely to constitute an important feature of children's social world in multiethnic educational settings such as London secondary schools, which are now more ethnically diverse than ever. This thesis extends current knowledge on cross-ethnic friendships by examining the prevalence and effects of such friendships on various developmental outcomes among ethnic majority and minority status children attending multiethnic schools. While Chapter 1 presented an overview of the literature on cross-ethnic friendships, following empirical chapters (Chapters 2-6) demonstrated findings from a comprehensive 3-wave school study conducted in London schools. Chapter 2 focused on patterns of cross-ethnic friendships and showed specific relationships between ethnic diversity, ethnic group and cross-ethnic friendships. Chapter 3 indicated that cross-ethnic friendships are related to positive outcomes such as psychological well-being, resilience and academic outcomes and moderate the negative effects of discrimination. Chapter 4 showed that interpersonal processes of self-disclosure and ideal self affirmation mediated the associations between cross-ethnic friendships and well-being measures. Chapter 5 examined anxiety and intimate self-disclosure in both same- and cross-ethnic friendships and indicated that reduced anxiety is a unique process whereby cross-ethnic friendships relate to positive outcomes. Chapter 6 revealed longitudinal associations between cross-ethnic friendships and positive outcomes and showed that these associations are stronger in classrooms with lower classroom racial tension. Finally, Chapter 7 investigated cross-ethnic friendships in the light of motivational outcomes; results of two experimental studies indicated that mental representations of cross-ethnic friendships may have effects on future career and academic choices of ethnic minority young adolescents. Overall, findings show that cross-ethnic friendships are important resources for children, providing benefits for the development of psychological, academic and motivational outcomes among children. The role of cross-ethnic friendships on positive development is discussed in the light of ethnic group differences and implications for school policies in multiethnic settings (Chapter 8).

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## General Introduction

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Today, cross-ethnic relationships constitute a crucial aspect of everyday life in many Western countries experiencing a sharp increase in ethnic diversity (e.g., Castles & Miller, 2003; Hooghe, Reeskens, Stolle, & Trappers, 2006; Hooghe, Trappers, Meuleman, & Reeskens, 2008). Recent statistical research has shown that this growth will continue during the next decades. For example, in the UK, while the total ethnic minority population was indicated as 13% by 2006, population estimates showed that this rate would reach 44% by 2056 (Coleman, 2010). Hence, it is important that social relationships between different ethnic group members function well in such ethnically diverse environments in order to promote the well-being of individuals and groups.

Although intergroup relationship literature has contributed substantially to the understanding of how different ethnic group members live together, it is critical to evaluate these relationships considering the ecological context where such specific cross-ethnic relationships take place. With such increasing ethnic diversity, cross-ethnic relationships have become not only important, but also more complicated than they used to be two decades ago. Today, it is known that cross-ethnic relationships are shaped by various factors from the effect of power and status of ethnic groups in the society to the effect of school organization (e.g., Hallinan & Teixeira, 1987). It is also known that they relate to various aspects of life, affecting a host of social and developmental outcomes (e.g., Kawabata & Crick, 2011). Since *Brown versus Board of Education Supreme Court* decision in the US (1954), a great deal of advancement has been achieved in relation to intergroup relationship research. Yet, relationships between members of different groups are often dynamic and complex; this requires further investigations of such relationships in various spaces and times, addressing new research questions that would offer significant contributions to this field.

Especially critical to consider are close cross-ethnic relationships among children in today's multiethnic settings, since research has shown these types of relationships have influences on a number of outcomes including not only positive outgroup attitudes (e.g., Aboud, Mendelson, & Purdy, 2003), but also various social-developmental outcomes such as social skills and competencies (e.g., Hunter & Elias, 1999; Lease & Blake, 2005), sense of safety (Munniksma & Juvonen, 2012) and peer victimization (Kawabata & Crick, 2011). Still, this literature provides only limited knowledge about how close intergroup relationships formed during childhood and early adolescence influence psychological, academic and motivational functioning of ethnic minority and majority status children living in school contexts becoming extremely diverse.

This thesis seeks to investigate cross-ethnic friendships as a form of close intergroup relationships among children, with a special focus on the formation of these friendships in relation to ethnic diversity and ethnic group differences. More importantly, this thesis aims to unveil the role of cross-ethnic friendships in positive development, by focusing on psychological, academic and motivational outcomes in children and young adolescents. The following chapter (Chapter 1) summarizes recent research trends in cross-ethnic friendship literature by overviewing research on both the formation and consequences of these friendships. This chapter further outlines main research questions of this thesis in the light of previous theoretical and empirical work. While Chapter 2 investigates exclusively the formation of cross-ethnic friendships in such multiethnic settings, following empirical chapters (Chapter 3 to Chapter 7) explore the consequences of children's cross-ethnic friendships in positive developmental outcomes. Finally, Chapter 8 provides a general discussion of the findings by highlighting the implications of the results for developmental and social psychology research.

## Chapter 1

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### Cross-ethnic friendships among children: a review of the literature

Friendships constitute a critical aspect of one's social environment during all periods of life. A great deal of research has been devoted to understand the formation and maintenance of friendships, as well as their consequences in a diverse range of positive outcomes including happiness, psychological well-being and self-esteem (e.g., Demir, Ozdemir, & Weitekamp, 2007; Diener & Seligman, 2002), social competence (Glick & Rose, 2011), and academic outcomes such as academic achievement, adjustment and goal orientations (Berndt & Keefe, 1995; Wentzel, Barry, & Caldwell, 2004; Wentzel & Caldwell, 1997). While for young children and toddlers, family relationships are the best predictors of life satisfaction (Huebner, 1991); for older children and young adolescents, friendships with peers become an increasingly important facet of social life contributing to well-being and self-esteem (Brechwald & Prinstein, 2011; Dunn, 2004). During this period, having good quality friendships could lead to more positive views of the self and increase various social skills such as leadership and sociability (Hartup & Stevens, 1999).

Although the developmental psychology literature has provided an extensive set of knowledge on peer relations during childhood and early adolescence, one limitation of this literature has been an exclusive focus on ethnic majority status children and friendships among same-ethnic peer groups (Kawabata & Crick, 2008). Recently, with the increase in ethnic diversity in many Western cities, it has been impossible to ignore the potential role of cross-ethnic friendships in children's world. Therefore, research in cross-ethnic friendships has witnessed an increased interest in the last decade, questioning how these friendships are formed, maintained and translated into various social and developmental outcomes among

children. The aim of this chapter is to provide an overview of previous findings, by focusing on the formation and consequences of these friendships.

## **1. Cross-ethnic friendships: Their formation**

The first step to understand cross-ethnic friendships is to look at their formation. How do close positive relationships between different ethnic group members form in the first place? Since cross-ethnic friendships have been associated with many positive outcomes in childhood (e.g., Aboud et al., 2003; Lease & Blake, 2005), it is important to explore how these friendships develop in different settings. This section will examine the links between ethnic diversity and cross-ethnic friendships in relation to intergroup contact and friendship formation theories and provide an overview of previous empirical research investigating patterns of cross-ethnic friendships among children.

### **1.1. Intergroup contact, ethnic diversity and cross-ethnic friendships**

Earlier studies in the intergroup relationship literature focused extensively on intergroup contact theory proposed by Allport (1954). Allport stated that contact between different ethnic group members is one of the best strategies to reduce negative intergroup attitudes, if contact included the support of authorities, equal status, cooperation, and common goals. Although these conditions were suggested to be facilitators rather than necessary conditions in further studies (Pettigrew & Tropp, 2006), Allport's contact hypothesis has paved the way to many subsequent research studies motivated by reducing prejudice and improving positive outgroup attitudes.

Although a large literature has provided evidence for the effectiveness of intergroup contact in improving outgroup attitudes in various ingroup-outgroup situations (see Pettigrew & Tropp, 2008; Pettigrew & Tropp, 2006), scholars argued that intergroup contact alone may not result in more positive intergroup relationships (e.g., Dovidio, Gaertner, & Kawakami, 2003). Consequently, Pettigrew (1998) reformulated the contact hypothesis by adding a

further condition for contact to be effective - friendship potential - which encompasses most of the aspects of Allport's initial conditions and provides multiple opportunities for contact and self-disclosure. Accordingly, cross-group friendships should have stronger effects on intergroup relationships, because they are often characterized by a long-term, mutual and positive relationship that involves affective processes. With this reformulation, cross-group friendships, rather than contact per se, have been found to be successful in decreasing outgroup prejudice in various settings (e.g., Levin, van Laar, & Sidanius, 2003; Pettigrew, 1997; Phinney, Ferguson, & Tate, 1997; Wagner, Christ, Pettigrew, Stellmacher, & Wolf, 2006; Wagner, van Dick, Pettigrew, & Christ, 2003). Following this research trend, Pettigrew and Tropp (2006) indicated that contact-prejudice association was stronger when the contact measure included friendship potential.

As research has demonstrated that intergroup contact and friendships are efficient tools that decrease outgroup prejudice, ample research has examined the determinants of these processes. One of the heavily studied factors in this literature has been ethnic diversity. A great deal of research has investigated ethnic diversity as one of the indicators of intergroup contact and friendships (e.g., Hallinan & Smith, 1985; Patchen, 1982). Accordingly, research supporting the benefits of school desegregation plans in the US and intergroup contact theory has suggested that the ethnic diversity of the school/classroom should decrease negative outgroup attitudes such as discrimination and promote cross-ethnic interaction and friendships (e.g., Quillian & Campbell, 2003).

Hallinan and Teixeira (1987), who investigated cross-ethnic friendships in desegregated schools in the US, stated that "the desegregated classroom is an environment that maximizes opportunities for Black and White children to interact and develop positive social ties" (p. 1354). Consistent with this, many empirical papers demonstrated that the number of potential cross-ethnic friends had a direct positive link with the formation of cross-

ethnic friendships (e.g., Hallinan & Smith, 1985; Howes & Wu, 1990; Quillian & Campbell, 2003; Sigelman, Bledsoe, Welch, & Combs, 1996). DuBois and Hirsch (1990) found that students who lived in ethnically heterogeneous neighbourhoods reported a higher number of close cross-ethnic friends compared to the ones living in ethnically segregated neighbourhoods. Similarly, Patchen (1982) found that White American students who lived in ethnically heterogeneous neighbourhoods reported more friendly cross-ethnic contact and higher numbers of cross-ethnic friendships compared to the ones who lived in segregated neighbourhoods.

Contrary to studies supporting the direct effect of ethnic diversity on the formation of cross-ethnic friendships, other studies found that greater ethnic diversity may not directly promote positive intergroup relationships. Accordingly, Dejaeghere, Hooghe, and Claes (2012) found that classroom ethnic diversity did not have an effect on ethnocentrism among majority group late adolescents in Belgian schools, unless the perceived intergroup relationship quality was high. Dejaeghere et al. noted that studies investigating the effects of ethnic diversity often fail to take into account the role of ethnic segregation which may have negative influences on the formation and development of cross-ethnic friendships.

In line with the above suggestion, Moody (2001), using a national sample of US adolescents, argued that increasing the number of ethnic minorities in schools may result in ethnic self-segregation, because ethnic minority group students may find sufficient numbers of students from their own ethnic group to befriend. Moody found that the relationship between ethnic diversity and cross-ethnic friendships was not a linear one; ethnic segregation was highest in moderately heterogeneous schools, where race becomes a salient feature of interpersonal relationships. Mouw and Entwistle (2006) also pointed to the importance of ethnic segregation among American adolescents by emphasizing the link between school/neighbourhood segregation and friendship segregation. These findings imply that the

potential for cross-ethnic friendships may not directly translate into actual cross-ethnic friendships.

## **1.2. Friendship formation theories: Homophily versus Propinquity**

One should also explore main friendship formation theories to understand how interpersonal attraction mechanisms function in connection with cross-ethnic friendships. Here, two mechanisms are important to note. First, it has been suggested that *homophily*, the tendency to approach the ones who are similar to us, is an important factor affecting friendship formation. Research has demonstrated that race/ethnicity is an important category individuals attend to when forming various interpersonal relationships (McPherson, Smith-Lovin, & Cook, 2001). Other researchers have consistently argued that ethnic/racial homophily is one of the reasons why individuals self-segregate around their own ethnic group (Kandel, 1978; Moody, 2001; Quillian & Campbell, 2003). A possible explanation for this inclination is the similarity attraction hypothesis which states that under normal circumstances individuals are drawn to the ones who are similar to them (e.g., Aboud & Mendelson, 1996).

Although ethnic/racial homophily has been a major factor researchers have emphasized in the choice of friendships, another complementary, but opposite force has been identified to affect friendship formation. This is *propinquity*, which has been defined as the tendency to form friendships with the ones who share a similar social situation (Quillian & Campbell, 2003) or the opportunity for contact (Mouw & Entwistle, 2006). One of the basic suggestions about the propinquity principle was by Blau (1977) who argued that individuals may have a preference to form same-ethnic friendships; yet contextual factors, specifically the size of the same-ethnic group, may not satisfy that desire. In other words, if the size of the ingroup is too small, individuals would resort to interact with outgroup members.

Accordingly, research has shown evidence for the direct relationship between opportunities for contact and the formation of cross-ethnic friendships (e.g., Turner, Hewstone, & Voci, 2007).

Quillian and Campbell (2003) indicated that in ethnically heterogeneous environments, friendship formation may be influenced by both homophily and propinquity principles. While similarity and familiarity, along with the desire to affirm ethnic identity and cope with discrimination would lead to a preference for same-ethnic friendships (Hamm, Brown, & Heck, 2005; Peshkin, 1991; Tajfel & Turner, 1979; Wilson & Rodkin, 2012), opportunities for cross-ethnic contact in an organizational structure, along with the desire to expand social networks to attain various resources (e.g., self-expansion model, Aron & Aron, 1986) would enhance the formation of cross-ethnic friendships. Therefore, both factors may play an equally important role in the formation of cross-ethnic friendships in ethnically diverse environments.

### **1.3. Quantity, quality and stability of cross-ethnic friendships: Empirical findings**

As intergroup contact theory, both the original (Allport, 1954) and reformulated version (Pettigrew, 1998), has had a major impact in social psychology and to some extent in developmental psychology, studies after desegregation projects in the US investigated the formation of cross-ethnic friendships in integrated schools to find out whether desegregation had successful outcomes in promoting positive intergroup relations (e.g., Clark & Ayers, 1992; Hallinan & Teixeira, 1987; Howes & Wu, 1990). Consequently, a great deal of studies has compared cross-ethnic and same-ethnic friendships on various aspects such as quantity, quality and stability. These studies will be outlined to illustrate whether the aforementioned friendship and contact theories have been empirically confirmed.

Earlier studies on intergroup relationships in the US concentrated mostly on Black and White interracial contact and friendships in schools. Although it was expected that school

integration and ethnically heterogeneous environments would result in more frequent and higher quality cross-ethnic friendships, initial findings revealed that cross-ethnic friendships were still uncommon (Clark & Ayers, 1992; Hallinan & Teixeira, 1987; Hallinan & Williams, 1989; Howes & Wu, 1990; Jackman & Crane, 1986; Shrum, Cheek, & Hunter, 1988; Tuma & Hallinan, 1979). These findings suggested that simply increasing ethnic diversity or the number of ethnic minority groups may not lead to stronger cross-ethnic relationships.

Subsequent studies including more diverse samples confirmed the relative rarity of cross-ethnic friendships compared to same-ethnic ones. For example, Kao and Joyner (2004) found that cross-ethnic friendships were infrequent compared to same-ethnic friendships among a nationally diverse sample of Americans adolescents. Studies with ethnic minority and majority groups in the UK (Boulton & Smith, 1992; Davey & Mullin, 1982; Leman & Lam, 2008; Reynolds, 2007) and in Europe (e.g., Verkuyten, 2001) also tended to show a same-ethnic friendship preference among children and adolescents.

Few other studies, although generally demonstrating cross-ethnic friendships to be rare compared to same-ethnic friendships, have shown that cross-ethnic interactions and friendships are becoming increasingly common. For example, Graham and Cohen (1997) found that same-ethnic friendships were overall more common than cross-ethnic ones; however, the majority of cross-ethnic evaluations were positive on acceptance measures. DuBois and Hirsch (1990), studying a sample of White and Black American junior school students, concluded that most students had a close cross-ethnic friend, although only a minority of these friendships extended to outside school. Hunter and Elias (1999) found that cross-ethnic friendships were not particularly infrequent among an ethnically diverse sample of American students. In a study conducted in two ethnically diverse schools in Canada, Smith and Schneider (2000) found no evidence for ethnocentrism among 7<sup>th</sup>-8<sup>th</sup> grade

students. The authors indicated that cross-ethnic friendships were more common than what has been suggested in earlier studies.

Previous research has also compared same- and cross-ethnic friendships on various quality measures. The majority of research has shown that cross-ethnic friendships are lower in quality compared to same-ethnic ones. For instance, Paterson (2010) found that compared to same-ethnic friendships, cross-ethnic friendships were lower in various aspects of friendship quality such as intimacy, self-disclosure, positive friendship functions, and affection among South Asian and White British undergraduates. Similarly, Shelton, Trail, West, and Bergsieker (2010) found that intimacy in cross-ethnic friendships was lower compared to intimacy in same-ethnic friendships among White and Black participants. Other factors such as shared activities (Kao & Joyner, 2004) and perceived support (Chan & Birman, 2009) have been also demonstrated to be lower in cross-ethnic friendships. Moreover, cross-ethnic friendships among children have been found to be more difficult and challenging to maintain (Pica-Smith, 2011) and are rarely nominated as best friends (Hallinan & Teixeira, 1987; Kao & Joyner, 2004; Reynolds, 2007).

Contrary to these studies, some researchers indicated that the quality of cross-ethnic friendships may not be necessarily low. For instance, with an ethnically diverse sample of Canadian elementary school students, Aboud et al. (2003) found that apart from intimacy which was lower in cross-ethnic friendships, other friendship quality measures such as emotional security and loyalty were not lower in cross-ethnic friendships than in same-ethnic ones. The authors indicated that once these types of friendships are formed, they may be similar to same-ethnic friendships on various aspects of friendship quality.

Moreover, cross-ethnic friendships have been found to be less stable compared to same-ethnic friendships (e.g., Aboud et al., 2003; Lee, Howes, & Chamberlain, 2007). Rude and Herda (2010) revealed that cross-ethnic friendships were less stable than same-ethnic

ones, even after controlling for school ethnic composition and friendship similarities in behaviors and attitudes. The authors also demonstrated that friendship reciprocity and closeness were the most significant predictors of cross-ethnic friendship stability. Similarly, Jugert, Noack, and Rutland (2013) examined factors that influence friendship stability and showed that cross-ethnic friendships were indeed less stable than same-ethnic ones. Moreover, empathy and perceived social norms were significant predictors of cross-ethnic friendship stability over a five months period.

On the contrary, some researchers did not find cross-ethnic friendships to be less stable compared to same-ethnic ones. Hallinan and Williams (1987), studying cross-ethnic friendship stability among White and Black American children attending desegregated schools, found that although cross-ethnic friendships were uncommon, they were stable over several weeks and months, almost as stable as same-ethnic friendships. McGill, Way, and Hughes (2012), using a sample of Black, Asian and Latino American adolescents, found that cross-ethnic friendships were even more stable than same-ethnic ones. The authors suggested that because cross-ethnic friendships are difficult to form in the first place, they may last longer after their initial formation.

#### **1.4. Summary**

Section 1 provided an overview of the literature on cross-ethnic friendships in the light of contact and friendship formation theories. The majority of findings suggest that there is a positive link between ethnic diversity and opportunities for cross-ethnic friendships and actual cross-ethnic friendship formation, although ethnic self-segregation should be taken into account. Two major forces are likely to operate in the formation of cross-ethnic friendships; while homophily suggests that people tend to be attracted to the ones who are similar to them, and consequently form more same-ethnic friendships, propinquity supports

intergroup contact theory and suggests that proximity with other ethnic groups would increase the formation of cross-ethnic friendships.

This section further evaluated empirical findings about the quantity, quality and stability of cross-ethnic friendships relative to same-ethnic friendships. While the general trend in this literature demonstrates that cross-ethnic friendships are usually rare, lower in quality and less stable compared to same-ethnic friendships, other research has shown that same- and cross-ethnic friendships may not necessarily differ in terms of friendship measures such as quality and stability. These findings suggest that the historical and cultural context, as well as the dynamics of the specific environment where cross-ethnic relationships are formed and maintained should be taken into account in order to fully understand these types of friendships.

## **2. Cross-ethnic friendships: Their outcomes**

Although the formation and the maintenance of cross-ethnic friendships have been a major focus for intergroup relation researchers, another line of research in cross-ethnic friendships has investigated the outcomes of these friendships. This section will outline the role of cross-ethnic friendships in two main areas: outgroup attitudes and developmental outcomes.

### **2.1. Cross-ethnic friendships and outgroup attitudes**

Following the success of intergroup contact theory (Allport, 1954), positive cross-ethnic interactions have been consistently suggested to be an efficient way to reduce ethnic prejudice and improve intergroup attitudes (e.g., Masson & Verkuyten, 1993; Pettigrew, 1998; Pettigrew & Tropp, 2006). In line with this assumption, various studies have shown that cross-ethnic interactions and ethnic diversity were related to more positive outgroup attitudes and evaluations amongst children (e.g., McGlothlin & Killen, 2010).

Studies exclusively focusing on cross-ethnic friendships among children revealed that these types of friendships are associated with more positive outgroup attitudes and behaviors. Aboud et al. (2003) demonstrated that cross-ethnic friendships were associated with lower levels of negative outgroup bias among children. In a longitudinal study including ethnic majority and minority students in Germany, Feddes, Noack, and Rutland (2009) indicated that cross-ethnic friendships were related to more positive outgroup attitudes over time. Another longitudinal study by Levin et al. (2003) showed that cross-ethnic friendships during the second and third year of college were associated with decreases in negative outgroup attitudes at the end of college.

Previous research has also investigated how exactly cross-ethnic friendships relate to more positive outgroup attitudes. Studies investigating the mediators between intergroup contact and outgroup attitudes have mostly focused on two aspects of intergroup contact: cognitive and affective processes. While increased knowledge about the outgroup has been proposed as a cognitive mechanism whereby intergroup contact reduces prejudice (Pettigrew & Tropp, 2008), decreased intergroup anxiety (Islam & Hewstone, 1993; Voci & Hewstone, 2003) and increased empathy and perspective-taking (Batson, Lishner, Cook, & Sawyer, 2005) have been suggested as affective mechanisms in this relationship. In a recent meta-analysis, Pettigrew and Tropp (2008) demonstrated that all these three variables mediated the relationship between intergroup contact and outgroup attitudes.

Investigating particularly cross-ethnic friendships, various mediating processes have been also identified. Among these, Turner et al. (2003) showed that cross-ethnic friendships improved explicit outgroup attitudes through decreased intergroup anxiety and increased self-disclosure among White and South Asian British children. Turner et al. indicated that self-disclosure is one of the most critical aspects of cross-ethnic friendships that significantly reduce negative outgroup attitudes, because self-disclosure with cross-ethnic friends should

enable children to acquire important resources and skills, and increase the importance of cross-ethnic friendships. Other studies found that perceived social norms (Feddes et al., 2009) and increased cognitions of rejection (Barlow, Louis, & Hewstone, 2009) mediated the effects of cross-ethnic friendships on outgroup attitudes.

It has been suggested that even extended cross-ethnic friendships, the knowledge that an ingroup member has a close cross-ethnic friend, may improve outgroup attitudes.

Proposed initially by Wright, Aron, McLaughlin-Volpe, and Ropp (1997), extended contact theory showed that observing and learning about ingroup members' cross-group friendships may decrease negative outgroup attitudes. The authors suggested that extended contact helps improving positive outgroup attitudes through the inclusion of the outgroup membership in the self and the observation of positive cross-ethnic friendships. Other research has confirmed the effectiveness of extended cross-ethnic friendships among children (e.g., Cameron, Rutland, Brown, & Douch, 2006).

## **2.2. Cross-ethnic friendships and positive developmental outcomes**

Although a great deal of research has been conducted to fully understand how cross-ethnic friendships are associated with outgroup attitudes and prejudice in particular, it is surprising that only a limited amount of research have been conducted to reveal other outcomes of cross-ethnic friendships, especially in terms of positive development (e.g., psychological well-being, resilience, academic performance). Today, it is a well-known fact that cross-ethnic friendships, as the strongest form of contact, have positive influences on intergroup relationships. However, little is known about how cross-ethnic friendships are associated with other positive outcomes in children's lives.

One of the few questions addressed in relation to the role of cross-ethnic friendships in positive development has been whether these types of friendships are associated with

social competence and skills. Accordingly, Hunter and Elias (1999) examined the links between cross-ethnic friendships and social competence among 5<sup>th</sup> grade American students recruited from an ethnically diverse school. Results indicated that 5<sup>th</sup> grade girls who reported higher quality cross-ethnic friendships had lower levels of minority rejection, more diverse social networks and better social skills such as leadership and sociability, compared to the ones with lower quality cross-ethnic friendships.

Lease and Blake (2005) suggested that two scenarios were possible regarding the relationship between cross-ethnic friendships and social competence. The authors indicated that children with cross-ethnic friends may be socially more competent compared to the ones with no cross-ethnic friends, because the initiation of cross-ethnic friendships may be risky and challenging for children and therefore would require some social skills. On the contrary, children with cross-ethnic friends could be less adjusted compared to the ones with no cross-ethnic friend, because these children may be the ones rejected by the majority ethnic group. Findings of this study provided evidence for the first scenario demonstrating that majority group children (Black or White depending on the ethnic composition) with cross-ethnic friends were more socially adjusted than their peers with no cross-ethnic friend and were associated with higher status and higher levels of prosocial behavior and leadership skills.

Similarly, cross-ethnic friendships were related to higher social competence among Asian American late adolescents (Tran & Lee, 2010). Interestingly, same-ethnic friendships were only marginally significantly related to social competence; this revealed that cross-ethnic friendships may have unique contributions to social competence. Kawabata and Crick (2008), investigating cross-ethnic friendships among an ethnically diverse sample of elementary school students in the US, found that cross-ethnic friendships, but not same-ethnic friendships, were related to more positive evaluations in terms of relational inclusion and leadership skills. Fletcher, Rollins, and Nickerson (2004) demonstrated that although

children's membership in ethnically homogeneous and heterogeneous peer groups did not predict their well-being, the extension of cross-ethnic friendships to outside-school settings was associated with greater social competence among Black students.

Other positive outcomes of cross-ethnic friendships in the social environment have been also investigated. Munniksma and Juvonen (2012), studying the links between cross-ethnic friendships and feelings of socio-emotional safety among Latino and White American 6<sup>th</sup>-7<sup>th</sup> grade students attending multiethnic schools, indicated that cross-ethnic friendships were related to increases in the sense of safety. Graham, Muniksma, and Juvonen (2014) also found that cross-ethnic friendships were associated with decreases in perceived vulnerability. Similarly, Kawabata and Crick (2011) demonstrated that cross-ethnic friendships were related to decreases in relational victimization among multiethnic elementary school children. Overall, these studies suggest that cross-ethnic friendships may significantly reduce possible negative outcomes children could experience in multiethnic contexts.

Additional evidence for the effects of cross-ethnic friendships on positive outcomes amongst children and adolescents has been found in relation to academic achievement. Although relatively few studies investigated this relationship, findings suggest that cross-ethnic friendships contribute to positive academic outcomes. For example, Newgent, Lee, and Daniel (2007) found that amongst 10<sup>th</sup> grade African and Latino American adolescents, having cross-ethnic friendships was positively associated with educational aspirations. Gurin, Dey, Hurtado, and Gurin (2002) suggested that informal interaction with cross-ethnic peers was one of the predictors of intellectual engagement for American college students. The authors argued that exposure to cross-ethnic peers in campus is crucial in adolescent development, since such exposure provides students with the opportunity to observe an expanded set of ideas and experiences. Chang (1996) also found that ethnic diversity of the campus was associated with positive academic and social concepts through socialization with

different ethnic group members. Similarly, Laird (2005) indicated that positive interactions with peers from diverse ethnic groups were related to academic self-confidence.

Other research examining the role of same- and cross-ethnic friendships as potential resources that foster well-being found that cross-ethnic friendships may not be exclusively beneficial for children. For example, in a recent study by McGill et al. (2012), Black and Asian American students with only best cross-ethnic friendships reported lower emotional well-being compared to the ones with only best same-ethnic friendships. The authors suggested that same-ethnic friendships were more beneficial for children, since they protected children from discrimination. Ryabov (2013) found that racial segregation measured by same-ethnic peer networks predicted higher academic achievement and engagement among Asian adolescents. Riegle-Crumb and Callahan (2009) found that same-ethnic friendships, but not cross-ethnic friendships, had positive effects on Latino's academic achievement.

Such findings are to some extent contradictory to the majority of previous research in cross-ethnic friendship literature showing the exclusive benefits of cross-ethnic friendships for children (e.g., Kawabata & Crick, 2008; 2011; Munniksma & Juvonen, 2012). However, a great deal of these studies focused only on one or two specific ethnic minority groups in ethnically varying US contexts, and therefore may not represent a similar environment to the majority of studies in the literature. Moreover, they vary extensively on friendship measurements (e.g., best same-/cross-ethnic friendships, same-ethnic peer networks) and focus only on certain aspects of child development. This further indicates the need to study cross-ethnic friendships in various contexts and ethnic groups in order to fully understand the nature of these friendships.

### **2.3. Summary**

This section examined previous empirical findings on the outcomes of cross-ethnic friendships in the literature. An investigation of this literature shows that cross-ethnic

friendships have been mainly studied in intergroup relations research and substantial evidence suggests that cross-ethnic friendships are efficient tools that foster positive outgroup attitudes via processes such as self-disclosure, intergroup anxiety and social norms. On the other hand, research in the developmental psychology literature has been limited in demonstrating the role of cross-ethnic friendships in children's personal development and functioning. The majority of research in this literature has shown that cross-ethnic friendships are associated with positive social outcomes such as social competence and decreased feelings of vulnerability in a multiethnic environment, while an even more limited literature provides insights about the association between cross-ethnic friendships and academic outcomes during early adolescence. Hence, the role of cross-ethnic friendships in the emergence of such positive developmental outcomes in childhood needs further inspection.

### **3. The current thesis**

So far, this chapter has reviewed previous research in cross-ethnic friendships' formation and outcomes. This section will outline the main perspective, the conceptual framework and the context of this thesis. Furthermore, a general description of the data and the target sample will be reported.

#### **3.1. Cross-ethnic friendships in the UK**

One of the first contributions of the current study is the investigation of cross-ethnic friendships in the UK, exclusively London, which is one of the most ethnically diverse cities in the world. Results of the 2011 Census revealed that approximately 45% of London's population is now formed of ethnic groups other than White British (Cohen, 2012; Office for National Statistics, 2012). Recent research has shown that London is qualitatively different compared to the rest of the UK in terms of ethnic composition. Accordingly, Sturgis, Brunton-Smith, Khua, and Jackson (2011) demonstrated that while the rest of the UK is mainly White British, London has a unique ethnic composition illustrating a very multiethnic

population. Sturgis et al. further indicated that meaningful contact between White British and ethnic minority group members was higher in London compared to the rest of the UK. These findings confirm the need to study cross-ethnic friendships in London, which provides an excellent opportunity to assess how ethnic diversity translates into cross-ethnic friendships and how such friendships are beneficial for children.

A second marked demographic change has been observed in educational settings in the UK. Ford (2008) showed that ethnic prejudice has declined and intergroup relationships have become much more common especially among younger generations in the UK. While there is a substantial increase in terms of opportunities for cross-ethnic interactions among young ethnic majority and minority members, schools also seem to enhance such opportunities providing appropriate social contexts. Hamnett (2012) stated that today the majority of the population in London secondary schools is composed of ethnic minority group students. This research is partly motivated by these demographic changes in ethnically diverse educational settings.

Research examining cross-ethnic friendships specifically in the UK is limited, but studies have shown a similar pattern of relative rarity concerning cross-ethnic friendships. In a study examining friendship preferences of elementary school children from White and Asian British backgrounds, Boulton and Smith (1992) found that both groups liked more their same-ethnic peers compared to cross-ethnic ones. Similarly, investigating primary school children in various locations in the UK, Davey and Mullin (1982) found a same-ethnic friendship preference for all ethnic groups. A more recent study by Leman and Lam (2008) also indicated ingroup friendship preference among ethnic minority (Caribbean and South Asian) and majority (European) British children. Reynolds (2007) examined same- and cross-ethnic friendships among Caribbean British youth and found that although most adolescents had at least one cross-ethnic friend, best friendships were often formed of same-ethnic peers.

A recent research report by Goodman, Hurcombe, Healy, Goodman, and Ball (2011) demonstrated that although the majority of 14-15 year-old adolescents from diverse locations in London and Berkshire reported one cross-ethnic friend, friendship patterns reflected a general degree of ethnic homogeneity. These studies suggest that cross-ethnic friendships are relatively rare, though it is important to bear in mind that research in the UK is still limited.

### **3.2. Cross-ethnic friendships, resilience and well-being**

As the social context of London secondary schools provides ample opportunities for cross-ethnic friendships, it is important to assess how these types of friendships relate to various positive outcomes in such multiethnic settings. Previous studies mainly examined cross-ethnic friendships in relation to social outcomes and more importantly relied on environments which were not sufficiently ethnically diverse (e.g., Lease & Blake, 2005). This thesis aimed to extend these findings by studying cross-ethnic friendships in relation to psychological, academic and motivational outcomes in a multiethnic school setting. This section will summarize the conceptual framework of the main outcomes.

Psychological outcomes in this thesis were assessed by two main concepts: psychological well-being and resilience. The World Health Organization defined psychological well-being as a state where the individual could successfully realize their abilities, cope with stress and work fruitfully (Tennant et al., 2007). A recent study stated that psychological capital (Avey, Luthans, Smith, & Palmer, 2010) was acquired through resources that relate to resilience and self-efficacy. Compared to the *hedonic* view which emphasizes the aspects of well-being that relates to happiness and pleasure, the *eudaimonic* view highlights self-realization as a part of well-being and defines well-being in terms of psychological functioning (Ryan & Deci, 2000). According to Ryff and Singer (2008), eudaimonic well-being is related to human growth and fulfilment and is highly influenced by contextual factors. Hence, psychological well-being in this thesis was viewed as functional,

and aimed to assess whether children were successful in psychological functioning and able to maintain resilience in multiethnic contexts.

Academic outcomes, on the other hand, have been suggested to be closely intertwined with the social environment of children in schools (Graham et al., 2014). Graham et al. called researchers to investigate the effects of cross-ethnic friendships on academic outcomes in order to fully understand the achievement of children in multiethnic settings. Academic outcomes in this study included academic level and academic self-concepts, tapping into both the actual academic achievement of children and their perceived academic well-being. While academic self-concepts constitute a more subjective academic well-being assessment, academic level generally represents a more objective indicator of academic outcomes. Hence, studying simultaneously academic and psychological measures as the outcomes of cross-ethnic friendships, this study aimed to provide a full picture of children's functioning in the school environment.

Finally, this thesis also seeks to reveal the role of cross-ethnic friendships in motivational outcomes, mainly in two areas, career and academic motivations, aiming to explore whether the outcomes of cross-ethnic friendships could be much more diverse than it has been previously suggested. Hence, if cross-ethnic friendships were related to psychological and academic functioning and resilience, these friendships could also exert influences in the way children make decisions about their future choices. In fact, academic motivations have been found to be associated with psychological adjustment and well-being among students (e.g., Miquelon, Vallerand, Grouzet, & Cardinal, 2005). Therefore, studying cross-ethnic friendships in relation to such motivational outcomes could extend substantially what is known about the role of cross-ethnic friendships on positive developmental outcomes.

Compared to other social outcomes that have been previously studied in the literature such as social adjustment and competence or feelings of safety and peer victimization, well-

being in this thesis represents psychological and functional outcomes at the individual level. It is especially important to explain the resilience perspective in this thesis. Although variously defined, resilience is described as the ability to face challenges, show relative resistance to adversity and maintain a healthy development despite the presence of psychosocial risk factors (Masten, Best, & Garmezy, 1990; Rutter, 1985; 2000). Resilience is not a trait or personality measure, but rather a context-dependent process that is formed through various interactions between risk and protective factors (Garmezy, 1991; Masten, 2001). For instance, Luthar and Zelazo (2003) indicated that resilience increases through learning new skills and new coping strategies that work efficiently. Egeland, Carlson, and Sroufe (1993) also noted that resilience is not a childhood characteristic, but develops as a result of the person-environment interaction over time.

The resilience research so far has mainly concentrated on individual and contextual factors which operate simultaneously in the development of resilience. Although individual factors such as high intelligence have been demonstrated to be important in predicting resilience (e.g., Jaffee, Caspi, Moffitt, Polo-Tomas, & Taylor, 2007), contextual factors are also known to have influences on how youth develop resilience against adversity. Therefore, social relationships may become effective tools that promote resilience. Indeed, friendships have been found to function as one of the main factors that protect children from a variety of life challenges (e.g., Cohen, Sherrod, & Clark, 1986; Hamm & Faircloth, 2005). Extending this literature, this thesis considers cross-ethnic friendships a positive mechanism that may protect children and foster the development at the psychological, academic and motivational level.

### **3.3. Perceived ethnic discrimination as a risk factor**

One reason why cross-ethnic friendships could be suggested as a protective factor in an ethnically diverse setting is the potentially challenging nature of such settings.

Discrimination is a potential risk factor that results in negative outcomes and is one of the main predictors of differences between ethnic minority and majority groups' health status (Williams, Yu, Jackson, & Anderson, 1997). It has been shown that negative health outcomes occur, because of the constant perception of discrimination which leads to a sense of powerlessness, inequality and injustice, and frustration (Cooper, 1993; Krieger, 1990; Sanders-Phillips, Settles-Reaves, Walker, & Brownlow, 2009).

A great deal of research has also examined the influence of discrimination on mental health. Indeed, a recent meta-analysis including 134 studies revealed that perceived discrimination is associated with both physical and mental health (Pascoe & Richman, 2009). Investigating the effects of racial/ethnic prejudice, Allport (1954) stated that "one's reputation, whether false or true, cannot be hammered, hammered, hammered into one's head without doing something to one's character" (p. 142). Research has demonstrated that perceived discrimination and unequal treatment based on any kind of group membership may have destructive consequences on well-being (e.g., Dion, Dion, & Pak, 1992). Accordingly, perceived ethnic discrimination (PED) experiences have been consistently linked to lower self-esteem and higher levels of depressive symptoms (Greene, Way, & Pahl, 2006; Umana-Taylor & Updegraff, 2007; Williams, Neighbors, & Jackson, 2003; Wong, Eccles, & Sameroff, 2003) and psychological distress (Fisher, Wallace, & Fenton, 2000). Such experiences have been further associated with decreased academic outcomes such as academic curiosity, persistence and self-reported grades (e.g., Neblett, Philip, Cogburn, & Sellers, 2006). Longitudinal studies revealed that increases in PED were associated with increases in conduct problems and depressive symptoms (Brody et al., 2006).

A great deal of research has provided information about how PED results in a range of negative outcomes among young adolescents. However, most of the available studies in this literature had a major focus on ethnic/racial discrimination in the US and therefore may

not generalize to the European context (Zick, Pettigrew, & Wagner, 2008). Previous research has confirmed that discrimination is a dynamic concept that is often shaped by societal and contextual factors (Trickett, Watts, & Birman, 1994). As intergroup relationships in the US are often influenced by the historical context of racism and segregation in the US (Zick et al., 2008), it is important to evaluate discrimination experiences among adolescents taking into account the historical and societal context.

Among few studies in the UK, Bhui, Stansfeld, McKenzie, Karlsen, Nazroo, and Weich (2005) investigated the association between PED and common mental disorders among ethnic minority workers and found a strong positive relationship between the two constructs. Nazroo (2003) stated that socioeconomic differentials are intertwined with racial discrimination which is often perceived not only at the individual level, but as a major social force that structures the society. Virdee (1997) stated that among ethnic minorities one in eight respondents reported at least one incident of ethnic discrimination within the preceding year. In the same study, White participants also indicated they were racially prejudiced against specific ethnic groups. Qualitative data also demonstrated ethnic discrimination as a part of everyday life challenges among ethnic minorities (e.g., Virdee, 1995). This suggests that multiethnic settings, although they provide various opportunities for positive cross-ethnic contact and friendships, may still provide major challenges for children from different ethnic backgrounds.

### **3.4. Cross-ethnic friendships during early adolescence**

The majority of empirical chapters in this thesis (Chapter 2-Chapter 6) aim to investigate cross-ethnic friendships formed during the first year of secondary school (age 11). Several reasons could be suggested for why this period is important for the development of friendships. First, schools constitute developmental contexts for both academic and socio-

emotional development (Eccles & Roeser, 2003). Hartup and Stevens (1999) suggested that friendships with peers during adolescence are based on shared activities or socialization and schools provide children opportunities to form consistent relationships that could transform into close friendships. Schools are important social contexts that are convenient exclusively for the development of cross-ethnic friendships, because they often satisfy optimal conditions proposed by Allport's intergroup contact theory (1954), providing equal status and a cooperative setting characterized by common goals. Consistently, Schofield (1995) stated that children have more opportunities to form cross-ethnic friendships in schools than any other environment.

The transition from primary to secondary school and how young adolescents behave in relation to social relationships is also relevant, because the meaning and the perception of friendships are likely to change during this period. For example, while peer relationships during elementary school years and earlier are characterized more by concrete elements such as playing activities, friendships in young adolescence include more abstract terms such as self-disclosure and support (Buhrmester, 1990; Fuligni & Eccles, 1993; Hartup & Stevens, 1997). Moreover, the transition to secondary school is often a challenging period for children in relation to maintaining long-term friendships (Dubois & Hirsch, 1993). During this period, children may be particularly vulnerable to discrimination in a new school environment (Tatum, 1997) and may have to form new friendships (Spears-Brown, 2008). As the majority of cross-ethnic friendship research has taken place in elementary schools (e.g., Aboud et al., 2003; Kawabata & Crick, 2011; Lease & Blake, 2005), an observation of secondary school cross-ethnic friendships may offer new perspectives into understanding the role of such friendships in a critical period of development.

Children also experience changes in terms of the development of the self during this period. Especially, the self-concept becomes an influential aspect of children's lives. For this

age group, friendships become increasingly important (Dunn, 2004), as children start spending more time in activities away from home and turn to peers as a source of belongingness, self-worth, comfort and advice (Eccles, Roeser, Vida, Fredericks, & Wigfield, 2006; Fuligni & Eccles, 1993; Gould & Mazzeo, 1982; Lewis & Feiring, 1989). Studies have also shown that adolescence is a period marked with an expanded peer network and high levels of importance attributed to close friendships, since friendships start to surpass parents by providing greater social support and contributing to self-concept and well-being (Furman & Buhrmester, 1992).

### **3.5. Major aims of this thesis**

In summary, cross-ethnic friendship literature has not yet fully discovered how these friendships may contribute to individual well-being and functioning in an ethnically diverse society which may offer a number of challenges for both ethnic minority and majority status group members. The current thesis extends previous findings in several ways, by:

- i) Studying cross-ethnic friendships in a multiethnic setting such as London secondary schools which provide an excellent milieu to examine cross-ethnic relationships among children from diverse ethnic backgrounds. Accordingly, Chapter 2 explores the patterns of cross-ethnic friendships in this specific environment and examines the effect of ethnic diversity and ethnic group on the formation of cross-ethnic friendships.
- ii) Examining cross-ethnic friendships from a resilience and eudaimonic well-being perspective and investigating whether cross-ethnic friendships have associations with positive psychological and academic factors. Chapter 3 explores relationships between cross-ethnic friendships and positive psychological and academic outcomes

and more importantly tests whether cross-ethnic friendships buffer the negative effects of perceived ethnic discrimination on positive outcomes.

- iii) Uncovering how exactly cross-ethnic friendships foster these positive outcomes among children. Hence, Chapter 4 seeks to enlighten interpersonal processes whereby cross-ethnic friendships relate to well-being, by testing self-disclosure and affirmation as mediators.
- iv) Exploring the specific roles of different processes in cross-ethnic and same-ethnic friendships in relation to psychological and academic outcomes. Accordingly, Chapter 5 attempts to illustrate the unique mediators of cross-ethnic friendships and indicate how cross- and same-ethnic friendships relate to psychological and academic well-being through intimate self-disclosure and anxiety.
- v) Investigating longitudinal effects of cross-ethnic friendships. Although previous research has demonstrated longitudinal effects of cross-ethnic friendships on outgroup attitudes among children (e.g., Feddes et al., 2009), to my knowledge, no research to date has exclusively examined the longitudinal effects of cross-ethnic friendship quality and quantity on psychological and academic well-being. Hence, Chapter 6 tests the associations between cross-ethnic friendships and psychological and academic well-being over time. More importantly, this chapter further examines whether classroom racial tension moderates these relationships.
- vi) Finally, attempting to test whether mental representations of cross-ethnic friendships have positive motivational outcomes for children. Previous research has not yet investigated cross-ethnic friendships in terms of children's motivations. Chapter 7 examines the role of cross-ethnic friendships in two experimental studies and tests whether priming children with cross-ethnic friendships would increase motivations

towards applying for an imaginary internship on a non-stereotypical career choice (Experiment 1) and applying for a predominantly White university (Experiment 2).

### **3.6. Data, procedure and sample**

This section outlines the data, procedure and sample used in further empirical chapters of this thesis and aims to provide a brief overview of the main methodological approach adopted in this thesis.

#### **Longitudinal London Schools Study (LLSS)**

In the first five empirical chapters of this thesis (Chapter 2-6), data were part of a longitudinal study conducted in nine secondary schools (37 classrooms) around London. This Longitudinal London Schools Study (LLSS) was based on three waves of data collected at the beginning of each school term (Autumn, Spring, and Summer Term, respectively) with four and a half months intervals. At the start of the school term (September, 2011), secondary schools drawn randomly from multiethnic areas of Greater London were sent an e-mail letter describing the aim and the procedure of the study. A total of nine schools accepted to take part in the study. After an initial meeting with the contact teacher and the consent of the school headteachers, Year 7 students were distributed the questionnaires in classrooms. In four of the schools, all classrooms in the year group participated in the research, while a randomly drawn sample of classrooms were recruited from the remaining schools. The main researcher was present in most of the data collection sessions; in other cases, the responsible teachers, who were carefully informed about the study, distributed the questionnaires.

At each wave, students were told to read informed consents carefully and were introduced to the questionnaires with an explanation about important concepts of the study such as “ethnic group” and “cross-ethnic friend”. Ethnic group was defined as “a group of people who share a cultural, religious and geographical history, for example: White British,

Black Caribbean British, Indian British”, whereas a cross-ethnic friend was described as “a friend who is of a different ethnic group than yours, for example: White British and Black African British”. At the end of each session, children were told to read debriefing forms.

To ensure the anonymity of the data and the follow up process, a procedure agreed between the contact teacher and I was used. Accordingly, before data collection, the contact teacher sent a list of all participants in each classroom. On separate sheets, each name was assigned to a participation number. Next, removable name tags including the names of students were attached to each questionnaire which also included the participation number of the student. Therefore, during data collection, students received questionnaires with their own name tags and their participation numbers. At the end of data collection, students were told to remove their name tags from the questionnaires. Hence, although questionnaires included names at the beginning of the sessions, main data were constructed with participation numbers.

The participating secondary schools were mostly located in suburban areas of London where the percentage of ethnic minorities was at least 30% of the total school population (the computation of ethnic diversity of classrooms will be outlined in Chapter 2). The majority of classrooms comprised a number of different ethnic groups. The socio-economic status of the schools was similar, ranging from lower to middle socio-economic status. Table 1.1 presents a description of the participating schools.

For two experimental studies included in Chapter 7, data were collected from different resources. For Experiment 1, data were collected from two schools that participated in LLSS (School ID 2 and School ID 4). For this study, data comprised a separate sample from Year 8 students. For Experiment 2, data were collected from two classrooms that had not participated in LLSS. The procedure for these two studies will be outlined in Chapter 7.

**Table 1.1** Description of the participating schools

School ID	School type <sup>a</sup>	% of White Europeans	Gender composition	Number of students recruited <sup>b</sup>
1	Community	67.4%	Mixed	209
2	Community	4.3%	Mixed	23
3	Foundation	2.3%	Mixed	95
4	Community	36.7%	All-girls	40
5	Community	47.8%	Mixed	28
6	Academy	37.1%	Mixed	50
7	Community	34.1%	Mixed	101
8	Community	17.8%	Mixed	167
9	Foundation	19.1%	All-girls	197

*Note.* <sup>a</sup>All schools are state comprehensive schools. Differences in school types are based on school governance. Community schools are controlled by local authorities; foundation schools and academies are governed by an independent governing body.

<sup>b</sup>The number of students recruited involves the initial number of students before the exclusion of some ethnic groups for further statistical analyses.

## Sample

The sample for the LLSS consisted of Year 7 students (aged 11) from a diverse range of ethnic groups. The initial sample consisted of 910 students (367 male, 539 female, 4 did not reveal their gender) from different ethnic backgrounds including White European British (29.3%), White Non-European British (1.6%), Middle Easterner British (7.2%), Black British (13.5%), South Asian British (28.3%), Other Asian British (2.3%), Mixed White – Other British (12.4%) and Other (5.4%). While the first empirical study of this thesis included four main ethnic groups (White European, Black, South Asian and Middle Easterner children, total  $N = 684$ ), following four empirical chapters included three main ethnic groups: White European, Black and South Asian children (total  $N = 621$ ). In the final empirical chapter,

only South Asian children ( $N = 53$  in Experiment 1 and  $N = 40$  in Experiment 2) were recruited.

The ethnic group of children were assessed with self-reports. The White European group included White British and Other European children, the Black group included mainly Caribbean, African and Somali children, the South Asian group included Indian, Pakistani, Bangladeshi, and Sri Lankan children and finally the Middle Easterner group included children from Turkish, Kurdish, Afghan, Iranian, Iraqi, and Saudi Arabic backgrounds. Students with other ethnicity and mixed-ethnicity ethnic groups were excluded from overall analyses in each chapter, due to their relatively lower sample size and complications that may arise from the operationalization of cross-ethnic friendships for these ethnic groups. In particular, mixed ethnic group children included a variety of ethnic backgrounds, comprising not only Black-White and Asian-White combinations, but also other mixtures such as Black-Asian and Black-Middle Easterner; therefore, as in the majority of studies in the literature (e.g., Quillian & Campbell, 2003), this ethnic group was excluded.

In Chapters 3-6, the main focus was on White European, Black and South Asian children. Although for each chapter, discussions about ethnic group differences will be explored in further details, it is important to touch upon some of the general findings about these ethnic group members in the UK and highlight why these specific ethnic groups were initially targeted in data analyses.

First, among ethnic minority status groups, the South Asian British sample was of particular interest. Recent statistical research has shown that South Asians constitute 12.1% of the London population and 7.8% of the total UK population (Office for National Statistics, 2012). Cross-ethnic friendships may be particularly important for South Asians in the UK who are found to be less integrated (Maxwell, 2009), more prone to remain encapsulated around their same-ethnic group (Peach, 1996) and more likely to experience racism compared

to other ethnic groups (Gillborn, 1998; Troyna & Hatcher, 1992; Virdee, 1997). South Asian British children are likely to be exposed to two different socialization processes, one at home and one at school, so they may be at higher risk for adjustment problems and indeed exhibit more internalizing problems at schools (Atzaba-Poria, Pike, & Barrett, 2004). Friendships that cross ethnic boundaries may have a protective role especially for South Asian children, as research has shown that affiliation with a high-status peer crowd protected these adolescents from the negative effects of depression (La Greca & Harrison, 2005).

Second, Black students were included as another growing ethnic minority group in London and the UK, constituting 13.3% of the London population and 3.5% of the total UK population (Office for National Statistics, 2012). Although the Black British group is more socially and economically integrated compared to South Asians (Maxwell, 2009), cross-ethnic friendships may also contribute to Black children's psychological and academic well-being. Especially, Black students' underachievement in schools is still one of the main problems in the UK educational system (Strand, 2012). Studies conducted in the US and the UK revealed that such underachievement of Black students may be linked to discrimination-related factors such as low teacher expectations (Gillborn & Gipps, 1996), perceived ethnic discrimination (Wong, Eccles, & Sameroff, 2003) and stereotype threat (Steele & Aronson, 1995). Therefore, multiethnic settings may constitute challenging environments for Black children who are likely to face adversity and negative stereotyping in the academic arena. Often suffering from the detrimental effects of stereotype threat (Steele & Aronson, 1995), Black children may benefit from cross-ethnic friendships in terms of psychological and academic development.

Finally, White Europeans may also gain from cross-ethnic friendships in multiethnic settings such as London secondary schools where they may be numerical minorities (Cohen, 2012). In fact, research has shown that cross-ethnic friendships can provide major advantages

for children of ethnic majority status (Lease & Blake, 2005). Although further research has demonstrated that the psychosocial outcomes of cross-ethnic friendships, for example sense of safety, were only observed among ethnic minority status children (Munniksma & Juvonen, 2012), it is conceivable that cross-ethnic friendships would relate to White European children's psychological and academic outcomes, as multiethnic settings may be also challenging for this ethnic group and cross-ethnic friendships could be helpful resources that provide social inclusion and other social skills such as leadership and prosocial behaviour (e.g., Kawabata & Crick, 2008).

### **Overview of Data Strategy**

Since LLSS was a large longitudinal data set collected over three time points from 37 classrooms, it was necessary to specify the data presentation strategy which would be followed in further empirical chapters (except Chapter 7, for which data were not part of LLSS). As a main strategy, it was decided that the initial four empirical chapters (Chapter 2 to 5) would include the analysis of cross-sectional data at different time points. Accordingly, Chapter 2 included data from the first wave of LLSS and examined the formation of cross-ethnic friendships. Chapter 3 also used data from the first wave of LLSS, but investigated cross-ethnic friendships in relation to well-being and ethnic discrimination. Chapter 4 focused on the second wave of LLSS, while Chapter 5 presented findings from the third wave of LLSS. Chapter 6 illustrated longitudinal findings including all three time points.

For Chapter 2 to 5, considering the length of the thesis in the presentation of the results and the introduction of a new variable at each time point, data analysis included cross-sectional findings. As the change in the majority of outcome variables such as resilience and psychological well-being was only small to moderate within the first year of secondary school (shown in Chapter 6), only cross-sectional results were reported in order to present a clear understanding of the specific relationships investigated at each time point.

Another important decision was related to the analysis of different ethnic groups within the same models. In this thesis, except Chapter 2 which examined ethnic group differences and Chapter 7 which only used one ethnic minority group, data analysis included separate models for each ethnic group. One reason for that was the inspection of the between-group differences during preliminary analyses. These differences were not only between ethnic minority and majority groups, but also between different ethnic minority groups. Hence, the presentation of the models without ethnic group distinctions may have obscured some of these differences. Consequently, it was decided that the findings would be presented separately for each ethnic group to provide a clear understanding of research questions for each main ethnic group. Table 1.2 (page 36) provides more details about data analysis strategy

### **3.7. Summary and Chapter overview**

This section outlined an overview of the empirical chapters of this thesis and a summary of the data and the sample, as well as the main aims of the study, presenting initial research questions that will be investigated in further chapters. Although research in cross-ethnic friendships has flourished in recent years, there are still many unanswered questions behind the formation and the consequences of these friendships. This thesis aims to extend previous research by examining cross-ethnic friendships in relation to positive psychological, academic, and motivational outcomes in a specific multiethnic city context, focusing on both ethnic majority and minority status children.

**Table 1.2** Overview of empirical chapters

<b>Chapter and Main Research Questions</b>	<b>Design/Analyses</b>	<b>Sample</b>
<b>Chapter 2: CE friendship formation</b>		
Are CE friendships rare and low in quality in London secondary schools? Do ethnic diversity and ethnic group predict CE friendship patterns?	Cross-sectional – 1 <sup>st</sup> Wave of LLSS / Multilevel Modelling	256 White Europeans, 118 Blacks, 247 South Asians and 63 Middle Easterners
<b>Chapter 3: CE friendships and psychological and academic well-being</b>		
Are CE friendships associated with psychological and academic well-being? Do CE friendships buffer the negative effects of PED?	Cross-sectional – 1 <sup>st</sup> Wave of LLSS / Multiple Regression & Multilevel Modelling	256 White Europeans, 118 Blacks, 247 South Asians
<b>Chapter 4: Self-disclosure and affirmation of ideal self as mediators between cross-ethnic friendships and psychological and academic well-being</b>		
How does CE friendship quality relate to psychological and academic well-being? Do CE friend self-disclosure and affirmation mediate these relationships?	Cross-sectional – 2 <sup>nd</sup> Wave of LLSS / Multilevel SEM	226 White Europeans, 101 Blacks, 205 South Asians
<b>Chapter 5: Intimate self-disclosure and anxiety in same- and cross-ethnic friendships</b>		
Do intimate self-disclosure and anxiety mediate the effects of same- and cross-ethnic friendships on positive psychological and academic outcomes?	Cross-sectional – 3 <sup>rd</sup> Wave of LLSS / Multilevel SEM	171 White Europeans, 90 Blacks, 202 South Asians
<b>Chapter 6: Longitudinal effects of CE friendships on psychological and academic well-being</b>		
Are there any longitudinal effects of CE friendships on well-being? Does classroom racial tension moderate these effects?	Longitudinal – 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> Waves of LLSS / Cross-lagged Multilevel Modelling	256 White Europeans, 118 Blacks, 247 South Asians
<b>Chapter 7: CE friendships and motivational outcomes</b>		
Experiment 1: Do mental representations of CE friendships affect motivations towards non-stereotypical career choices? Experiment 2: Do mental representations of CE friendships affect motivations towards university applications?	Experimental –Mixed Design ANOVA	Experiment 1- 53 South Asians Experiment 2- 40 South Asians

Note. CE = cross-ethnic; PED = perceived ethnic discrimination.

## Chapter 2

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### Cross-ethnic friendships: Are they really rare? Evidence from London secondary schools<sup>1</sup>

Motivated by recent statistical research demonstrating a sharp increase in ethnic diversity across London, this initial chapter aims to find out whether ethnic diversity of classrooms and ethnic group predict the quantity and quality of cross-ethnic friendships in multiethnic classrooms. Relying on data from the first wave of LLSS (Longitudinal London Schools Study), this chapter explores the formation of cross-ethnic friendships, presenting cross-ethnic friendship patterns of an ethnically diverse sample of students ( $N = 684$ ) recruited from nine secondary schools (37 classrooms). In contrast to most previous research which suggested the relative rarity of cross-ethnic friendships, cross-ethnic friendships were in fact frequent and of high quality, even outnumbering same-ethnic friendships for all ethnic groups. After controlling for gender, classroom gender composition, percentage of available same-ethnic peers, ethnic identity and perceived ethnic discrimination (PED), classroom ethnic diversity still had a marginally positive effect on cross-ethnic friendship quantity, but had no effect on cross-ethnic friendship quality. White European children reported higher quantity and lower quality cross-ethnic friendships compared to other ethnic groups, but this depended on ethnic diversity. Findings are discussed following intergroup and friendship theories, highlighting unique associations among cross-ethnic friendships, ethnic group membership and ethnic diversity.

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<sup>1</sup>A different version of this chapter is published as: Bagci, S. C., Kumashiro, M., Smith, P. K., Blumberg, H., & Rutland, A. (2014). Cross-ethnic friendships, are they really rare? Evidence from multiethnic secondary schools in London. *International Journal of Intercultural Relations*, 41, 125-137. DOI:10.1016/j.ijintrel.2014.04.001.

## 2.1. Introduction

Recent statistical research has shown that London has now a strikingly different ethnic composition compared to the rest of the UK, with a sharp increase in ethnic diversity and meaningful regular contact between different ethnic groups (Sturgis et al., 2011). The growth of ethnic minority populations is also emphasized in educational settings, where ethnic minority students have started outnumbering White British students in secondary schools (Hamnett, 2012). Yet, despite these recent statistical research trends highlighting such demographic changes, little is known about the actual cross-ethnic friendship patterns in the multiethnic setting of London secondary schools and how ethnic diversity and ethnic group affect the formation of these friendships in this setting.

Although cross-ethnic friendship literature has previously investigated how these types of friendships form, this literature is often limited to studies conducted in the US and involves mostly Black and White interracial friendships (e.g., DuBois & Hirsch, 1990). As cross-ethnic friendships and intergroup relationships are extensively dynamic and depend on the social context, previous studies on cross-ethnic friendships may not reflect current patterns of friendships in today's multiethnic school settings. In fact, these types of friendships may be especially important during secondary school years, because cross-ethnic friendship habits adopted during this period may predict friendship patterns in later stages of life (e.g., Ellison & Powers, 1994; Stearns, Buchmann, & Bonneau, 2009). Therefore, by focusing on the quantity and quality of cross-ethnic friendships, this first empirical study aims to illustrate a general picture of cross-ethnic relationships among children starting their first year in London secondary schools and reveal the effects of ethnic group and ethnic diversity on these friendships. The following research questions were addressed in this chapter:

*Research Question 2.1:* Does this ethnic diversity, pointed by recent statistical research, translate into actual cross-ethnic friendships? Does ethnic diversity predict the quantity and quality of cross-ethnic friendships?

*Research Question 2.2:* Are there any ethnic group differences in the formation of cross-ethnic friendships? Does ethnic group predict cross-ethnic friendship quantity and quality?

Cross-ethnic friendships in multiethnic contexts have been primarily investigated following the basic tenets of intergroup contact theory (Allport, 1954). Schools have been suggested as convenient social settings for the development of intergroup contact and friendships and eventually positive outgroup attitudes by ensuring equal status and common goals among children (Schofield, 1991). Empirical research has supported this assumption, and cross-ethnic friendships have been found to improve positive outgroup attitudes among children and adolescents (e.g., Aboud et al., 2003; Feddes et al., 2009). Other research has shown that cross-ethnic friendships are beneficial for children not only in relation to improved intergroup relationships, but also in relation to other positive outcomes such as social skills and competence (e.g., Kawabata & Crick, 2008; Lease & Blake, 2005). Therefore, it is critical to understand how these friendships initially form in such school settings which provide multiple opportunities to form cross-ethnic friendships.

Two main theoretical perspectives in friendship literature should be reviewed to understand the formation of cross-ethnic friendships. First, propinquity has been suggested to increase intergroup contact and friendships in earlier theories of friendship formation (Blau, 1974, 1977; Homans, 1950). Confirming this principle and intergroup contact theory, a great deal of previous empirical work found a direct positive link between the number of potential cross-ethnic friends in schools and the frequency of cross-ethnic friendships (e.g., Hallinan & Smith, 1985; Howes & Wu, 1990; Quillian & Campbell, 2003). In fact, the availability of

cross-ethnic peers is suggested to be one of the prerequisites of cross-ethnic friendships (Blau, 1977).

Yet, opportunities for cross-ethnic friendships alone may not be sufficient for the actual development of cross-ethnic friendships (Moody, 2001; Mouw & Entwistle, 2006). Thus, a second principle, homophily, should also be considered in friendship formation. Research has shown that racial/ethnic homophily is one of the strongest divides that influence friendship choices (Kandel, 1978, McPherson et al., 2001). Most empirical research in the US and Canada has supported the homophily principle and found that children and adolescents usually form friendships with their same-ethnic/race peers (e.g., Clark & Ayers, 1992; Kao & Joyner, 2006). Studies in the UK, although scarce, also demonstrate high in-group preference of children in their choice of friends (e.g., Boulton & Smith, 1996; Leman & Lam, 2008).

Quillian and Campbell (2003) argued that in ethnically diverse environments, people may be inclined to form an increased number of same-ethnic friendships based on homophily, while propinquity and opportunity for cross-ethnic contact may enhance the formation of cross-ethnic friendships. Similarly, Wilson and Rodkin (2012) suggested that one may tend to befriend same-ethnic peers as a way to promote one's social identity (Hamm et al., 2005; Tajfel & Turner, 1979); whereas, one may wish to form expansive social connections that would cross ethnic boundaries. Ethnic composition of the specific context may therefore play a significant role in the compromise between same- and cross-ethnic friendships.

Cross-ethnic friendship quantity and quality may also vary across different ethnic groups. The general trend in the literature shows that White participants (majority group status members) are especially likely to form same-ethnic friendships compared to cross-ethnic ones (e.g., Clark & Ayers, 1992; Howes & Wu, 1990; Margie, Killen, Sinnott, & McGlothlin, 2005; Shrum et al., 1988) and report lower levels of diversity in their friendship group compared to ethnic minorities (Fischer, 2008). White children have been also found to

be less friendly towards their cross-ethnic peers (Hallinan & Teixeira, 1987) and give less importance to their cross-ethnic friends (Pica-Smith, 2011) compared to ethnic minorities.

Although most empirical research noted that Whites are inclined to choose more same-ethnic friends, this often depends on the ethnic composition of the social context. For instance, Kawabata and Crick (2008) found that, after controlling for the proportion of same-ethnic group members in the classroom, White Europeans tended to report higher cross-ethnic friendship selection compared to African and Latino Americans in multiethnic schools. Some studies, on the other hand, found that the in-group preference for friendships exists for both majority and minority ethnic groups and there was no effect of ethnic group on friendship selection (Aboud et al., 2003; Graham & Cohen, 1997; Howes & Wu, 1990).

The current investigation extends previous findings in several ways. First, the majority of studies investigating secondary school cross-ethnic friendships examined only Black-White or majority-minority interracial friendships (e.g., Hallinan & Williams, 1989; Sigelman et al., 1996; Vervoort, Scholte, & Scheepers, 2011), which may not represent current social environments in big cities. Although some studies included more ethnically/racially diverse samples (e.g. Quillian & Campbell, 2003; Kawabata & Crick, 2011), these studies have been almost exclusively limited to cross-ethnic/racial friendships in the US setting, which may be primarily shaped by the American history of racial segregation (Van Houtte & Stevens, 2009).

By controlling for a number of variables that may affect the quantity and quality of cross-ethnic friendships in an ethnically diverse environment, this study examined specific relationships between ethnic group, ethnic diversity and cross-ethnic friendships. First, the percentage of available same-ethnic peers in the classroom which has been found to affect the formation of cross-ethnic friendships was taken into account (Joyner & Kao, 2000; Moody, 2001). Second, gender-related variables, gender and classroom gender composition, were

controlled, as girls and boys may have different patterns of social networks and friendships (e.g., Graham & Cohen, 1997; Lee et al., 2007).

Finally, two ethnicity-related variables - PED and ethnic identity - which may have implications in ethnically diverse settings were included. Negative intergroup experiences have been demonstrated to have negative impacts on intergroup relations (Stephan & Stephan, 1985). Levin et al. (2003) and Schofield, Hausmann, Ye, and Woods (2010) indicated that PED may increase the frequency of same-ethnic friendships. Ethnic identity, on the other hand, may also affect cross-ethnic friendship formation. Yet, relevant findings showed mixed results. Some studies demonstrated that ethnic identity promotes the selection of same-ethnic friendships (Kao & Vaquera, 2006) and ethnic groups may self-segregate in order to maintain their social identity (social identity theory, Tajfel & Turner, 1979; Tatum, 1997). Other research showed that ethnic identity may actually encourage the formation of cross-ethnic friendships by promoting other-group orientation (the desire to interact with other group members) and increasing awareness and understanding of other ethnic groups, confidence in ethnic identity and intercultural thinking (Phinney et al., 1997; Phinney, Jacoby, & Silva, 2007).

## **2.2. Aims and hypotheses**

In summary, the first aim of this study was to explore the current trend of cross-ethnic friendships in Greater London. Both ethnic minority and majority British children's self-reported cross-ethnic friendships were evaluated, using the number of same- and cross-ethnic friendships as an indicator of cross-ethnic friendship quantity, and the closeness and interaction with three best cross-ethnic friends as indicators of cross-ethnic friendship quality. The second aim was to explore how cross-ethnic friendships vary across different ethnic groups and classroom ethnic diversity by controlling for a number of relevant variables which may have potential effects on cross-ethnic friendship quantity and quality.

Based on the findings in the literature, the following hypotheses were constructed:

*Hypothesis 2.1:* Children would report higher numbers of same-ethnic friendships than cross-ethnic ones.

*Hypothesis 2.2:* Classroom ethnic diversity would have positive effects on cross-ethnic friendship quantity and quality.

It was expected that ethnic group membership would have an effect on cross-ethnic friendship quantity and quality; though no a priori hypothesis was suggested because some research suggests that same-ethnic preference exists for both ethnic minority and majority children (e.g., Boulton & Smith, 1992; Davey & Mullin, 1982), while others suggest the ethnic majority group reports higher numbers of same-ethnic friendships (e.g., Howes & Wu, 1990; Margie et al., 2005).

### **2.3. Method**

#### **Participants**

Questionnaires were distributed to Year 7 students (aged 11; 286 girls, 398 boys) within the first two months of their first year at secondary school. A total of 684 participants (256 White European, 118 Black, 247 South Asian, and 63 Middle Easterner British) were included in the final analysis. Details of the total sample are presented in Chapter 1.

#### **Procedure**

Data were extracted from the first wave of LLSS, collected in nine multiethnic schools (37 classrooms) in Greater London during the first half of the Autumn Term (September-October, 2011). Questionnaires were completed within 45 minutes. Details of the procedure and the schools are stated in Chapter 1.

#### **Materials**

**Ethnic diversity.** Ethnic diversity was measured by Simpson Diversity Index (Simpson, 1949) which has been widely used in previous studies investigating ethnic/racial

diversity in classrooms/schools (see Bellmore, Nishina, Witkow, Graham, & Juvonen, 2007; Juvonen, Nishina, & Graham, 2006). The ethnic composition of classrooms was computed according to self-reported ethnicities of students in the sample. Ethnic diversity index for each classroom was based on main ethnic categories in the total sample including White European, White Non-European, Black, Middle Easterner, South Asian, Other Asian, Mixed children and other ethnic category children. The index is computed using the formula below:

$$D_C = 1 - \sum_{i=1}^g p_i^2$$

where  $D_C$  is the ethnic diversity of a given classroom,  $p$  is the proportion of students in the classroom who are in ethnic group  $i$  and  $p_i^2$  is summed across  $g$  groups in a classroom. Simpson's Diversity Index ranges from 0 to 1, with higher scores indicating greater ethnic diversity. The index takes into account the number of different ethnic groups in the context and the relative proportion of each ethnic group.

Ethnic diversity was also calculated at the grade level (Year 7) for each school where more than one classroom was included in the study. Ethnic diversity computed at the grade level in the present sample ranged between .34 and .84 with a mean of .68 ( $SD = .11$ ) and the classroom diversity ranged between .34 and .85 with a mean of .68 ( $SD = .13$ ). The percentage of White European British students in each classroom varied between 0 and 84. The correlation between classroom-level and grade-level diversity was .85,  $p < .001$ . Because most schools did not disclose information about the ethnic composition at the school level, it was not possible to investigate ethnic diversity at the school level.

**Friendship measurements.** To assess cross-ethnic friendship quantity, students were asked to think about their friends that they hang out with regularly. The first question involved two open-ended items that assessed participants' approximate number of friends from the same and different ethnic groups ("How many friends do you have from your own

ethnic group?" and "How many friends do you have from a different ethnic group?"). A composite variable of cross-ethnic friendship quantity was obtained by computing the ratio of cross-ethnic friendship numbers to the total number of friendships.

Cross-ethnic friendship quality was assessed as a second friendship measure. Research suggest from childhood into adolescence, individuals increasingly spend more time with friends within their peer group and form close friendships (Berndt, 1998; Eccles et al., 2006) and psychological closeness is a key feature of peer friendship and acceptance (Parker & Asher, 1993). Cross-ethnic friendship quality was therefore assessed by a second question where the participants were asked to think about their three best cross-ethnic friends. For each friend, students were asked to rate the frequency of interaction ("How much do you interact with this friend?") ranging from 1 (*not very frequently*) to 5 (*very frequently*) and closeness ("How close do you feel to this friend?") ranging from 1 (*not very close*) to 5 (*extremely close*). A composite variable of friendship quality was then computed by combining the mean interaction and closeness for three best cross-ethnic friends (See Appendix B).

### **Control variables.**

**Percentage same ethnicity.** The percentage of available same-ethnic peers was calculated by dividing the total number of same-ethnic students (minus one) to the total number of students (minus one) in the classroom for each student. For example, in a classroom where the number of students is 21 and the number of South Asian students is 6, for each South Asian student, the probability of befriending a same-ethnic friend would be 25%. The variable was computed based on major ethnic categories used in the diversity index (White European, White Non-European, Middle Easterner, Black, South Asian, Other Asian, Mixed and Other). The same measure was used in previous research to define whether the participants were numerical majority/minority in the classroom (Bellmore, Witkow, Graham,

& Juvonen, 2004) and as a classroom characteristic describing classroom ethnic composition (Bellmore et al., 2007).

**Gender and Classroom gender composition.** Gender and classroom gender composition (mixed gender vs. all-girls) were included as dichotomous variables.

**Ethnic identity.** Ethnic identity was assessed by three items that addressed how much the participant identified with his/her ethnic background. The scale included the following items: “I feel good about my ethnic group”, “I am proud of being a member of my ethnic group” and “It is important to me that I am a member of my ethnic group”. The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The reliability of the scale was .80.

**Perceived ethnic discrimination.** PED was measured by an eight-item scale which assessed how often children perceived each ethnic discrimination experience (MADIC, 1991-1998, see Wong et al., 2003). Some of the items were: “How often do you feel that teachers call on you less often than they call other kids because of your race or ethnicity?” and “How often do you feel like you are not picked up for certain teams or other school activities because of your race or ethnicity?”. The response scale ranged from 1 (*never*) to 5 (*all the time*). The reliability of the scale was high with Cronbach’s alpha coefficient of .90.

## 2.4. Data Strategy

Initially, means and standard deviations for cross-ethnic friendship quantity and quality, and control variables were computed across four major ethnic groups. Results concerning same-/cross-ethnic friendship numbers were examined by conducting paired sample t-tests for each ethnic group.

To explore the effects of ethnic group and ethnic diversity, HLM (Hierarchical Linear Modelling) was used; this method scrutinizes the dependencies that could stem naturally from the fact that students share the same classroom (Raudenbush & Bryk, 2002). Since students

were nested within classrooms and measurements might be similar within the same classroom, a two-level hierarchical linear modelling procedure which accounts for the effect of classroom variance was considered the most appropriate strategy.

Two multilevel models on cross-ethnic friendship quantity and quality were performed (at this stage, the ratio of cross-ethnic friendship numbers to total friendship numbers was used in order to decrease the variability in cross-/same-ethnic friendship estimations). First, unconditional models with no predictor were checked to find out about how much variance was explained by between-classroom (level-two) effects. Next, main predictor variables (ethnic group and classroom ethnic diversity) were entered, along with control variables (percentage same-ethnicity, gender, classroom gender composition, ethnic identity and perceived ethnic discrimination). Finally, the interaction term of Classroom ethnic diversity X Ethnic group was included to determine whether ethnic diversity would have different effects across different ethnic groups. All continuous variables were transformed to *z-scores*, except classroom ethnic diversity which was a level-two variable. This was required to interpret its main effect independent of the interaction term.

## 2.5. Results

### Same-/cross-ethnic friendship numbers

In general, children reported high numbers of both same- and cross-ethnic friendships. Only 3% of the total sample reported that they did not have any cross-ethnic friends and 9% reported that they did not have any same-ethnic friend. Overall, children estimated significantly higher numbers of cross-ethnic friends ( $M = 12.98$ ,  $SD = 15.09$ ) than same-ethnic friends ( $M = 8.27$ ,  $SD = 12.34$ ),  $t(563) = -6.68$ ,  $p < .001$ . Separate analyses for each group indicated that for all ethnic groups cross-ethnic friendship numbers were higher than same-ethnic ones;  $t(203) = -3.24$ ,  $p < .01$  for White Europeans;  $t(51) = -7.73$ ,  $p < .001$  for

Middle Easterners;  $t(95) = -4.36, p < .001$  for Blacks and  $t(211) = -1.91, p = .05$  for South Asians.

Cross-ethnic friendship quality was also generally high ( $M = 3.77, SD = .79$ ) ranging from 3.73 to 3.92 on a scale of 1 to 5, on which a higher score represents better quality cross-ethnic friendships<sup>2</sup>. Means and standard deviations are presented in Table 2.1.

**Table 2.1** Descriptive statistics across ethnic groups

	SE friend number	CE friend number	% SE peers	CE quality	PED	Ethnic identity
<b>W. European</b>	8.00 (12.11)	12.03 (15.49)	.43 (.21)	3.73 (.77)	1.32 (.59)	4.12 (.76)
<b>M. Easterner</b>	5.37 (7.24)	17.12 (13.89)	.13 (.10)	3.90 (.79)	1.62 (.79)	4.30 (.88)
<b>Black</b>	10.86 (16.94)	19.55 (20.96)	.14 (.09)	3.92 (.68)	1.62 (.77)	4.34 (.79)
<b>South Asian</b>	10.20 (11.21)	10.15 (10.66)	.43 (.20)	3.69 (.86)	1.53 (.77)	4.34 (.77)
<b>Total</b>	8.27 (12.34)	12.98 (15.09)	.35 (.22)	3.77 (.79)	1.47 (.72)	4.26 (.78)

*Note.*  $N = 684$ . Standard deviations presented in parentheses.

SE = same-ethnic; CE = cross-ethnic; PED = perceived ethnic discrimination; W. European = White European; M. Easterner = Middle Easterner.

### Multilevel Modelling

**Cross-ethnic friendship quantity.** The unconditional model with no predictors revealed that the intercept-only model was significant and the variance between classrooms explained 11% of the total variance of cross-ethnic friendship quantity ( $p < .01$ ). This finding confirmed that the procedure was necessary for the current data analysis.

After the inclusion of the main and control variables in the model, gender had a significant main effect ( $\beta = .06, p < .05$ ); boys had higher cross-ethnic friendship quantity

<sup>2</sup>Most children reported cross-ethnic friendship quality at least for one friend. For participants who reported fewer than three friends, the mean quality was computed based on the quality of one or two cross-ethnic friends. Children who did not report any friendship quality were not included in further analyses.

compared to girls. While classroom gender composition and ethnic identity did not have significant effects, PED had a marginally positive association with cross-ethnic friendship quantity ( $\beta = .02, p = .09$ ). Percentage same-ethnicity had a negative effect ( $\beta = -.11, p < .001$ ). Classroom ethnic diversity had a marginally positive effect ( $\beta = .32, p = .07$ ). Ethnic group had an association with cross-ethnic friendship quantity; White European children reported a significantly higher same-ethnic friendship quantity compared to other ethnic groups ( $\beta = .45, p < .01$ ). An interaction effect between ethnic diversity and ethnic group was observed; White Europeans estimated higher cross-ethnic friendship quantity compared to other groups, when classroom ethnic diversity was lower ( $\beta = -.66, p < .01$ ).

**Cross-ethnic friendship quality.** The unconditional model revealed that the intercept-only model explained 4% of the variance between classrooms and the variance was marginally significant ( $p = .09$ ). Although between-classroom variance explained a small part of the variance, this model was preferred in order to account for classroom-level variance.

With the inclusion of the control and main variables, gender had a significant main effect. Boys had lower cross-ethnic friendship quality compared to girls ( $\beta = -.22, p < .05$ ). Ethnic identity also had a marginally significant positive association with cross-ethnic friendship quality ( $\beta = .07, p = .07$ ). Classroom ethnic diversity and percentage same-ethnicity did not have significant effects. There was a marginally significant main effect of ethnic group; White Europeans estimated lower quality cross-ethnic friendships compared to other ethnic groups ( $\beta = -.80, p = .08$ ). Ethnic group also had a marginally significant interaction with ethnic diversity; White Europeans reported higher quality cross-ethnic friendships, when classroom ethnic diversity was higher ( $\beta = 1.28, p = .06$ ). Table 2.2 presents multilevel models predicting cross-ethnic friendship quantity and quality.

**Table 2.2** Multilevel models predicting cross-ethnic friendship quantity and quality

	Cross-ethnic friendship quantity	Cross-ethnic friendship quality
Intercept	.36 (.13)**	3.85 (.49)***
<i>Individual-level variables</i>		
Gender		
Boys	.06 (.03)*	-.22 (.08)*
Girls (ref.)	-	-
Opportunity for same-ethnic friendships	-.11 (.02)***	.03 (.06)
Ethnic Identity	-.00 (.01)	.07 (.04)†
Perceived ethnic discrimination	.02 (.01)†	.04 (.04)
Ethnic group		
White European	.45 (.13)**	-.80 (.46)†
Middle Easterner	.13 (.36)	.38 (1.07)
Black	.18 (.27)	.24 (.83)
South Asian (ref.)	-	-
<i>Classroom-level variables</i>		
Classroom ethnic diversity	.32 (.17)†	-.20 (.66)
Classroom gender composition		
Mixed	.06 (.03)	.06 (.14)
All girl (ref.)	-	-
<i>Individual-level X Classroom-level interaction</i>		
Classroom ethnic diversity X ethnic group		
Diversity X White European	-.66 (.19)**	1.28 (.69)†
Diversity X Middle Easterner	-.25 (.48)	-.11 (1.42)
Diversity X Black	-.29 (.37)	.00 (1.14)
Diversity X South Asian (ref.)	-	-
Variance		
Within classroom variance	.06***	.56***
Between classroom variance	.00	.04†
-2 Restricted Log Likelihood	39.82	1086.82

Note. N = 648. Standard errors presented in parentheses. ref. = reference category.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

## 2.6. Discussion

The aims of this study were to investigate cross-ethnic friendship quantity and quality in a multiethnic UK setting and examine whether ethnic diversity and ethnic group have significant effects on cross-ethnic friendship measurements. Cross-ethnic friendships were in fact more frequent than same-ethnic ones, and of high quality. Even after controlling for potential variables that could affect friendship formation in a multiethnic setting, classroom ethnic diversity still had a marginal, but significant and positive effect on cross-ethnic friendship quantity. There was no evidence for the effect of ethnic diversity on cross-ethnic friendship quality. Ethnic group also had significant effects; White European children indicated higher cross-ethnic friendship quantity, but lower quality cross-ethnic friendships compared to other groups. Furthermore, White Europeans reported lower cross-ethnic friendship quantity, but higher quality cross-ethnic friendships when classroom ethnic diversity was higher.

The first important finding of this study concerns cross-ethnic friendship quantity. Contrary to the widespread evidence in the literature and Hypothesis 2.1 which suggested that cross-ethnic friendships are rare and low in friendship quality (e.g., Bellmore et al., 2007; Graham & Cohen, 1997; Schneider, Udvari, & Dixon, 2007), cross-ethnic friendships reported by the current sample were not rare and of low quality. Even at the beginning of the term when students are expected to gather around their own ethnic group in multiethnic settings based on similarity attraction hypothesis and because race/ethnicity might be used as an initial criterion for friendship formation in a new environment (Jugert, Noack, & Rutland, 2011), children showed an inclination towards cross-ethnic friendships.

Few studies have shown that cross-ethnic friendships may be common and to my knowledge, no studies have shown that cross-ethnic friendship numbers are higher than same-ethnic ones for both ethnic majority and minority participants. Dubois and Hirsch

(1990) and Hunter and Elias (1999) investigating Black and White American students' interracial friendships, found that cross-race friendships were not uncommon; most participants in their sample reported at least one different race friend. In a Canadian study, Smith and Schneider (2000) showed that their sample was relatively non-ethnocentric in their choice of friends. This study was conducted in two multi-ethnic schools in Toronto, therefore may represent a similar environment to the setting in the current study which shows that cross-ethnic friendships are not only common, but they could also dominate friendship patterns among both ethnic majority and minority ethnic groups in particular contexts.

Findings about the high, almost dominant cross-ethnic friendship numbers are controversial, but not unexpected. Recent qualitative data among 14-15 years old British students showed that ethnicity was not a salient factor in friendship formation (Goodman et al., 2011). Moreover, in the current sample, PED was generally low (with a mean of 1.47 on a scale from 1 to 5). In a recent research, Ford (2008) indicated that explicit ethnic/racial discrimination in the UK is in decline as a result of social contact between White Britons and ethnic minorities which has become much more common. In line with this finding, residential ethnic segregation also seems to be decreasing in the UK over the last decade (Sabater, 2008; Simpson, 2007), while interracial marriages have been found to increase (Muttarak, 2004). These improvements in social integration further point to why cross-ethnic friendships today may not be as rare as they used to be in previous research.

Finally, social norms about cross-ethnic friendships and a positive racial climate could explain the findings. Developmental research has shown that children's intergroup attitudes and behaviors are influenced by social norms that highlight the inappropriateness of ethnic discrimination (e.g., Killen, Lee-Kim, McGlothlin, & Stangor, 2002; Rutland, 2004). During elementary school years, social norms in multiethnic settings often encourage the tolerance and appreciation of cultural diversity and children's outgroup attitudes are heavily influenced

by such social norms and concerns for self-representation (Rutland, Cameron, Milne, & McGeorge, 2005). Feddes et al. (2009) found that cross-ethnic friendships improved outgroup attitudes through perceived social norms indicating cross-ethnic friendships as *acceptable* behavior in the current environment. Even extended cross-ethnic friendships in which knowing that an ingroup friend has an outgroup friend is known to improve positive intergroup relationships (Wright et al., 1997). Therefore, a positive school climate where social norms indicate the promotion of positive intergroup relationships can foster the development and maintenance of cross-ethnic friendships (e.g., Damico, Bell-Nathaniel, & Green, 1981; Hallinan & Teixeira, 1987; Serow & Solomon, 1979).

In terms of the quality of cross-ethnic friendships, relatively high levels of closeness and interaction for cross-ethnic friends were found; this was opposed to the general trend in the literature which indicates cross-ethnic friendships to be low in intimacy and quality (e.g., Shelton et al., 2010). Although it was not possible to compare cross-ethnic friendship quality to same-ethnic friendship quality in this study, students did not necessarily rate these friendships low in quality. Some studies have demonstrated that although cross-ethnic friendships are lower in terms of prevalence, once they are formed, they may not be significantly different from same-ethnic friendships in terms of stability (Hallinan & Williams, 1989) and quality (Aboud et al., 2003).

Another aim of the study was to investigate the role of classroom ethnic diversity in cross-ethnic friendship quantity and quality. As expected and partly confirming Hypothesis 2.2, ethnic diversity had positive effects on cross-ethnic friendship quantity. Opportunities to form same-ethnic friendships (percentage same-ethnicity) also had significant negative associations with cross-ethnic friendship quantity. These findings are in line with intergroup contact theory, suggesting a positive relationship between intergroup contact and positive intergroup relationships. Hence, primary findings fit the principle of propinquity better than

homophily showing that children did not necessarily have a higher selection of same-ethnic friends in multiethnic contexts. Moreover, cross-ethnic friendship quantity seemed to increase, as the number of available same-ethnic peers decreased. This shows that cross-ethnic friendship quantity is likely to be influenced by opportunities for cross-ethnic friendships in the setting, therefore supporting the propinquity principle. However, it is important to note that friendship choice is not only related to ethnic group membership, as children's friendships may be based on other shared categories such as shared activities (McGlothlin, Killen, & Edmonds, 2005). Further research is needed to fully understand how the principles of homophily and propinquity affect the formation of friendships.

Ethnic diversity did not have a significant effect on cross-ethnic friendship quality, as initially hypothesized. This might be because only three best cross-ethnic friends were included for quality; students could have reported high cross-ethnic friendship quality when classroom ethnic diversity was either high or low, since best friendships are likely to be of high quality regardless of the ethnic diversity. On the other hand, Dejaeghere et al. (2012) found no direct effect of ethnic diversity on ethnocentrism with a late adolescent sample and concluded that the effect of ethnic diversity was moderated by the perceived quality of interaction. The authors suggested that the effects of ethnic diversity in classrooms is not mechanical, but rather depends on how the quality of cross-ethnic friendships is perceived by students. Findings may also show that although ethnic diversity provides opportunities for the formation of cross-ethnic friendships and therefore contributes to the number of cross-ethnic friendships, ethnic diversity per se may not directly influence the quality of such friendships.

A significant effect of gender was also detected on both cross-ethnic friendship quantity and quality; boys reported higher cross-ethnic friendship quantity, whereas they had lower quality cross-ethnic friendships compared to girls. These findings fit previous work demonstrating that girls tend to have higher quality friendships and higher intimacy in their

friendships compared to boys (Eder & Hallinan, 1978), while boys usually form more expansive social networks (Benenson, 1990; Graham & Cohen, 1997) and have higher numbers of cross-ethnic friends compared to girls (Kawabata & Crick, 2008). Accordingly, boys consider shared activities more important than other characteristics, such as race and ethnicity in their friendships (Cairns, Leung, Buchanan, & Cairns, 1995). Moreover, ethnic identity also had a marginally positive effect on cross-ethnic friendship quality. Although theories of social identity often imply a negative effect of ethnic identity on cross-ethnic friendships, recent research has pointed to the positive effect of ethnic identity on cross-ethnic friendship formation indicating that a strong ethnic identity may lead to more positive outgroup attitudes (Rutland et al., 2012; Phinney et al., 2007).

Concerning the effects of ethnic group on cross-ethnic friendships, findings showed that White European children estimated a higher cross-ethnic friendship quantity compared to other ethnic groups. Although a great deal of research has shown Whites' same-ethnic selectivity (e.g., Clark & Ayers, 1992; Margie et al., 2005), other studies pointed to White Europeans' cross-ethnic selectivity in ethnically diverse environments (Kawabata & Crick, 2008). Wilson and Rodkin (2011) also found that African Americans, but not European Americans, had ethnically segregated friendships.

Moreover, White European children reported lower cross-ethnic friendship quantity when classroom ethnic diversity was higher. This could be explained by the ethnic competition theory (Blalock, 1967), which suggests that ethnic majority groups may feel threatened by the increasing numbers of ethnic minorities and therefore select higher numbers of same-ethnic friends in highly diverse environments in order to preserve their social status. Therefore, White Europeans' formation of cross-ethnic friends could have decreased with increases in ethnic diversity. In a study in the Netherlands, Vervoort et al. (2011) found that White participants had more negative outgroup attitudes and more positive ingroup attitudes

when there were higher numbers of ethnic minorities in the classroom. On the other hand, Whites may be more inclined to choose cross-ethnic friends when ethnic diversity is lower in order to expand their social network. For example, Lease and Blake (2005) found that White American children who have cross-ethnic friends were seen as more prosocial and of high status compared to the ones with no cross-ethnic friends.

There was also a marginally significant effect of ethnic group on cross-ethnic friendship quality, as expected. White European children reported lower cross-ethnic friendship quality compared to other ethnic groups. This is in line with previous empirical research which suggested that Whites give less importance to their cross-ethnic peers compared to ethnic minority group members (Pica-Smith, 2011). Furthermore, White Europeans had higher quality cross-ethnic friendships, when ethnic diversity was higher. It could be suggested that, even though White Europeans estimated lower cross-ethnic friendship quantity when ethnic diversity was higher, these friendships could still be of high quality. When ethnic diversity is higher, White children may be inclined to approach more their same-ethnic peers as an initial friendship preference, but they do not necessarily form lower quality cross-ethnic friendships in such settings.

This study had a number of limitations. One was the complexity of defining ethnicity and interethnic relationships in the UK context. Children were asked to define their own ethnicity and their cross-ethnic friendships, which introduces some subjectivity in the interpretation of findings. The calculation of cross-ethnic friendship measures did not specifically include the broad social category (e.g. South-Asian) to define the children's in-group, since previous research suggests this is not meaningful for children living in the UK (e.g., Rutland et al., 2012). There may be important cultural, religious and political differences between regions or nations within South-Asia and discrimination is known to exist between individuals whose heritage is within these different localities (Robinson, 2005;

2009). To ensure the ecological validity of the study, children were allowed to define their ethnic group when answering the two friendship questions. Nevertheless, specific distinctions between further subcategories may be worth considering in future research.

Another issue might be the differentiation between friends and best friends. Research has shown that children are usually ethnically exclusive with their best friend (Reynolds, 2007; Smith & Schneider, 2000). Although the number of cross-ethnic friends exceeded the number of same-ethnic friends in the current research, children might still have chosen their best and closest friends from the same-ethnic group. Additionally, in terms of the quality of friendships, only intimacy and interaction were included as quality measures, while other factors in friendship quality, such as reciprocity and self-disclosure may be further explored in the assessment of cross-ethnic friendships (Rude & Herda, 2010). Findings could be extended by including same-ethnic friendship quality in order to fully understand the broader friendship patterns of children.

Also, it would have been very interesting to examine further children's friendships with particular ethnic groups. This would have contributed substantially to our understanding about specific intergroup relationships in the UK setting. For example, are White Europeans' outgroup attitudes equally favourable towards different ethnic minority status groups? Do ethnic minority status children tend to befriend other ethnic minority status children or ethnic majority status children? Research shows that children's outgroup attitudes are often influenced by these social status differences (e.g., Bigler, Brown, & Markell, 2001). Hence, future research should address these particular research questions.

## 2.7. Conclusion

This chapter demonstrated that cross-ethnic friendships among children may not be necessarily as rare and of low quality as they were demonstrated in previous studies. In a

multicultural city environment, such as London secondary schools, children seem to report more cross-ethnic friendships than same-ethnic ones. Findings also suggest that ethnic group, ethnic diversity and cross-ethnic friendships have unique associations in the current context which offered an exclusive setting to investigate how different ethnic group members relate to each other. Although it is difficult to generalize the findings to other settings, results are promising in reflecting new understandings about how ethnic segregation may be decreased over time in such settings.

Findings of this initial chapter are not only promising by showing positive intergroup relationships among children from different ethnic backgrounds, but they are also motivational for investigating further the consequences of cross-ethnic friendships in positive development for two main reasons. First, in the current study, high quantity and quality cross-ethnic friendships suggest that these friendships are not as rare as they used to be, and therefore, could have stronger and unique influences in the lives of both ethnic minority and majority children in multiethnic settings. Previous studies examining the role of cross-ethnic friendships in social development have usually suffered from the rarity of these friendships; both Lease and Blake (2005) and Kawabata and Crick (2008) had to dichotomize their cross-ethnic friendship measures and assess whether children had a cross-ethnic friend or not.

Second, although the formation of cross-ethnic friendships has been a major focus of interest in social psychology since desegregation plans in the US (e.g., Hallinan & Teixeira, 1987), researchers have only started to examine the consequences of cross-ethnic friendships in social and developmental outcomes in the 21<sup>st</sup> century (e.g., Lease & Blake, 2005; Munniksma & Juvonen, 2012). Therefore, knowledge about the consequences of these friendships in children's world is still limited. The next chapters will provide a further understanding of these friendships by examining a number of different outcomes such as psychological well-being, resilience and academic outcomes.

## **Chapter 3**

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### **Are cross-ethnic friendships beneficial in multi-ethnic school settings?**

#### **Links to perceived ethnic discrimination and well-being<sup>3</sup>**

Chapter 3 includes the second set of empirical findings of this thesis. Chapter 2 focused exclusively on the formation of cross-ethnic friendships and demonstrated that cross-ethnic friendships in multiethnic London secondary schools are relatively common and of high quality, and are affected by classroom ethnic diversity and ethnic group membership. The current chapter concentrates on the potential consequences of cross-ethnic friendships. Including three major ethnic groups from the first wave of LLSS (256 White European, 247 South Asian and 118 Black children), this chapter investigates whether cross-ethnic friendships relate to psychological well-being, resilience and academic outcomes. Moreover, this chapter examines whether cross-ethnic friendship quantity and quality would buffer the potential negative effects of perceived ethnic discrimination (PED) on these outcomes.

Results revealed that cross-ethnic friendships may have direct positive links with psychological and academic outcomes and have buffering effects against PED. Findings are discussed in the light of ethnic group differences and the differentiation between cross-ethnic friendship quantity and quality as potential resources that contribute to well-being in early adolescence.

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<sup>3</sup>A different version of this chapter has been published as: Bagci, S. C., Rutland, A., Kumashiro, M., Smith, P. K., & Blumberg, H. (2014). Are minority status children's cross-ethnic friendships beneficial in a multiethnic context? *British Journal of Developmental Psychology*, 32(1), 107-115. DOI: 10.1111/bjdp.12028.

### 3.1. Introduction

Findings from Chapter 2 showed that students from both ethnic minority and majority ethnic groups attending multiethnic secondary schools in London reported more cross-ethnic friendships than same-ethnic ones, highlighting this context as a unique setting for the study of cross-ethnic friendships. In this chapter, in addition to exploring how cross-ethnic friendships are linked to psychological and academic outcomes, PED is also incorporated in this relationship, as PED is known to be a potential risk factor within multiethnic settings. Research suggests it can have detrimental effects on children's and adolescents' self-esteem, psychological well-being and academic achievement (e.g., Carter, 2007; Williams, Neighbors, & Jackson, 2003; Wong et al., 2003). Nonetheless, some children are able to show resilience and relative resistance in the face of challenges and maintain a healthy sense of self (Crocker & Major, 1989; Keyes, 2009). One possible explanation may be the contribution of cross-ethnic friendships, as cross-ethnic friendships have been found to have direct positive effects on positive outgroup attitudes (e.g., Aboud et al., 2003; Feddes et al., 2009) and social development (e.g., Hunter & Elias, 1999; Kawabata & Crick, 2008). Hence, the following research questions have been addressed:

*Research Question 3.1:* Are cross-ethnic friendship quantity and quality associated with psychological well-being, resilience and academic outcomes?

*Research Question 3.2:* Do cross-ethnic friendship quantity and quality buffer the negative effects of PED on psychological well-being, resilience and academic outcomes?

Social psychology research has provided strong evidence about the ubiquitous role of cross-ethnic friendships in intergroup relationships (e.g., Aboud et al., 2003; Turner et al., 2007). Developmental research has also shown that cross-ethnic friendships are associated with positive outcomes in childhood such as multicultural sensitivity, sociability and leadership qualities (Hunter & Elias, 1999), prosocial behavior and social satisfaction (Lease

& Blake, 2005), social inclusion and leadership skills (Kawabata & Crick, 2008), stronger sense of safety and lower peer victimization (Kawabata & Crick, 2011; Munniksma & Juvonen, 2012) and positive educational outcomes (Newgent et al., 2007). This chapter focuses on a different aspect of cross-ethnic friendships and suggests that cross-ethnic friendships would operate as protective factors for children by directly relating to resilience, psychological well-being and academic outcomes and by moderating the negative effects of PED.

At present, little is known about the influence of cross-ethnic friendships on children's psychological and academic well-being and resilience. Previous research has suggested that friendships can operate as protective factors that reduce stress and buffer potential risks (e.g., Cohen et al., 1986; Hamm & Faircloth, 2005). In multi-ethnic contexts, cross-ethnic friendships are likely to be especially important, because these types of friendships should indicate a degree of social acceptance and integration amongst culturally diverse peer groups and, therefore, allowing the child to discount to some extent any PED.

Research with young adults suggests that cross-ethnic friendships are related to psychological well-being and may buffer the effects of high race-based rejection sensitivity on belongingness and satisfaction (Mendoza-Denton & Page-Gould, 2008). As cross-ethnic friendships promote intergroup interactions through consistent disconfirmations of negative expectations about intergroup contact (Mendoza-Denton, Page-Gould, & Pietrzak, 2006), they may similarly contribute to positive psychological well-being and resilience by facilitating integration and adaptation to a multiethnic society and providing mechanisms that protect children from possible negative effects of challenges, particularly PED. Relatedly, Kawabata and Crick (2008) suggested that cross-ethnic friendships could provide children specific advantages by increasing social competence and reducing the effects of discrimination.

Cross-ethnic friendships may be also associated with academic outcomes in school through enabling access to knowledge about schooling, and insights and information regarding efficient tools to use in the school setting (e.g., Stanton-Salazar & Dornbusch, 1995). Johnson, Crosnoe, and Elder (2001) suggested that the quality of relationships in the school environment and comfort in interactions are crucial aspects of school experiences. Hence, positive relationships with a variety of ethnic groups in the environment may relate to higher attachment to the school, less skipping classes and perceiving schooling as a more enjoyable experience.

### **3.2. Aims and hypotheses**

This study extends the literature by studying cross-ethnic friendships from a resilience perspective and highlighting the role of cross-ethnic friendships on psychological and academic outcomes which are related to the development of personal outcomes and functioning, whereas previous studies usually explored cross-ethnic friendships in relation to social-developmental outcomes or outgroup attitudes. Also, both cross-ethnic friendship quality and quantity were examined in relation to positive outcomes; previous studies often relied on one measure of friendships such as having cross-ethnic friends or not (Kawabata & Crick, 2008; Lease & Blake, 2005), friendship quality (Hunter & Elias, 1999), or friendship numbers (Tran & Lee, 2011). As cross-ethnic friendships should provide children with special skills and coping mechanisms that facilitate integration to a multiethnic environment and help building up resilience against discrimination by generating close positive relationships that consistently disconfirm the expectancy of discrimination, the following hypotheses were tested:

*Hypothesis 3.1:* Cross-ethnic friendships would have direct positive associations with psychological well-being, resilience and academic outcomes.

*Hypothesis 3.2:* Cross-ethnic friendships would buffer the negative effects of PED on psychological well-being, resilience and academic outcomes.

### **3.3. Method**

#### **Participants**

The sample included 621 students including 256 White European, 247 South Asian and 118 Black Year 7 students (aged 11; 227 boys, 276 girls). Details of the sample are summarized in Chapter 1.

#### **Procedure**

Data were part of the first wave of LLSS collected in nine multi-ethnic schools (37 classrooms) in Greater London during the first half of the Autumn Term (September-October, 2011). The procedure is outlined in Chapter 1.

#### **Materials**

**Classroom ethnic diversity.** Classroom ethnic diversity was treated as a control variable and was computed by Simpson Diversity Index (Simpson, 1949), outlined in Chapter 2.

**Friendship measurements.** Friendship quantity and friendship quality were used as cross-ethnic friendship measurements (see Chapter 2).

**Perceived ethnic discrimination.** PED was measured by an eight-item scale which assessed how often children perceived each ethnic discrimination experience (MADIC, 1991-1998, see Wong et al., 2003). Details of this scale are outlined in Chapter 2. Reliability was high with a Cronbach's alpha of .91.

**Psychological Well-being.** A fourteen-item well-being measure, *Warwick-Edinburgh Mental Well-Being Scale* (Tennant et al., 2007) which assesses positive mental well-being was used. Sample items were "I've been feeling relaxed" and "I've been interested in new

things". The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale showed high reliability (Cronbach's alpha of .86).

**Resilience.** Resilience was measured by a four-item resilience scale for youth from a longitudinal study conducted in the US (MADIC, 1991-1998, see Bartko & Eccles, 2003). Participants were asked to indicate how often they think they are very good at the following four statements. These items included: "figuring out problems and planning how to solve them" and "learning from your mistakes". The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The reliability of the scale was satisfactory (Cronbach's alpha of .60).

**Academic self-concepts.** Academic self-concepts were assessed by asking students their self-rated academic abilities on three subjects. Students were asked to indicate how well they think they do in each subject (Maths, English, Science). Responses were based on a 5-point Likert scale ranging from 1 (*poor*) to 5 (*excellent*). The mean academic self-concept measure was computed by averaging responses across three subjects.

**Academic level.** Academic level was measured by asking students their National Curriculum Levels on three subjects (Maths, English, and Science). Levels ranging from 2c to 7a were converted to numerical scores ranging from 1 to 18, with higher numbers showing higher academic level attained. These numerical scores were then averaged across three subjects.

### 3.4. Data Strategy

Initially, whether the use of a Hierarchical Linear Modelling procedure (HLM; Raudenbush & Bryk, 2002) was necessary was checked. Unconditional models revealed no significant variance explained at the classroom level for psychological well-being and resilience. Therefore, hierarchical regression models were performed for these outcomes. All

individual level variables were centred. Concerning academic self-concepts and academic level, results showed that variance at the classroom level was not significant, however intraclass correlation coefficients (ICC) were high (ICC ranging from .04 to .22). Therefore, a two-level procedure was used in further analyses. Two multilevel models were constructed with academic self-concepts and academic level as dependent measures for each ethnic group. All individual variables were transformed to *z-scores*. For all models (both multiple regression and multilevel models), gender and classroom ethnic diversity were entered as control variables. Cross-ethnic friendship quantity, quality and PED were entered as the main predictors, along with two interaction terms of PED X Cross-ethnic friendship quality and PED X Cross-ethnic friendship quantity. Simple slope analyses were performed with -1 and +1 standard deviation values of the moderator (Aiken & West, 1991).

### **3.5. Results**

Descriptive statistics and correlations are presented in Table 3.1 (next page).

**Table 3.1** Means, standard deviations, and correlations among main study variables

	<i>Means(SD)</i>	2	3	4	5	6	7
<b>White European</b>							
1 CE friendship quantity	.58 (.27)	.20**	.17*	.09	.02	.05	-.03
2 CE friendship quality	3.73 (.77)	-	.03	.37***	.34***	.12	.08
3 PED	1.32 (.59)		-	-.20**	-.07	-.15*	-.23**
4 Psychological well-being	3.64 (.60)			-	.52***	.18**	.01
5 Resilience	3.53 (.53)				-	.29***	.24**
6 Academic self-concepts	3.91 (.62)					-	.30***
7 Academic level	9.31 (2.02)						-
<b>Black</b>							
1 CE friendship quantity	.66 (.23)	-.03	-.05	-.19	-.02	.14	-.05
2 CE friendship quality	3.92 (.69)	-	-.04	.22*	.18†	.22*	.14
3 PED	1.62 (.77)		-	.01	.01	-	.00
4 Psychological well-being	3.83 (.60)			-	.33**	.13	.17
5 Resilience	3.56 (.64)				-	.23*	.10
6 Academic self-concepts	3.91 (.67)					-	.61***
7 Academic level	8.23 (2.40)						-
<b>South Asian</b>							
1 CE friendship quantity	.55 (.28)	.19*	.07	.11	.06	.17*	.15*
2 CE friendship quality	3.69 (.86)	-	.02	.26***	.15**	.11	-.02
3 PED	1.53 (.77)		-	-.11†	-.10	-.15*	-.24**
4 Psychological well-being	3.63 (.69)			-	.56***	.45***	.30***
5 Resilience	3.58 (.70)				-	.41***	.32***
6 Academic self-concepts	4.09 (.64)					-	.44***
7 Academic level	8.99 (2.06)						-

Note. CE = cross-ethnic; PED = perceived ethnic discrimination.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

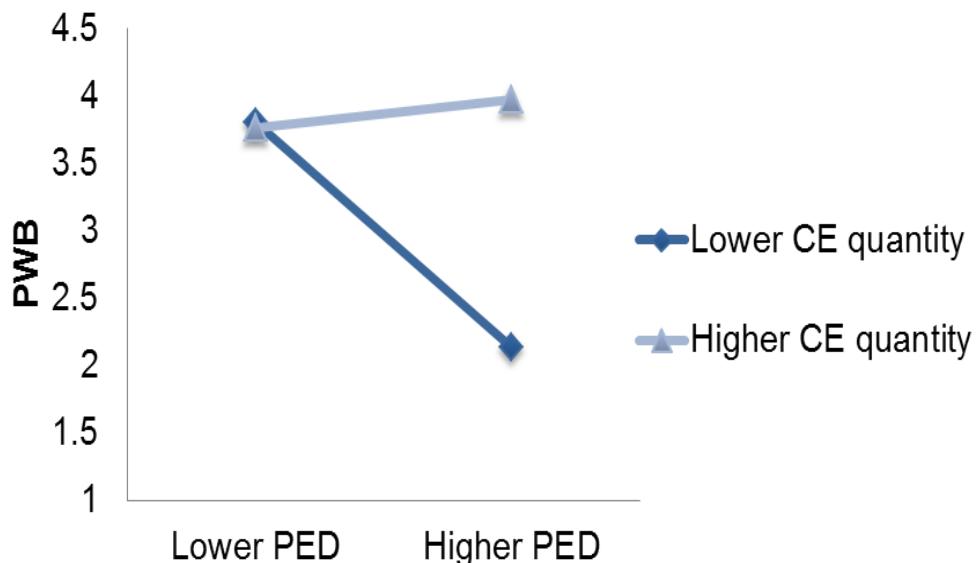
### Multiple regressions predicting psychological outcomes

**Psychological well-being.** For White European students, cross-ethnic friendship quality was positively associated with psychological well-being ( $\beta = .37, p < .001$ ). No other significant association was found.

For Black students, no significant main effect or interaction was observed in relation to psychological well-being.

For South Asian students, cross-ethnic friendship quality was positively associated with psychological well-being ( $\beta = .27, p < .01$ ) and PED was negatively associated with psychological well-being ( $\beta = -.16, p < .05$ ). An interaction between cross-ethnic friendship quantity and PED was detected ( $\beta = .21, p < .01$ ). The simple slope was not significant for students who estimated higher cross-ethnic friendship quantity,  $t(155) = .53, p > .05$ . Students with lower cross-ethnic friendship quantity, on the other hand, reported lower psychological well-being when PED was higher,  $t(155) = -3.36, p < .001$  (see Figure 3.1).

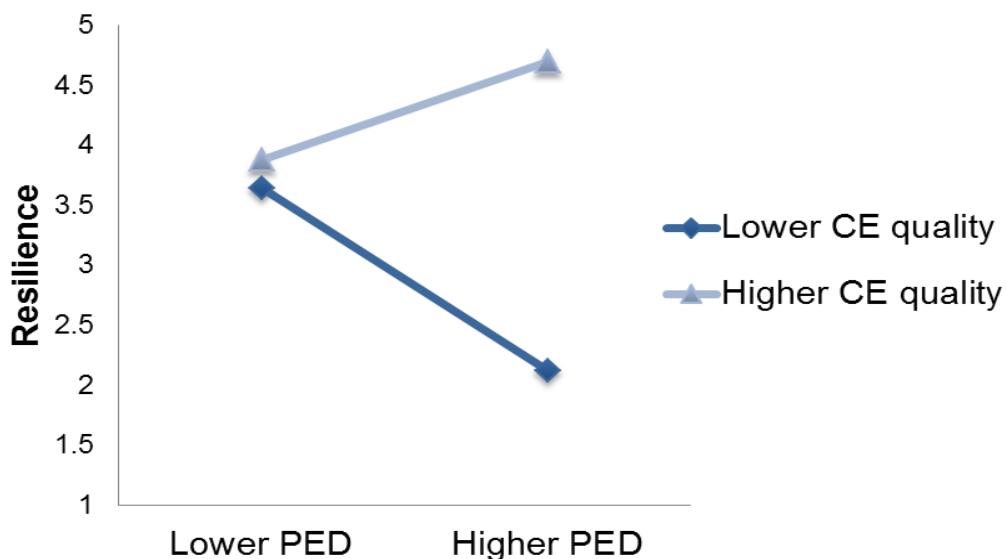
**Figure 3.1** Moderation of cross-ethnic friendship quantity on South Asians' psychological well-being



*Note.* CE = cross-ethnic; PWB = psychological well-being; PED = perceived ethnic discrimination.

**Resilience.** For White Europeans, cross-ethnic friendship quality was positively associated with resilience ( $\beta = .32, p < .001$ ). Cross-ethnic friendship quality also significantly interacted with PED ( $\beta = .23, p < .01$ ). Children with lower cross-ethnic friendship quality indicated lower resilience when PED was higher,  $t(141) = -2.34, p < .05$ . The trend for students with higher cross-ethnic friendship quality was increasing, but the slope was not significant,  $t(141) = 1.40, p > .05$  (see Figure 3.2).

**Figure 3.2** Moderation of cross-ethnic friendship quality on White Europeans' resilience

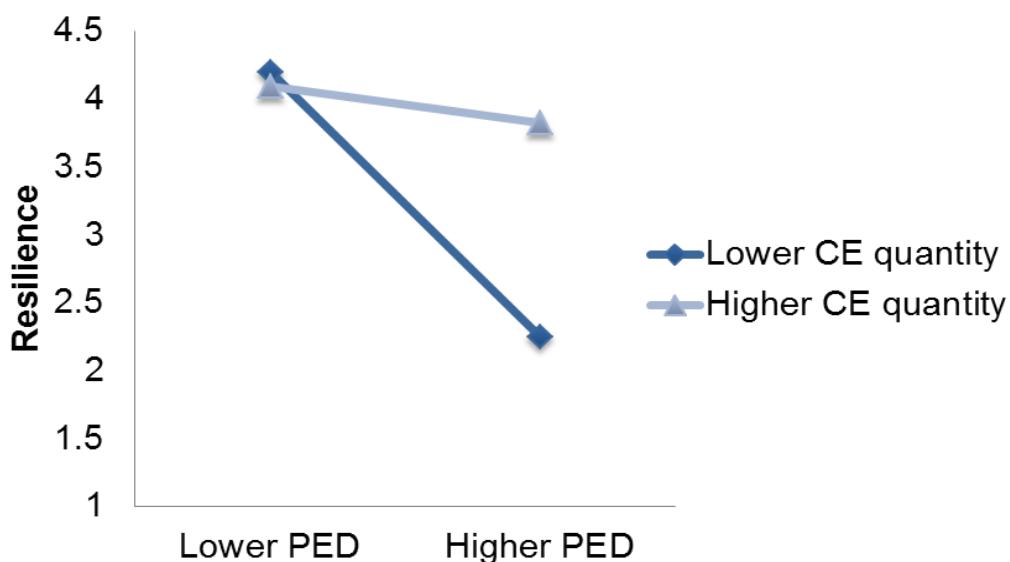


*Note.* CE = cross-ethnic; PED = perceived ethnic discrimination.

For Black children, a marginally significant interaction was observed between cross-ethnic friendship quality and PED ( $\beta = .28, p = .05$ ). A further simple slope analysis demonstrated that the slope for high cross-ethnic friendship quantity seemed to increase and the slope for lower cross-ethnic friendship quantity seemed to decrease. Yet, the slopes were not significant for either lower or higher cross-ethnic friendship quality groups,  $t(61) = -1.68$  and  $t(61) = 1.28$  respectively, both  $p > .05$ .

For South Asians, the quality of cross-ethnic friendships was positively associated with resilience ( $\beta = .17, p < .05$ ) and PED was negatively associated with resilience ( $\beta = -.25, p < .01$ ). Cross-ethnic friendship quantity interacted with PED ( $\beta = .19, p < .05$ ). The simple slope was significant for students reporting lower cross-ethnic friendship quantity,  $t(154) = -3.82, p < .001$ ; lower cross-ethnic friendship quantity decreased resilience when PED was higher. The simple slope was not significant for higher cross-ethnic friendship group,  $t(154) = -.62, p > .05$  (see Figure 3.3). Table 3.2 (next page) summarizes the results of multiple regression analyses for all ethnic groups.

**Figure 3.3** Moderation of cross-ethnic friendship quantity on South Asians' resilience



*Note.* CE = cross-ethnic; PED = perceived ethnic discrimination.

**Table 3.2** Multiple regression models predicting psychological well-being and resilience for each ethnic group

	Psychological well-being			Resilience		
	White European	Black	South Asian	White European	Black	South Asian
Gender	.08 (.09)	-.15 (.15)	.05 (.11)	.03 (.10)	-.11 (.16)	-.13 (.11)
Ethnic diversity	-.01 (.33)	.00 (.74)	-.07 (.41)	.15 (.37)	-.08 (.78)	.00 (.41)
CE friendship quantity	-.01 (.17)	-.20 (.38)	.12 (.21)	.04 (.20)	-.02 (.40)	.07 (.21)
CE friendship quality	.37 (.06)***	.08 (.10)	.27 (.06)**	.32 (.06)***	.10 (.11)	.17 (.06)*
PED	-.11 (.09)	.03 (.09)	-.16 (.07)*	-.01 (.11)	-.05 (.10)	-.25 (.07)**
PED X CE quantity	-.09 (.44)	-.02 (.51)	.21 (.31)**	.18 (.50)	.21 (.53)	.19 (.32)*
PED X CE quality	.13 (.14)	.04 (.15)	-.06 (.08)	.23 (.15)**	.28 (.15)†	-.13 (.08)
Model <i>F</i> value	$F(7,138) = 4.15***$	$F(7,58) = .66$	$F(7,151) = 4.37***$	$F(7,137) = 4.04***$	$F(7,57) = .99$	$F(7,150) = 4.15***$
Model <i>R</i> <sup>2</sup>	.17	.07	.17	.17	.11	.16

Note. CE = cross-ethnic; PED = perceived ethnic discrimination. Standard errors presented in parentheses.

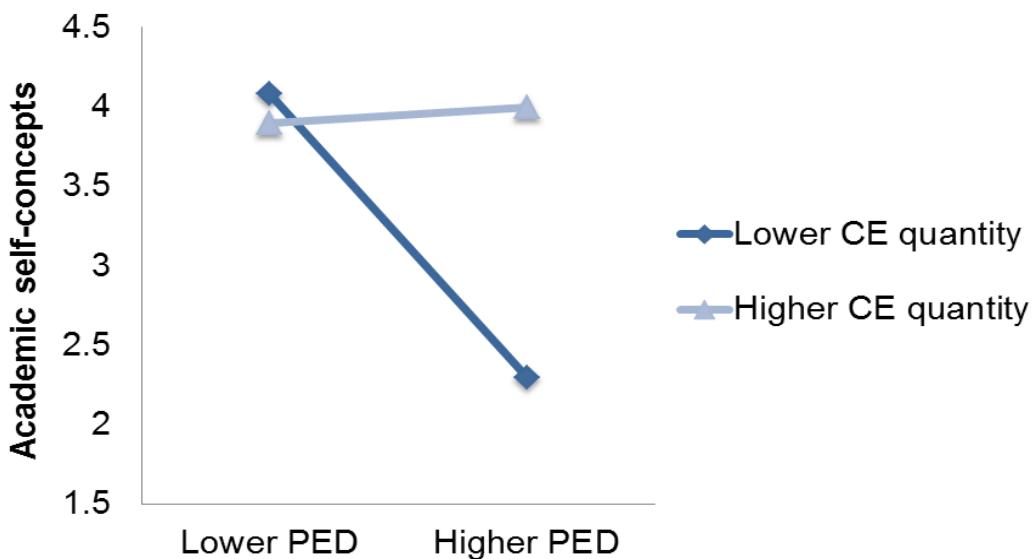
† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

### Multilevel models predicting academic outcomes

**Academic self-concepts.** For White European children, none of the cross-ethnic friendship measurements or interaction variables was significantly associated with academic self-concepts.

For Black students, neither cross-ethnic friendship quantity, nor quality had a significant direct association with the outcome variable. PED had a significant negative association with academic self-concepts ( $\beta = -.19, p < .05$ ). Furthermore, cross-ethnic friendship quantity had a significant interaction with PED ( $\beta = .25, p < .05$ ). Simple slope analyses showed that the slope for higher cross-ethnic friendship quantity was not significant,  $t(57) = .17, p > .05$ , while the slope for lower cross-ethnic friendship quantity had a significantly decreasing trend,  $t(57) = -3.07, p < .01$ . Accordingly, only children with lower cross-ethnic friendship quantity experienced a significant decrease in academic self-concepts when PED was higher (see Figure 3.4).

**Figure 3.4** Moderation of cross-ethnic friendship quantity on Blacks' academic self-concepts



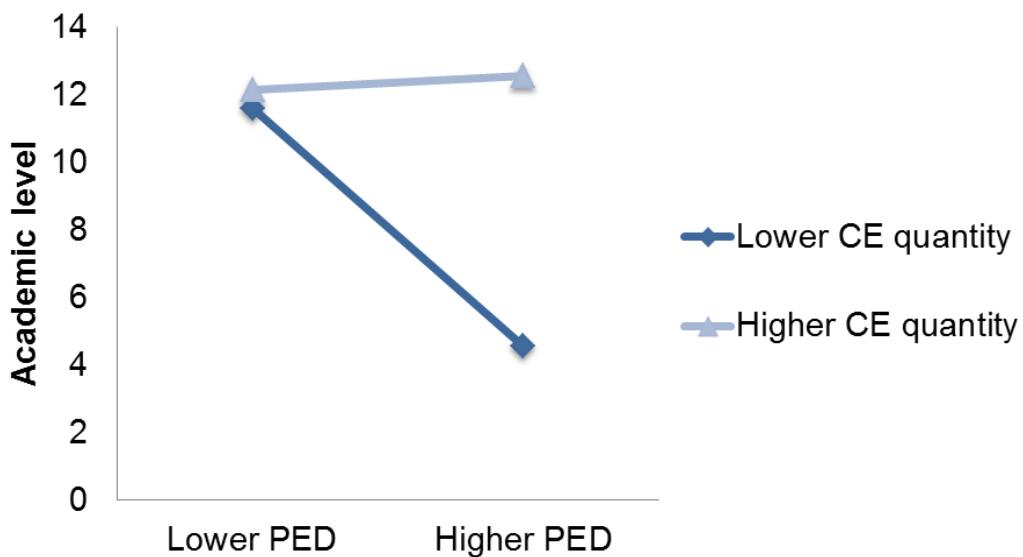
*Note.* CE = cross-ethnic; PED = perceived ethnic discrimination.

A third model with academic self-concepts was run with South Asian students. Results revealed that cross-ethnic friendship quantity was significantly associated with academic self-concepts ( $\beta = .15, p < .05$ ), while PED had a negative effect ( $\beta = -.15, p < .05$ ).

**Academic outcomes.** For White European students, there was only a significant effect of gender ( $\beta = -.69, p = .06$ ), with girls reporting higher levels of academic outcomes compared to boys.

Among Black children, gender also had a significant effect ( $\beta = -1.85, p < .05$ ); girls indicated higher academic outcomes compared to boys. A marginally significant interaction between PED and cross-ethnic friendship quality was detected ( $\beta = .76, p = .05$ ). Simple slope analysis however did not reveal any significant slope for lower cross ethnic friendship quality,  $t(53) = -1.21, p = .23$ , or higher cross-ethnic friendship quality,  $t(30) = 1.66, p = .10$ .

For South Asian children, quantity of cross-ethnic friendships had a strong and positive association with academic outcomes ( $\beta = .70, p < .001$ ), while PED had a negative association with academic outcomes ( $\beta = -.59, p < .01$ ). An interaction between PED and cross-ethnic friendship quantity was observed ( $\beta = .65, p = .001$ ). Simple slope analysis demonstrated that the slope was not significant for higher cross-ethnic friendship quantity group,  $t(139) = .31, p > .05$ . On the other hand, the group with lower cross-ethnic friendship quantity experienced a significant decrease in academic outcomes when PED increased  $t(139) = -4.64, p < .001$  (see Figure 3.5, next page). See Table 3.3 (page 73) for the final multilevel model results.

**Figure 3.5** Moderation of cross-ethnic friendship quantity on South Asians' academic level

*Note.* CE = cross-ethnic; PED = perceived ethnic discrimination.

### 3.6. Discussion

This chapter sought to examine whether cross-ethnic friendships directly relate to psychological and academic well-being and resilience and buffer the negative effects of PED. It was found that cross-ethnic friendship quality, but not quantity, had direct positive associations with both psychological well-being and resilience for White European and South Asian children. On the other hand, cross-ethnic friendship quantity but not quality was related to academic outcomes for South Asian children. For this ethnic group, PED also had significant negative effects on all of the outcome measures, while it had negative effects only on academic self-concepts among Black children. Cross-ethnic friendships had buffering effects for all ethnic groups, including White Europeans. These effects, however, varied across ethnic groups. Cross-ethnic friendships seemed to be effective on resilience for White Europeans, on academic outcomes for Blacks and on both psychological and academic outcomes for South Asian children.

**Table 3.3** Multilevel models predicting academic self-concepts and level for each ethnic group

	Academic self-concepts			Academic level		
	White European	Black	South Asian	White European	Black	South Asian
Intercept	3.48 (.24)***	2.49 (.59)***	4.33 (.31)***	9.90 (.90)***	5.01 (2.49)*	10.78 (1.08)***
Boys	.04 (.10)	.18 (.17)	.06 (.11)	-.69 (.36)†	-1.85 (.71)*	-.49 (.33)
Girls (ref.)	-	-	-	-	-	-
Classroom ethnic diversity	.10 (.35)*	2.02 (.81)*	-.31 (.43)	.13 (1.27)	5.54 (3.38)	-1.87 (1.52)
CE friendship quantity	.07 (.06)	.06 (.12)	.15 (.16)*	.14 (.19)	-.19 (.48)	.70 (.18)***
CE friendship quality	.09 (.05)	.01 (.09)	.06 (.05)	.18 (.18)	.22 (.38)	-.10 (.15)
PED	-.01 (.07)	-.19 (.07)*	-.15 (.06)*	-.16 (.24)	.10 (.31)	-.59 (.17)**
PED X CE friendship quantity	-.03 (.08)	.25 (.11)*	.10 (.09)	.16 (.28)	.23 (.43)	.65 (.19)**
PED X CE friendship quality	-.07 (.07)	.17 (.09)	-.02 (.06)	.17 (.26)	.76 (.38)*	-.15 (.16)
<i>Within-classroom variance</i>	.26 (.03)***	.32 (.06)***	.36 (.04)***	3.31 (.43)***	5.10 (1.05)***	3.09 (.41)***
<i>Between-classroom variance</i>	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.23 (.23)
<i>-2 Log Likelihood</i>	207.31	109.88	265.80	502.12	233.56	576.42

Note. CE = cross-ethnic; PED = perceived ethnic discrimination. Standard errors presented in parentheses.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

These findings have significant implications for the developmental intergroup contact literature (e.g. Feddes et al., 2009; Tropp & Prenovost, 2008), which has typically shown contact between children from different ethnic groups only improves the intergroup attitudes of majority status children. In this chapter, it has been shown, in a multi-ethnic context where cross-ethnic friendship opportunities exist, that these types of friendships also relate to positive outcomes for both majority and minority status children. The associations, however, are not in terms of more positive intergroup attitudes as commonly found amongst ethnic majority status children. Instead, this study suggests cross-ethnic friendships have associations with the psychological and academic outcomes of ethnic minority and majority status children.

In line with the predictions and partly confirming Hypothesis 3.1, which stated direct associations between cross-ethnic friendships and psychological and academic well-being, findings revealed that cross-ethnic friendship quality was positively associated with psychological well-being and resilience for South Asian and White European groups. These findings extended cross-ethnic friendship literature which suggested that cross-ethnic friendships are related to positive outcomes in childhood (e.g., Kawabata & Crick, 2008, 2011). Cross-ethnic friendship quantity did not have significant associations with psychological outcomes. The lack of findings may be explained by previous research into intergroup contact which demonstrates that the quality of contact is particularly effective in reducing intergroup bias (Tropp & Prenovost, 2008). Davies, Tropp, Aron, Pettigrew, and Wright (2011) also demonstrated that compared to the number of cross-ethnic friendships, aspects of cross-ethnic friendships that relate to quality, such as self-disclosure are stronger predictors of outgroup attitudes.

PED had negative associations with both psychological and academic well-being for South Asian students. Research has demonstrated that South Asians had extra difficulties in

adjustment to school (Ghuman, 2002) and racial harassment was common among these students (Eslea & Mukhtar, 2000). One reason for the alienation of the South Asian ethnic group in the UK has been suggested to be the participation of this ethnic group in non-mainstream religions (e.g., Leiken, 2005). On the other hand, PED had negative associations with Black students' academic self-concepts. This is in line with previous research suggesting the negative effects of stereotype threat especially among Black students (Steele & Aronson, 1995). Therefore, Black students' perception of their ability in the academic setting may be negatively related to the perception of discrimination.

As predicted and partly confirming Hypothesis 3.2, which stated the buffering role of cross-ethnic friendships, findings demonstrated evidence for the buffering role of cross-ethnic friendship quantity for South Asians' psychological well-being, resilience and academic level and Blacks' academic self-concepts. For White Europeans, only quality had buffering effects on resilience. Accordingly, children with lower cross-ethnic friendship quantity (for ethnic minority status children) or quality (for ethnic majority status children) reported lower positive outcomes when PED was higher, whereas the effects of discrimination were attenuated for children with higher cross-ethnic friendship quantity or quality. Interestingly, for ethnic minority status children, only the quantity of cross-ethnic friendships moderated the effects of discrimination. Hence, the quantity of cross-ethnic friendships may be a more important measure against discrimination by providing consistent disconfirmations of negative expectations about intergroup contact from multiple resources (Mendoza-Denton et al., 2006). Therefore, continuous and frequent positive interactions may be more effective than quality per se in reducing the effects of discrimination.

The buffering effect of cross-ethnic friendships for White Europeans' resilience is interesting. It is possible that multiethnic settings could provide challenging environments and adjustment difficulties for Whites European children. Although PED is generally more

prevalent among non-white ethnic minorities (e.g., Verkuyten & Thijs, 2002), research has shown that Whites may also report ethnic discrimination (e.g., Coker et al., 2009). In fact, recent research in the US has suggested the emergence of ‘reverse racism’ against White populations who now report they perceive discrimination from other ethnic groups (Norton & Sommers, 2011). Although PED did not have significant negative effects for White Europeans in this study, cross-ethnic friendships tended to be an effective resource that protected White Europeans when these negative effects exacerbated.

The protective role of cross-ethnic friendships has been overlooked in the literature and so far studies have often considered same-ethnic friendships as buffering mechanisms against discrimination (e.g., Campbell & McLean, 2002; Postmes & Branscombe, 2002). Among few studies, Page-Gould (2012) found that students with close cross-ethnic friends did not avoid further cross-ethnic interactions after stressful intergroup experiences and cross-ethnic friendships functioned as resources that helped in coping with further stressful intergroup interactions. Linking these findings to the resilience literature, it was confirmed that cross-ethnic friendships could function as important mechanisms that reduce the negative effects of PED on positive outcomes. In this context, cross-ethnic friendships operated as *protective-stabilizers*, which enable the stability of the outcome variable despite increased risk (Luthar, Cicchetti, & Becker, 2000).

In summary, this chapter provided evidence for the protective role of cross-ethnic friendships on psychological well-being, resilience and academic outcomes among both ethnic minority and majority children. One limitation was the complexity of defining cross-ethnic friendships for children (also discussed in Chapter 2). Accordingly, in a study conducted by Smith and Schneider (2000) in Canada, children had difficulties in defining their own and their friends’ ethnic groups; while some children identified their friends from larger ethnic groups such as “Asians”, others indicated more specific ethnic groups such as

“Indian”. The current study also relies on self-reported cross-ethnic friendships which may have been chosen from both larger ethnic groups and from more specific ethnic categories, which introduces some subjectivity in the interpretation of cross-ethnic friendships. On the other hand, resilience was a complicated concept for children, as the resilience scale showed only moderate reliability; one reason may be that the items were hard to grasp for this age group. Future studies should consider using a more accessible and concrete measure for this concept.

It would have been informative to examine whether same-ethnic friendships had similar effects to cross-ethnic friendships. It is possible that the direct benefits to positive outcomes are not unique to cross-ethnic friendships. Friendships with others from within your own ethnic group may also be associated with higher well-being. It is more questionable whether same-ethnic friendships act as a buffer against PED in a multi-ethnic context. This is because same-ethnic friendships are unlikely to indicate a degree of integration amongst culturally diverse peer groups and, so afford the child the opportunity to disregard any PED. Other factors that may protect the well-being from PED should be examined in further studies. These include the potential role of ethnic identification and ethnic socialization within the family (e.g., Miller & MacIntosh, 1999).

### **3.7. Conclusion**

In conclusion, this study indicated that cross-ethnic friendships are beneficial for children by directly promoting positive outcomes and buffering against the negative effects of PED. Findings of this study make an original contribution to developmental intergroup contact literature by showing the benefits of cross-ethnic friendships for the individual outcomes among children. Such findings contribute to cross-ethnic friendship literature by not only showing how cross-ethnic friendships may function in current multiethnic

environments, but also how these friendships may help reduce the detrimental effects of PED, and enable children to maintain higher psychological and academic well-being and resilience against adversity. Although this chapter provides important knowledge about the role of cross-ethnic friendships in positive outcomes during childhood, it is still unknown how exactly these friendships relate to psychological and academic outcomes. Hence, the next chapter will further investigate which interpersonal processes may mediate this association.

## **Chapter 4**

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### **How do cross-ethnic friendships relate to psychological and academic well-being? The role of self-disclosure and affirmation**

Although Chapter 3 provided important information about how cross-ethnic friendships contribute to psychological and academic outcomes and moderate the detrimental effects of PED, it is still unknown how exactly these friendships are associated with these positive outcomes. As Chapter 2 showed how frequent cross-ethnic friendships have become in today's multiethnic school settings, it is crucial to expand current knowledge about these friendships, by further investigating how they are related to positive psychological and academic outcomes in childhood. This chapter, using multilevel structural equation modelling, examines two underlying interpersonal processes, self-disclosure and affirmation of the ideal self, as mediators between cross-ethnic friendship quality, and psychological and academic well-being among three main ethnic groups in the UK (White European, Black, and South Asian children). Findings revealed that both mediators had significant relationships with outcome variables. While affirmation was an important process for White European and South Asian children; self-disclosure significantly mediated the effects of quality on psychological well-being only among ethnic minority children (Black and South Asian).

#### 4.1. Introduction

Friendship literature has provided substantial evidence demonstrating the role of friendships in psychological outcomes such as well-being and self-esteem (e.g., Buhrmester, 1990; Hartup & Stevens, 1999; Keefe & Berndt, 1996). Yet, the majority of this literature has examined friendships in predominantly White settings and has not distinguished between same- and cross-ethnic friendships, given that cross-ethnic contact and friendships are usually rare in such settings (e.g., McGlothlin & Killen, 2006; Quillian & Campbell, 2003). However, today children have plenty of opportunities to meet cross-ethnic peers and form cross-ethnic friendships in multiethnic educational settings (e.g., Ford, 2008). In such environments, children spend a considerable amount of time with their cross-ethnic peers in classrooms. Therefore, it is likely that some of these cross-ethnic interactions would surpass the level of acquaintanceship and become friendships that involve interpersonal processes. In fact, Chapter 2 indicated that cross-ethnic friendship quality was relatively high in the current setting as opposed to previous research suggesting the low quality of cross-ethnic friendships (e.g., Paterson, 2010).

In this chapter, two specific interpersonal mechanisms are examined in the relationship between cross-ethnic friendships and psychological and academic outcomes: affirmation of the ideal self (the extent to which cross-ethnic friends are perceived as eliciting the child's ideal self) and self-disclosure (the extent to which children share information about themselves with their cross-ethnic friends and vice versa). Research has previously shown that both self-disclosure and affirmation of the ideal self are critical processes in interpersonal relationships (e.g., Altman & Taylor, 1973; Drigotas, 2002; Reis & Shaver, 1988). This chapter extends previous findings in intergroup and close relationships literature, by testing such processes in cross-ethnic friendships among ethnic minority and majority children. Hence, two main research questions were addressed:

*Research Question 4.1:* Does self-disclosure with cross-ethnic friends mediate the relationship between cross-ethnic friendship quality and psychological and academic well-being?

*Research Question 4.2:* Does affirmation of the ideal self by cross-ethnic friends mediate the relationship between cross-ethnic friendship quality and psychological and academic well-being?

So far, cross-ethnic friendship research has mainly concentrated on mediators that link cross-ethnic friendships to positive outgroup attitudes. These include increased self-disclosure and decreased intergroup anxiety (Turner et al., 2007), reduced cognitions of rejection (Barlow et al., 2009) and perceived social norms (Feddes et al., 2009). Despite progress in the understanding of cross-ethnic friendships in relation to outgroup attitudes, research investigating associations between cross-ethnic friendships and positive development have been mostly limited to social outcomes such as social skills, competence and adjustment (e.g., Hunter & Elias, 1999; Lease & Blake, 2005) and peer victimization and sense of vulnerability (e.g., Kawabata & Crick, 2011; Graham et al., 2014). Although these studies generated a basic understanding about the benefits of cross-ethnic friendships, no studies, to my knowledge, ever sought to examine how exactly cross-ethnic friendships may relate to psychological and academic outcomes in childhood. This chapter aims to fill this gap by investigating underlying interpersonal processes linking the quality of cross-ethnic friendships with psychological and academic well-being among White European, Black, and South Asian children recruited from multi-ethnic secondary schools in London. Specifically, two mediators were examined simultaneously in this association: self-disclosure between cross-ethnic friends and cross-ethnic friend affirmation of the ideal self.

The first mediator proposed was self-disclosure with cross-ethnic friends. Research has demonstrated that close interpersonal relationships develop through increased amounts of

information and intimacy shared mutually between individuals (Altman & Taylor, 1973; Reis & Shaver, 1988). Such self-disclosure among friends is related to well-being, and feelings of trust and acceptance (Furman & Robbins, 1985; McDonough & Munz, 1994), decreases in feelings of loneliness and depression (e.g., Berg & McQuinn, 1989; Wei, Russell, & Zakalik, 2005), greater social support (Thoits, 1986) and better coping with stress (Costanza, Derlega, & Winstead, 1988). Self-disclosure as a positive feature of friendships has been also linked to increased involvement in school (Berndt & Keefe, 1995), and academic achievement (Jourard, 1961).

Self-disclosure with cross-ethnic friends could be of special importance in relation to psychological and academic well-being, because a mutual sharing of information among different ethnic group members could promote important social and communication skills. More importantly, such self-disclosure may enable children to observe and learn different perspectives and experiences that may not be acquired through same-ethnic friendships. Research has shown that children with cross-ethnic friends possessed more perspective taking compared to children with no cross-ethnic friends (Eisenberg et al., 2009). Additionally, this kind of information exchange that cross ethnic boundaries may provide children with a varied range of reference points to evaluate themselves (Antonio, 2004) and function like social capital, providing resources that enable children to access important information about how to be successful in school (Crosnoe, Cavanagh, & Elder, 2003; Stanton-Salazar & Dornbusch, 1995).

Evidence from intergroup relations literature also supports this assumption, showing self-disclosure as an important concept in cross-ethnic friendships. In a meta-analysis, Davies et al. (2011) found that self-disclosure is one of the most significant indicators of cross-ethnic friendships promoting positive intergroup relationships. Turner et al. (2007) also found that cross-ethnic friendships improved positive outgroup attitudes through increased self-

disclosure between group members. The authors indicated that self-disclosure provides individuals with social skills and new experiences, constituting social resources that facilitate self-efficacy. Other research has demonstrated that self-disclosure is related to positive outgroup attitudes through eliciting various positive affective processes such as empathy, perspective taking and reciprocal trust (Miller, 2002; Stephan & Finlay, 1999).

The second mediator suggested was cross-ethnic friend affirmation of the ideal self, or the degree to which cross-ethnic friends help bring out one's ideal self. The ideal self is the desired vision of an individual's future possible selves and has often been shown to be an influential motivating force driving behaviour (e.g., Higgins, 1987). Other research highlighted the positive consequences of such possible selves in relation to well-being and academic and motivational outcomes (e.g., Oyserman & James, 2011; Oyserman, Bybee, Terry, & Hart-Johnson, 2004). Specifically, Oyserman et al. (2004) indicated that possible selves could function as "road maps" by guiding behavior, increasing optimism and self-regulating behavior. Even imagining successful possible selves has been linked to higher levels of well-being (King, 2001) and performance (Ruvolo & Markus, 1992).

Research on adults has shown that close relationships play a key role in motivation and self-regulation (c.f., Fitzsimons & Finkel, 2011). Specifically, the Michelangelo Phenomenon has shown that close relationship partners play a key role in shaping the ideal self (Drigotas, Rusbult, Wieselquist, & Whitton, 1999; Rusbult, Finkel, & Kumashiro, 2009). Using principles of behavioural confirmation theory, the Michelangelo Phenomenon model suggests that close relationship partners can help move individuals closer to their ideal self via partner affirmation, or behaving in a manner congruent with one's ideal self. Such affirmation of the ideal self was found to be associated with higher levels of personal and relational well-being (Drigotas, 2002; Rusbult et al., 2009). Although partner affirmation has been mostly studied in the context of romantic relationships among adults, research has

shown that friendships also serve as processes that justify self-concepts (Derlega & Chaikin, 1975). In fact, people are receptive to how their friends see them, and friendships can contribute to self-sufficiency by increasing self-awareness and self-knowledge, consequently presenting a more ideal self (Cocking & Kennett, 1998).

It could be argued that affirmation of the ideal self, when it especially originates from cross-ethnic friends, may relate to psychological and academic well-being by providing a source of support and encouragement from a variety of groups in a multiethnic educational setting which may offer a number of challenges such as ethnic discrimination (Bellmore, Nishina, You, & Ma, 2012), intergroup anxiety (Stephan & Stephan, 1985) and negative stereotypes (Wolfe & Spencer, 1996). Ethnic minority youth may especially anticipate different educational and employment pathways which are not similar to their families' traditional goals and motivations (e.g., Dale, Shaheen, Kalra, & Fieldhouse, 2002) and therefore may experience conflicts between family norms and the mainstream society.

As an important mechanism of affirmation, behavioral confirmation from others can affect the self and the expectation of close others can lead to behaviors that are consistent with this expectation. This consequently leads to the confirmation of self-fulfilling prophecies (Darley & Fazio, 1980; Harris & Rosenthal, 1985). Research in intergroup research has shown that when expectations from other group members are negative, these can lead to stereotype threat and negatively influence self-efficacy (e.g., Steele & Aronson, 1995). Hence, as opposed to stereotype threat, cross-ethnic friend affirmation may imply positive expectations from a variety of ethnic groups in a multiethnic environment, which may in turn relate to the self positively, increase self-efficacy and relate to better well-being outcomes.

Moreover, the ideal self as a form of future possible self is concerned with the self-regulation of behavior and is influential in driving motivations, desires and wishes for the

future (e.g., Oyserman et al., 2004). Therefore, affirmation of the ideal self via cross-ethnic friends may be critical for children by enabling them to perceive that their future goals are attainable even in challenging multiethnic settings which include now a variety of ethnic groups competing for scarce resources such as education and job opportunities (Tajfel & Turner, 1979). Therefore, perceiving cross-ethnic behaviors that are in line with one's ideal-self may promote psychological and academic well-being, since they allow children to feel that they are likely to achieve their ideal selves in the future, even though such expectations may be normally perceived as challenging in a multiethnic context.

Similar to previous empirical chapters, the target sample consisted of first year secondary school children who participated in the second wave of LLSS, as this period is critical for the development of friendships (Dunn, 2004) and self-concepts (e.g., Eccles et al., 2006). During this period, the quality of friendships and interpersonal processes such as self-disclosure become particularly important for early adolescents (Buhrmester, 1990; Fuligni & Eccles, 1993). Early adolescents start to spend more time in activities away from home and consequently consider their peers and friends as a source of self-worth and advice (e.g., Fuligni & Eccles, 1993). Therefore, the quality of relationships in the school environment and comfort in interactions may become crucial aspects of school experiences during this period (Johnson et al., 2001).

#### **4.2. Aims and hypotheses**

This study aimed to investigate how cross-ethnic friendships relate to psychological and academic well-being and test self-disclosure and ideal self affirmation as mediators of this association. At this stage of the research, the focus was on cross-ethnic friendship quality rather than quantity. It could be argued that the mere number of friendships is less likely to relate to self-disclosure and affirmation of the ideal self, while the quality of friendships

would be more closely associated with such interpersonal processes, since it encompasses both friendship interaction and intimacy. In summary, two main hypotheses were generated:

*Hypothesis 4.1:* The effect of cross-ethnic friendship quality on psychological and academic well-being would be mediated by self-disclosure with cross-ethnic friends.

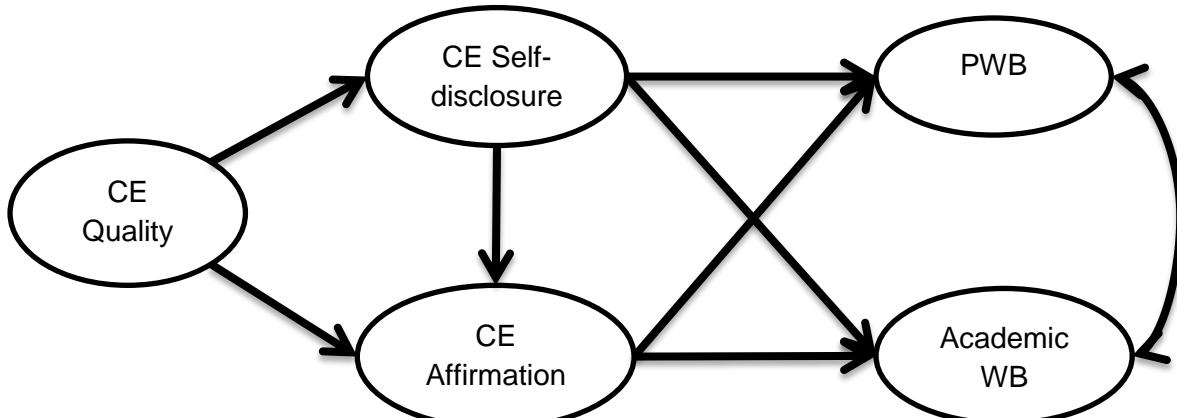
*Hypothesis 4.2:* The effect of cross-ethnic friendship quality on psychological and academic well-being would be mediated by cross-ethnic friend affirmation.

A final interest was to test whether there would be a relationship between the two mediators. Although no previous research has examined this relationship, it is likely that there would be a temporal sequence between the two processes. Self-disclosure is a more fundamental interpersonal process that may lead to the more complex process of affirmation, which theoretically follows a preliminary self-disclosure process (e.g., for cross-ethnic friends to believe that the target can achieve the most important dreams in life, i.e., affirmation, they should initially talk about these dreams, i.e., self-disclosure). Thus, the third hypothesis was generated:

*Hypothesis 4.3:* Self-disclosure with cross-ethnic friends would mediate the relationship between cross-ethnic friendship quality and affirmation.

The final hypothesized model is illustrated in Figure 4.1.

**Figure 4.1** Hypothesized mediation model.



Note. PWB = psychological well-being; CE = cross-ethnic.

### 4.3. Method

#### Participants

The sample included a total of 532 children including 226 White European, 205 South Asian and 101 Black students (aged 11; 223 boys, 309 girls) who studied at Year 7 in multi-ethnic secondary schools around London. The total sample is described in Chapter 1.

#### Procedure

Data were extracted from the second wave of LLSS collected during the first half of the Spring Term (January–February, 2012). In wave two, eight schools (35 classrooms) agreed to participate in the study, with a dropout rate of 11% at the school level and 5% at the classroom level. Chapter 1 outlines the procedure in detail. Although students were already informed about the aims and the procedures of the study and major concepts, descriptions of ethnicity and cross-ethnic friend, as well as research aims were repeated. The completion of the questionnaires took approximately 40 minutes.

#### Materials

**Friendship measurements.** Cross-ethnic friendship quality which includes intimacy and interaction with three best cross-ethnic friends was used. Details of this measurement are provided in Chapter 2.

**Self-disclosure with cross-ethnic friends.** Self-disclosure was assessed by two five-item scales designed for the purpose of the study and measured how often students talk to one of their cross-ethnic friends and how often their cross-ethnic friends talk to them about their feelings, academic life, etc. Some of the items were: “How often do you talk to one of your cross-ethnic friends about how you are feeling?” and “How often does one of your cross-ethnic friends talk to you about how well you are doing at school?” (see Appendix C). The response scale ranged from 1 (*none of the time*) to 5 (*all of the time*). The reliability of scales

was measured by Cronbach's alpha which showed moderate to good reliability (.79 for self-disclosure and .83 for cross-ethnic friend self-disclosure).

**Cross-ethnic friend affirmation.** This was assessed by a six-item scale designed for the purpose of this study and measured how much children perceive their cross-ethnic friends eliciting their ideal-selves. Sample items were: "My cross-ethnic friends understand the kind of person I most want to become" and "My cross-ethnic friends make me feel like a better person". The responses were reported on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach's alpha coefficient showed moderate reliability (.72) (see Appendix C).

**Psychological Well-being.** The same psychological well-being measures as in Chapter 3 were used (Warwick-Edinburgh Mental Well-Being Scale and the resilience scale). The Cronbach's alpha coefficients were .90 and .65, demonstrating good and acceptable reliability.

**Academic well-being.** This was measured by academic self-concepts and levels (see Chapter 3). Students were asked to report their perceived abilities and National Curriculum Levels on three different subjects.

#### **4.4. Data strategy**

Multilevel Structural Equation Modelling (MSEM, Curran, 2003) was used in order to present a systematic observation of the relationships between main variables. This method was advantageous for the current data, allowing the test of mediators in the same model simultaneously. Moreover, at this stage, the use of MSEM allowed the use of both psychological and academic outcomes as latent variables in the same model.

The fact that data were nested within classrooms and it was possible that students sharing the same classroom reported similar outcomes necessitated a preliminary investigation of the use of a multilevel procedure. Variance explained at the classroom level

was small for psychological well-being, but high for academic outcomes (ICC ranging from .00 to .20, all  $p > .05$ ). Therefore, a two-level procedure was used in data analysis.

As the sample size was over 100, which is the recommended sample size for the use of latent variables (Hair, Anderson, Tatham, & Black, 1998), latent variables were used to represent independent, mediator and dependent variables. Psychological well-being was indicated by two scales: Warwick-Edinburgh mental well-being scale and resilience scale. Academic outcomes were indicated by academic self-concepts and academic level. Self-disclosure with cross-ethnic friends was indicated by self-disclosure to cross-ethnic friends and from cross-ethnic friends. Affirmation of the ideal self was represented by two observed variables combined with the partial disaggregation method which allows the use of a reduced number of indicators by collapsing the total number of items to two or three indicators for each latent variable. This has been found to be advantageous for modelling a complex higher-order model and reducing the level of random error (Bagozzi & Heatherton, 1994; Von der Heidt & Scott, 2007). Hence, items for affirmation were randomly combined into two indicators. Finally, cross-ethnic friendship quality was represented by two observed variables: frequency of interaction and closeness.

Following goodness of fit indices were used: the chi-square test, the root-mean-square error of approximation (RMSEA), standardized mean square error of approximation (SRMR) and the comparative fit index (CFI). A good fit is achieved by a non-significant chi-square test (although for most studies including a large sample size, chi-square is almost always significant, therefore is usually not considered a reliable fit measure; Kenny, 2012), a CFI value greater than 0.95, an RMSEA of less than .06, and an SRMR of less than .08 (Hu & Bentler, 1999).

Using Mplus Version 7 (Muthén & Muthén, 1998 - 2014), initially the fit of measurement model across ethnic groups was tested. Next, structural models including the

mediation of cross-ethnic friend affirmation and self-disclosure in the relationship between cross-ethnic friendship quality, and psychological and academic well-being were constructed. The maximum likelihood estimation was used in competitive structural models which were then compared in order to test study hypotheses. To simplify the interpretations of the results, each ethnic group was tested separately.

#### **4.5. Results**

**Preliminary analyses.** Preliminary analyses are presented in Table 4.1 (next page). No significant ethnic group differences were observed on affirmation, self-disclosure, cross-ethnic friendship quality, psychological well-being, resilience or academic self-concepts. There was a significant effect of ethnic group on academic level,  $F(2,360) = 11.17, p < .001$ . Further post-hoc tests demonstrated that White European children reported significantly higher academic level compared to Black and South Asian children ( $p < .001$ ).

**Table 4.1.** Means, standard deviations, and correlations among main study variables

	<i>Mean (SD)</i>	2	3	4	5	6	7
<b>White European</b>							
1 CE quality	3.87 (.74)	.46***	.42***	.38***	.20**	.08	.07
2 CE self-disclosure <sup>4</sup>	3.18 (.87)	-	.47***	.34***	.26***	.15*	.27***
3 CE affirmation	3.82 (.70)		-	.51***	.22**	.27***	-.07
4 Psychological well-being	3.59 (.72)			-	.59***	.47***	.05
5 Resilience	3.63 (.70)				-	.54***	.14†
6 Academic self-concepts	3.92 (.64)					-	.47***
7 Academic level	10.84 (2.51)						-
<b>Black</b>							
1 CE quality	4.02 (.79)	.29**	.29**	.16	.18	.30**	.24*
2 CE self-disclosure	3.19 (.87)	-	.54***	.51***	.51***	.37**	.29*
3 CE affirmation	3.88 (.80)		-	.51***	.40***	.37**	.22†
4 Psychological well-being	3.72 (.80)			-	.61***	.48***	.21†
5 Resilience	3.61 (.80)				-	.45***	.32**
6 Academic self-concepts	3.90 (.72)					-	.56***
7 Academic level	9.09 (2.32)						-
<b>South Asian</b>							
1 CE quality	3.82 (.74)	.27***	.46***	.30***	.25**	.27***	.31***
2 CE self-disclosure	3.20 (.95)	-	.41***	.38***	.33***	.10	.10
3 CE affirmation	3.91 (.75)		-	.43***	.38***	.34***	.40***
4 Psychological well-being	3.64 (.68)			-	.65***	.38***	.29***
5 Resilience	3.54 (.73)				-	.43***	.33***
6 Academic self-concepts	3.94 (.63)					-	.57***
7 Academic level	9.55 (2.25)						-

Note. CE = cross-ethnic.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

<sup>4</sup>Since self-disclosure to cross-ethnic friends and from cross-ethnic friends were highly correlated for all ethnic groups ( $r > .55$ ), for descriptive results, an aggregated measure of self-disclosure with cross-ethnic friends was used.

### Model fit of the measurement models

Initial CFI models indicated that the measurement model was acceptable for all ethnic groups. All observed variables significantly loaded on latent variables. Table 4.2 presents initial model fits of the measurement models.

**Table 4.2** Measurement fit across ethnic groups

Ethnic group	Model fit
White Europeans	$\chi^2(25) = 70.98$ , $p < .05$ , CFI = .94, RMSEA = .08, SRMR = .06
Blacks	$\chi^2(25) = 33.78$ , $p > .05$ , CFI = .97, RMSEA = .06, SRMR = .06
South Asians	$\chi^2(25) = 38.57$ , $p < .05$ , CFI = .98, RMSEA = .05, SRMR = .04

### Multilevel structural equation models

Initially, partially mediated models including direct paths from cross-ethnic friendship quality to psychological and academic well-being were estimated. Psychological well-being and academic well-being were regressed upon cross-ethnic friendship quality, affirmation and self-disclosure, and cross-ethnic affirmation and self-disclosure were regressed upon quality. For this initial model, a priori path among the mediators was not included.<sup>5</sup> The models yielded acceptable to good fit for all ethnic groups. Table 4.3 presents model fits and path coefficients for all associations (next page). The partially mediated model (baseline model) revealed that for all ethnic groups, quality significantly predicted cross-ethnic friend self-disclosure and affirmation. Affirmation had significant associations with psychological and academic well-being for White European and South Asian children, but not for Black children. On the other hand, self-disclosure was related to both outcomes for Black children.

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<sup>5</sup>An initial observation of gender, classroom ethnic diversity and racial climate as control variables revealed that the main effects were intact with the inclusion of these two terms. Yet, the model fits were significantly worse with their addition. Therefore, they are not used in subsequent models.

**Table 4.3** Path coefficients and standard errors for the baseline model across ethnic groups

Baseline model	<b>White European</b>	<b>Black</b>	<b>South Asian</b>
Quality → Affirmation	.51 (.10)***	.62 (.16)***	.58 (.10)***
Quality → Self-disclosure	.79 (.12)***	.40 (.16)*	.58 (.14)***
Quality → Psychological WB	.11 (.15)	-.08 (.18)	-.14 (.14)
Quality → Academic WB	-.19 (.19)	.22 (.36)	.05 (.37)
Affirmation → Psychological WB	.39 (.15)**	.28 (.21)	.61 (.18)**
Affirmation → Academic WB	.55 (.31)†	.50 (.34)	1.41 (.50)**
Self-disclosure → Psychological WB	.09 (.09)	.48 (.16)**	.19 (.06)**
Self-disclosure → Academic WB	.06 (.10)	.64 (.19)*	-.10 (.15)

*Note.* WB = well-being.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

Model fit for White Europeans:  $\chi^2(71) = 102.81, p < .05$ , CFI = .95, RMSEA = .04, SRMR = .07.

Model fit for Blacks:  $\chi^2(71) = 83.21, p > .05$ , CFI = .96, RMSEA = .04, SRMR = .11.

Model fit for South Asians:  $\chi^2(71) = 74.18, p > .05$ , CFI = .99, RMSEA = .01, SRMR = .07.

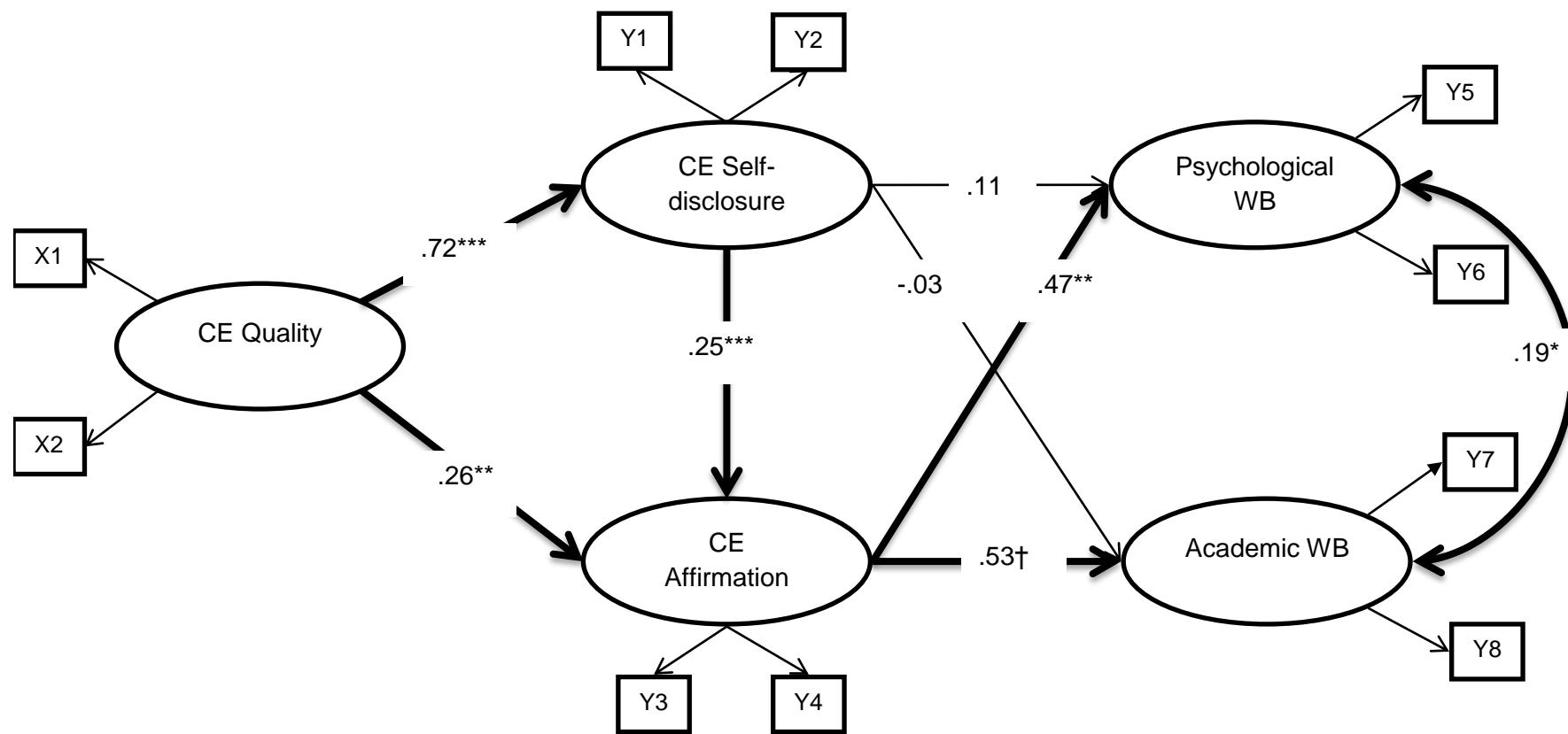
Next, baseline models were compared to models where a path from self-disclosure to affirmation was added. These models yielded significantly better fit compared to models with no path between self-disclosure and affirmation, demonstrated by significant chi-square difference tests,  $\Delta\chi^2(1) = 16.63$  for White Europeans,  $\Delta\chi^2(1) = 10.92$  for Blacks and  $\Delta\chi^2(1) = 11.53$  for South Asians, all  $p < .05$ . These models further demonstrated that the path from self-disclosure to affirmation was significant for White European ( $B = .25, SE = .06, p < .001$ ), Black ( $B = .41, SE = .13, p < .01$ ) and South Asian children ( $B = .18, SE = .05, p < .01$ ).

It was also checked whether the model improved by changing the path direction among the mediators; although paths including the opposite direction (from affirmation to

self-disclosure) were also generally significant, no significant improvement was observed in model fit.

To ascertain whether there existed a full mediation, these models were compared to fully mediated models where the direct paths from cross-ethnic friendship quality to psychological and academic well-being were excluded. Relevant chi-square difference tests were non-significant for each ethnic group,  $\Delta\chi^2(2) = 5.80$  for White Europeans,  $\Delta\chi^2(2) = 2.68$  for Blacks and  $\Delta\chi^2(2) = 1.19$  for South Asians, all  $p > .05$ ; this showed that the fully mediated models were not significantly worse than the partially mediated models. Hence, the simpler model with no direct paths from cross-ethnic friendship quality to psychological and academic well-being was retained.

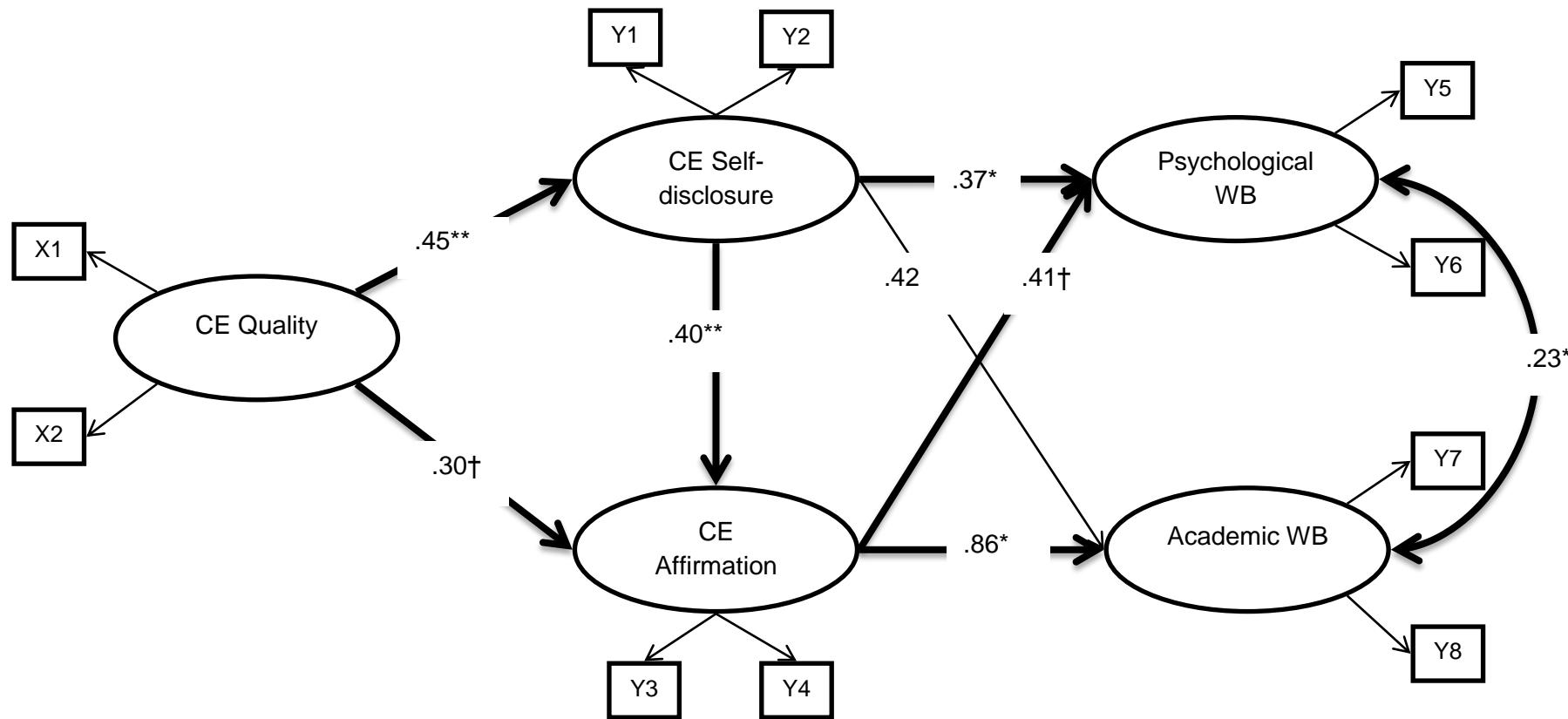
Additionally, whether self-disclosure fully or partially mediated the effects of quality on affirmation was tested by excluding the direct path from quality to affirmation. The results of chi-square difference tests were significant,  $\Delta\chi^2(1) = 10.76$  for White Europeans,  $\Delta\chi^2(1) = 6.67$  for Blacks and  $\Delta\chi^2(1) = 28.10$  for South Asians, all  $p < .05$ , demonstrating the retention of the partially mediated model. Figures 4.2, 4.3 and 4.4 (on pages 95, 96, and 97) demonstrate final model fits for each ethnic group.

**Figure 4.2** Effects of cross-ethnic friendship quality mediated by self-disclosure and affirmation for White Europeans

Note.  $N = 224$ . CE = cross-ethnic; WB = well-being. Final model fit:  $\chi^2(72) = 91.09$ ,  $p > .05$ , CFI = .97, RMSEA = .03, SRMR = .06.

All path coefficients are unstandardized.

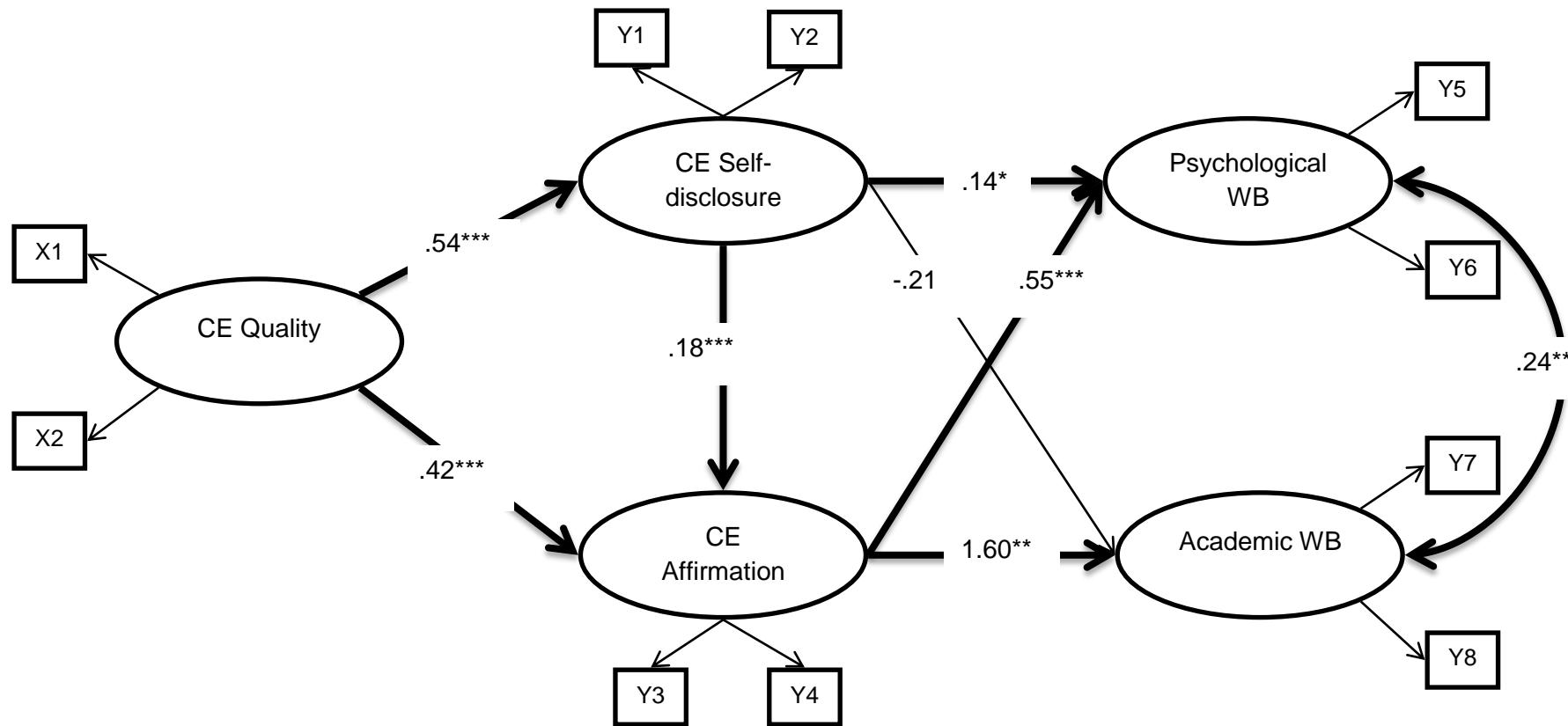
† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

**Figure 4.3** Effects of cross-ethnic friendship quality mediated by self-disclosure and affirmation for Black children

Note.  $N = 101$ . CE = cross-ethnic; WB = well-being. Final model fit:  $\chi^2(72) = 74.97$ ,  $p > .05$ , CFI = .99, RMSEA = .02, SRMR = .09.

All path coefficients are unstandardized.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

**Figure 4.4** Effects of cross-ethnic friendship quality mediated by self-disclosure and affirmation for South Asian children

Note. N = 205. CE = cross-ethnic; WB = well-being. Final model fit:  $\chi^2(72) = 63.84$ , p > .05, CFI = 1.00, RMSEA = .00, SRMR = .05

All path coefficients are unstandardized.

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

The results confirmed that for White Europeans, affirmation was significantly associated with psychological well-being ( $B = .47, SE = .14, p < .01$ ) and marginally significantly associated with academic well-being ( $B = .53, SE = .29, p = .06$ ). Self-disclosure did not relate to outcome variables. For Black children, affirmation had a marginally significant association with psychological well-being ( $B = .41, SE = .23, p = .07$ ) and a significant association with academic well-being ( $B = .86, SE = .41, p < .05$ ), while self-disclosure had a significant association only with psychological well-being ( $B = .37, SE = .16, p < .05$ ). For South Asian children, affirmation was significantly associated with both academic and psychological well-being ( $B = 1.60, SE = .47, p < .01$  and  $B = .55, SE = .14, p < .001$ , respectively). Self-disclosure was significantly related to only psychological well-being ( $B = .14, SE = .06, p < .05$ ).

Indirect effects for the final model were computed with delta method (Sobel test with added covariance). Table 4.4 presents the results of indirect effects (next page). Findings confirmed partly Hypothesis 4.1, which stated the mediating role of self-disclosure. Accordingly, it was found that for both Black and South Asian children, self-disclosure fully mediated the effects of quality on psychological well-being ( $B = .16, SE = .09, p = .06$  and  $B = .08, SE = .04, p < .05$ , respectively). For White Europeans, self-disclosure did not have a mediating effect.

In line with Hypothesis 4.2 which suggested affirmation as a mediator, affirmation fully and significantly mediated the effects of quality on psychological well-being for White Europeans ( $B = .12, SE = .05, p < .05$ ). For South Asian children, affirmation fully mediated the effects of quality on psychological well-being ( $B = .23, SE = .07, p < .01$ ) and academic well-being ( $B = .67, SE = .23, p < .01$ ). For the Black group, affirmation did not have a significant mediating effect. Confirming Hypothesis 4.3, for all ethnic groups, the effect of quality on affirmation was partially and significantly mediated by self-disclosure (all  $p < .05$ ).

**Table 4.4** Specific indirect effect estimates and standard errors

Independent variable	Mediator	Dependent variable	Estimate of indirect effect	SE of Indirect effect
<b>White European</b>				
Quality →	Affirmation →	Psychological WB	.12*	.05
		Academic WB	.14	.09
Quality →	Self-disclosure →	Psychological WB	.08	.06
		Academic WB	-.02	.07
Self-disclosure →	Affirmation →	Psychological WB	.11**	.04
		Academic WB	.13†	.08
Quality →	Self-disclosure →	Affirmation	.18***	.05
<b>Black</b>				
Quality →	Affirmation →	Psychological WB	.12	.08
		Academic WB	.26	.07
Quality →	Self-disclosure →	Psychological WB	.16†	.09
		Academic WB	.19	.15
Self-disclosure →	Affirmation →	Psychological WB	.16	.11
		Academic WB	.34	.21
Quality →	Self-disclosure →	Affirmation	.18*	.08
<b>South Asian</b>				
Quality →	Affirmation →	Psychological WB	.23**	.07
		Academic WB	.67**	.23
Quality →	Self-disclosure →	Psychological WB	.08*	.04
		Academic WB	-.12	.10
Self-disclosure →	Affirmation →	Psychological WB	.10**	.04
		Academic WB	.29**	.12
Quality →	Self-disclosure →	Affirmation	.10**	.04

Note. WB = well-being; SE = standard error.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

#### 4.6. Discussion

This study aimed to present a new perspective into how cross-ethnic friendships relate to psychological and academic well-being in a multiethnic setting by investigating self-disclosure and affirmation of the ideal self, as mediators. To my knowledge, this is the first study to examine potential mediators between cross-ethnic friendships and well-being outcomes. Moreover, this is the first study to examine the role of affirmation among children and in cross-ethnic friendships. Findings demonstrated evidence for the mediating effect of self-disclosure on psychological well-being among Black and South Asian children. Affirmation mediated the effects of quality on White Europeans' psychological well-being and South Asians' psychological and academic well-being. For all groups, self-disclosure partially mediated the effects of quality on affirmation.

The initial hypothesis about self-disclosure (Hypothesis 4.1) stated that the association between the quality of cross-ethnic friendships and psychological and academic well-being would be mediated by self-disclosure. Findings partially supported this. For White Europeans, self-disclosure did not have a mediating effect on outcome variables; while for ethnic minority children, self-disclosure had a significant association with psychological well-being. Although the relationship between cross-ethnic friend self-disclosure and psychological and academic outcomes has not been studied in the literature, Turner et al. (2007) found that self-disclosure mediated the effects of cross-ethnic friendships on outgroup attitudes for both White and South Asian British students. The authors found that the effect of self-disclosure on outgroup attitudes was further mediated by the perceived importance of self-disclosure. Therefore, one reason for the lack of significant effects of self-disclosure for White Europeans might be because these children perceive self-disclosure with cross-ethnic friends as less important compared to ethnic minority status children. Indeed, research has

shown that White children are usually less friendly to their cross-ethnic friends (e.g., Pica-Smith, 2011). Cross-ethnic self-disclosure could be of higher importance for ethnic minority children's psychological well-being, providing opportunities to share information with other groups and thereby eliciting feelings of integration and belongingness in a multiethnic setting.

It was also predicted that cross-ethnic friend affirmation would be a significant mediator between cross-ethnic friendship quality, and psychological and academic well-being (Hypothesis 4.2). Mediation analyses showed that affirmation fully mediated the effects of cross-ethnic friendship quality on psychological well-being for White Europeans and both psychological and academic well-being for South Asians. For Black children, although the mediation effect was not significant, affirmation was positively related to both outcomes. These findings are in line with previous theoretical suggestions. Research has shown that partner affirmation in close relationships is related to positive outcomes for both individuals and couples (e.g., Rusbult et al., 2009). Extending these findings, it was demonstrated that the extent to which cross-ethnic friends helped in the pursuit of the ideal self was related to positive outcomes among children.

These findings show that cross-ethnic friendships not only improve outgroup attitudes and social skills as previously suggested (e.g., Aboud et al., 2003; Lease & Blake, 2005), but they also relate to processes that include "the self", in particular motivations towards approaching a more ideal self among both ethnic minority and majority status children. These findings also relate to the *self-expansion theory* (Aron, Aron, & Smollan, 1992), which suggests that the inclusion of the other to the self is a critical process in relationships. It has been found that the extent to which the other is included in the self is an important mechanism whereby cross-ethnic friendships relate to improved outgroup attitudes (e.g., Aron & McLaughlin-Volpe, 2001; Page-Gould, Mendoza-Denton, Alegre, & Siy, 2010).

Although the current study examined psychological and academic well-being rather than outgroup attitudes, these findings suggest that cross-ethnic friendships may have important implications in the development of the self among children.

Finally, there was also evidence for the mediating role of self-disclosure between cross-ethnic friendship quality and affirmation of the ideal self, confirming Hypothesis 4.3. Accordingly, self-disclosure partially mediated the effects of quality on affirmation for all groups. To my knowledge, no study to date has examined specifically the association between self-disclosure and affirmation of the ideal self. This finding fits the initial theoretical assumption about the temporal sequence of the mediators. Self-disclosure is one of the basic interpersonal processes in friendships and is accompanied with reciprocal trust, loyalty and commitment (Bauminger, Finzi-Dottan, Chason, & Har-Even, 2008; Laursen, 1993). Therefore, it is possible that self-disclosure in cross-ethnic friendships leads to greater affirmation from cross-ethnic friends through the development of these reciprocal processes. As individuals start to gain knowledge about each other's inner world and establish mutual trust and understanding, affirmation may become a more important resource affecting the self.

In summary, this study extends previous findings by highlighting the role of interpersonal processes in cross-ethnic friendships in relation to positive developmental outcomes. It is important to note that critical ethnic group differences emerged. While self-disclosure was not a significant mediator for the ethnic majority status group, it was a significant mediator for ethnic minority status groups (Black and South Asian). Why was self-disclosure only effective for these students? One reason may be the concept of social capital acquired through cross-ethnic friendships (Stanton-Salazar & Dornbusch, 1995). It is more likely that children of ethnic minority backgrounds would benefit more from sharing information with cross-ethnic friends in a multicultural educational setting. Affirmation was

particularly influential for South Asian children; this may be due to the extra support this ethnic group needs to integrate and feel accepted into the main culture, given that this group is often more segregated compared to other ethnic minority groups (Maxwell, 2009). The same effect may be less obvious for Black children who may not need cross-ethnic friend affirmation for well-being and who are usually found to already have a high self-esteem (e.g., Crocker & Major, 1989). Also, the sample size of Black children was relatively small compared to other ethnic groups, which may have affected the results. Future research should investigate such differences between different ethnic groups.

Finally, it is critical to consider differences in terms of the outcome variables. It was suggested that affirmation of the ideal self and self-disclosure would mediate the effects of quality on both academic and psychological outcomes. Findings showed that these processes were particularly important for psychological well-being, rather than academic well-being for White European and Black children. It seems that such interpersonal processes provide more efficient resources for the development of well-being compared to the development of academic outcomes. Further research should examine why and how cross-ethnic friendships relate to these different outcomes.

A few limitations of the study should be considered. First, the lack of measures for same-ethnic friendships was a limitation, because it was impossible to show the uniqueness of such associations without means to compare these to same-ethnic friendship processes. Moreover, this study considered self-disclosure and affirmation as mediators between cross-ethnic friendships and psychological and academic well-being. Yet, it is possible that other mechanisms also play a role in these associations. Future studies could investigate whether social competence and skills acquired through cross-ethnic friendships (e.g., Kawabata & Crick, 2008) mediate the effects of cross-ethnic friendships on psychological and academic outcomes. Also, other processes that link cross-ethnic friendships to positive outgroup

attitudes may be tested in the context of psychological and academic well-being. For example, cross-ethnic friendships may promote positive development by decreasing intergroup anxiety which has been demonstrated as an important process in cross-ethnic friendships (e.g., Barlow et al., 2009). Finally, self-disclosure was assessed by a scale asking about the frequency of self-disclosure rather than the quality which may have been more important in terms of well-being. Therefore, it is important to further consider whether the role of self-disclosure would be different if it was measured in terms of quality.

#### **4.7. Conclusion**

Friendship literature offers a considerable amount of information about how friendships contribute to well-being and intergroup relation literature provides compelling evidence about how cross-ethnic friendships relate to outgroup attitudes; whereas the study of cross-ethnic friendships in psychological and academic well-being is surprisingly restricted considering the increasing numbers of cross-ethnic friendships in ethnically diverse settings. This chapter showed evidence for two critical interpersonal mechanisms - self-disclosure and affirmation - that may be important in the association between cross-ethnic friendship quality and positive outcomes. Findings suggest that interpersonal processes in cross-ethnic friendships may serve as important resources that relate to the psychological and academic functioning of children. As this chapter gave further insights into associations between cross-ethnic friendships and positive outcomes, an important question still remains unanswered. Are these benefits exclusive to cross-ethnic friendships? Are there unique processes whereby same- and cross-ethnic friendships relate to these positive outcomes? The next chapter will attempt to answer this question by exploring mediating processes in both same- and cross-ethnic friendships.

## Chapter 5

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### **Intimate self-disclosure and anxiety in same- and cross-ethnic friendships: How do they relate to children's psychological and academic well-being?**

Previous empirical chapters (Chapter 3 and 4) outlined whether and how cross-ethnic friendships contribute to positive psychological and academic outcomes. It has been demonstrated that cross-ethnic friendships buffer the destructive effects of PED on psychological and academic outcomes (Chapter 3) and relate to well-being through interpersonal mechanisms of self-disclosure and affirmation of the ideal self (Chapter 4). Although previous chapters provided evidence for positive associations between cross-ethnic friendships and psychological and academic outcomes, one major limitation has been the lack of measurements that relate to same-ethnic friendships, especially in terms of quality. This restricted extensively conclusions about the unique links between cross-ethnic friendships and positive outcomes. In other words, one could suggest that the associations in previous chapters may be a common feature of friendships in general. This chapter aims to investigate what makes cross-ethnic friendships distinctive in relation to psychological and academic well-being and examine through which processes same- and cross-ethnic friendship qualities are associated with these outcomes, by testing intimate self-disclosure and anxiety as mediators. Findings revealed that reduced anxiety in cross-ethnic friendships was a unique mediator associated with psychological well-being among White European and South Asian children. While self-disclosure in same-ethnic friendships was related exclusively to the psychological well-being of South Asian children, self-disclosure in cross-ethnic friendships was related exclusively to the psychological well-being of Black children.

## 5.1. Introduction

So far, the majority of research in cross-ethnic friendship literature has not gone beyond investigating the formation of same- and cross-ethnic friendships (e.g., Clark & Ayers, 1992; Dubois & Hirsch, 1990) and consequently neglected to examine the possible implications of these friendships for positive development among children. On the other hand, the limited research on the consequences of cross-ethnic friendships has often focused on the role of cross-ethnic friendships, without means to compare their effects to same-ethnic friendships (e.g., Hunter & Elias, 1999; Lease & Blake, 2005). Moreover, most studies examining the role of same- and cross-ethnic friendships simultaneously have been limited to only one dimension of these friendships such as whether children have cross-ethnic friends or not (Kawabata & Crick, 2008) or friendship numbers (Munniksma & Juvonen, 2012; Tran & Lee, 2010) and have not examined how same- and cross-ethnic friendships may particularly relate to positive developmental outcomes. The current chapter extends previous findings by investigating intimate self-disclosure and anxiety as mediators between same- and cross-ethnic friendship qualities and well-being outcomes. The following research question was addressed:

*Research Question 5:* Do intimate self-disclosure and anxiety mediate the effects of same- and cross-ethnic friendship quality on positive psychological and academic outcomes?

While a substantial body of research in friendship literature has compared same- and cross-ethnic friendships on various features such as quantity (e.g., Hallinan & Teixeira, 1987), quality (e.g., Aboud et al., 2003) and stability (e.g., Jugert et al., 2013), little is known in this literature about whether there are similar and/or differential processes through which same- and cross-ethnic friendships relate to positive developmental outcomes, especially in multiethnic settings where children have opportunities to form both types of friendships. Few researchers have examined whether cross-ethnic friendships make a unique contribution to

positive social-developmental outcomes. Kawabata and Crick (2008) found that cross-ethnic friendships, but not same-ethnic friendships, were uniquely associated with social inclusion and leadership skills and suggested that cross-ethnic and same-ethnic friendships may have differential roles in positive development. Kawabata and Crick (2011) further demonstrated that cross-ethnic friendships, but not same-ethnic friendships, were related to decreases in peer victimization over time. Tran and Lee (2011) found that cross-ethnic friendships were strongly associated with social competence, whereas same-ethnic friendships were only marginally significantly related to positive social outcomes. Munniksma and Juvonen (2012) also indicated that cross-ethnic friendships were uniquely related to increases in emotional safety.

Therefore, it is possible that, compared to same-ethnic friendships, cross-ethnic friendships have a distinctive role in positive development; yet, it is still unclear which particular mechanism makes these friendships unique in relation to positive psychological and academic development. This chapter investigates intimate self-disclosure and anxiety in same- and cross-ethnic friendships as possible processes that mediate the associations between friendships and these positive outcomes. Previously, Turner et al. (2003) found that increased self-disclosure and decreased anxiety mediated the effects of cross-group friendships on explicit outgroup attitudes among children. In the current chapter, the mediating role of self-disclosure and anxiety is investigated in relation to psychological and academic well-being. Moreover, both same- and cross-ethnic friendships are examined simultaneously to find out which process uniquely mediates these associations.

Among many interpersonal processes investigated in friendship literature, self-disclosure has been considered a unique process whereby children and adolescents develop intimacy in friendships (Buhrmester & Prager, 1995). Behaviors that highlight supportiveness and openness are central to friendship maintenance (Oswald, Clark, & Kelly, 2004). Intimacy

and self-disclosure become especially important predictors of socio-emotional and psychological functioning during early adolescence (e.g., Berndt, 1982; Townsend, McCracken, & Wilton, 1988). Hence, the first process investigated is intimate self-disclosure that includes the sharing of feelings and secrets and talking about problems and future plans. Although self-disclosure with cross-ethnic friends has been already examined in Chapter 4, at this stage of the research, the focus was on intimate self-disclosure which included the sharing of important elements in life. While Chapter 4 examined how frequently children self-disclosed to their cross ethnic friends, in this chapter the assessment of self-disclosure included rather the quality of self-disclosure with cross-ethnic friends. Another reason for investigating intimate self-disclosure is the lack of studies distinguishing between the effects of self-disclosure in same- and cross-ethnic friendships. Today's multiethnic educational environments allow for the examination of the consequences of self-disclosure in both friendship types, by providing children with multiple opportunities to self-disclose to other children from their own and different ethnic and racial backgrounds.

In a multiethnic setting, while self-disclosure in same-ethnic friendships may relate to psychological and academic well-being by providing mutual support, trust and solidarity within the same-ethnic group (e.g., McGill et al., 2012, Reynolds, 2007), self-disclosure in cross-ethnic friendships could be especially important by providing children with a sense of acceptance and inclusion from a variety of ethnic groups. Turner et al. (2007) suggested that self-disclosure with cross-ethnic friends was related to improvements in outgroup attitudes, because it provided children with special resources and opportunities to observe and experience different perspectives. In fact, research presented in Chapter 4 demonstrated that self-disclosure was an important process that linked cross-ethnic friendships to positive psychological outcomes among South Asian and Black children. In this chapter, both

friendship types are included in order to explore the unique pathways whereby cross-ethnic friendships are associated with well-being.

A second process investigated as a mediator in this chapter is anxiety. Anxiety in this research is intended to measure how comfortable children are interacting with their same- and cross-ethnic friends and how easy they find approaching these friends. Research has shown that comfort in peer interaction is a crucial aspect of school experiences (Johnson et al., 2001). Parker and Asher (1993) indicated that companionship and the way children interact in friendships is a substantial component of friendships. While the feeling of comfort in peer interaction is likely to enhance school adjustment and well-being; discomfort, in other words anxiety, especially among individuals from different groups has been shown to have negative influences on emotional and cognitive behaviors among minority (e.g., Stephan & Stephan, 1985) and majority group individuals (e.g., Richeson & Shelton, 2003).

Substantial evidence in cross-ethnic friendship literature has indeed indicated that decreased intergroup anxiety is an important process through which cross-ethnic friendships improve positive outgroup attitudes (e.g., Turner et al., 2007; Page-Gould, Mendoza-Denton, & Tropp, 2008). Hence, it is possible that cross-ethnic friendships would be particularly beneficial for psychological and academic development through reduced anxiety which may be of special value in a multiethnic society by generating a sense of belonging and safety (Munniksma & Juvonen, 2012; Mendoza-Denton & Page-Gould, 2008). While little is known about the role of anxiety in same-ethnic friendships, it is likely that reduced anxiety in cross-ethnic friendships would be a more influential mediator, since it would create a positive social climate for the development of children by improving outgroup attitudes and positive interaction between members of different groups.

## 5.2. Aims and hypotheses

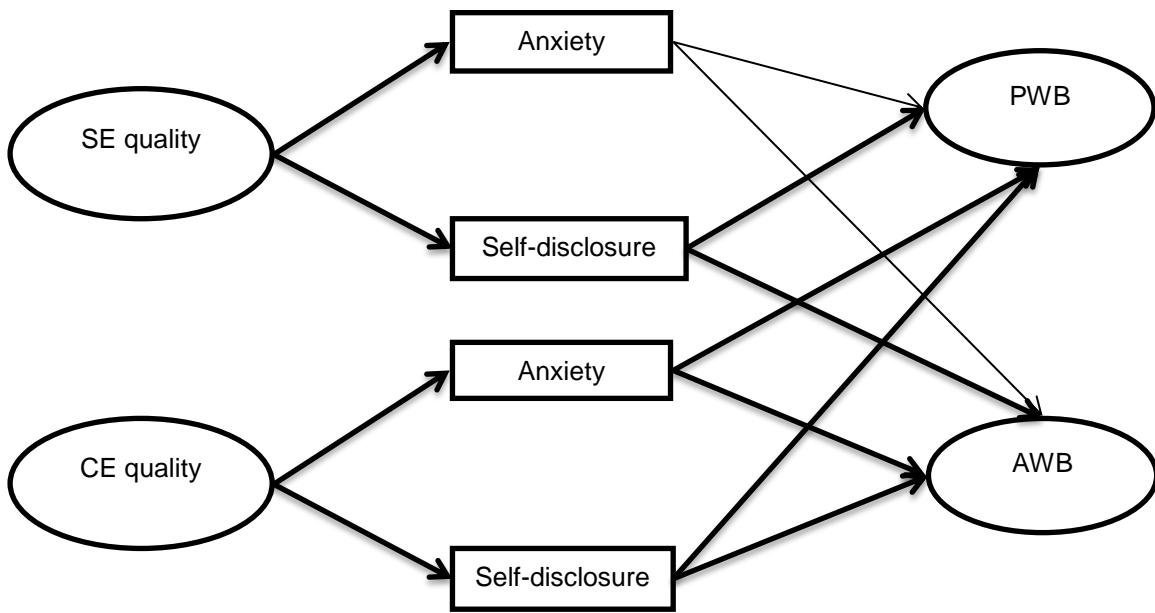
In summary, although previous research has examined self-disclosure and anxiety as mediators between cross-ethnic friendships and outgroup attitudes (e.g., Turner et al., 2007; Page-Gould et al., 2008), it is still unknown how these processes relate to psychological and academic outcomes in same- and cross-ethnic friendships. Since self-disclosure is an important intimacy indicator for both same- and cross-ethnic friendships, it was suggested that:

*Hypothesis 5.1:* Both same- and cross-ethnic friendship self-disclosures would mediate the effects of friendship quality on psychological and academic well-being.

On the other hand, it is conceivable that, in a multiethnic setting, reduced anxiety in cross-ethnic friendships would be a unique resource that would promote feelings of acceptance, comfort and adaptation into an ethnically diverse environment. Therefore, it was hypothesized that:

*Hypothesis 5.2:* Reduced anxiety in cross-ethnic friendships, but not in same-ethnic friendships, would uniquely mediate the effects of cross-ethnic friendship quality on psychological and academic well-being.

Although various ethnic group differences have been observed in previous empirical chapters, because same-ethnic friendships were only introduced in this study and so far no research has pointed to ethnic differences in this relationship especially in the UK, no specific hypothesis was constructed in relation to ethnic group differences. The hypothesized model is summarized in Figure 5.1.

**Figure 5.1** Hypothesized mediation model

*Note.* CE = cross-ethnic; SE = same-ethnic; PWB = psychological well-being; AWB = academic well-being.

### 5.3. Method

#### Participants

The sample included 463 students from two major ethnic groups; 171 White European, 90 Black and 202 South Asian students (aged 11; 263 girls, 200 boys) who studied at Year 7 in multi-ethnic secondary schools around London. Details of the sample are outlined in Chapter 1.

#### Procedure

Data were used from the third wave of the LLSS collected during the first half of the summer term (July, 2012). The schools which agreed to participate in LLSS were contacted at the beginning of the Summer Term and were invited to take part in the 3<sup>rd</sup> wave of data collection. All schools which agreed to participate in Wave 2 (eight schools) agreed to participate in Wave 3. During data collection, two classrooms further withdrew from the study due to school activities which resulted in a dropout rate of 6% at the classroom level.

The completion of questionnaires took 40 minutes. The details of the procedure are outlined in Chapter 1.

## Materials

**Friendship measurements.** Composite variables of cross-ethnic friendship quality and same-ethnic friendship quality were computed by combining the mean interaction and closeness for the three best cross-ethnic and three best same-ethnic friends (see Chapter 2 for details).

**Intimate friendship self-disclosure.** Two four-item scales (one for same-ethnic, one for cross-ethnic friendships) were used. The scale was designed for the aim of this research and included the following items: “I share my feeling and thoughts with my cross-/same-ethnic friends”, “If I had a family problem, I would talk about this to my cross-/same-ethnic friends”, “I talk about my future plans with my same-/cross-ethnic friends” and “I tell my secrets to my same-/cross-ethnic friends”. The response scale ranged from 1 (*none of the time*) to 5 (*all of the time*). The reliability of the scales was high with reliability coefficients of .83 for same-ethnic friendships and .81 for cross-ethnic friendships.

**Friendship anxiety.** Anxiety has been frequently studied in intergroup relations research, but most assessments of intergroup anxiety were concerned with feelings towards an outgroup member (e.g., Stephan and Stephan's intergroup anxiety scale, 1984). Since the focus of this study was particularly on close friendships rather than intergroup contact and both same- and cross-ethnic friendships were included, two two-item scales were designed to measure anxiety in same- and cross-ethnic friendships. The items were: “I feel comfortable interacting my same-/cross-ethnic friends”, and “I find it easy to approach my same-/cross-ethnic friends.” Both items were reversed, since it was thought it may be difficult for children to indicate anxiety with direct questions in the school environment. The response scale

ranged from 1 (*none of the time*) to 5 (*all of the time*). Reliability coefficients were high for both same- and cross-ethnic friendships (Cronbach's alpha = .89 and .81, respectively).

**Psychological well-being.** Warwick-Edinburgh Mental Well-Being Scale and the resilience scale (see Chapter 3 for details) were used. Cronbach's alpha coefficients were .91 and .63, respectively.

**Academic well-being.** Students were asked to report their perceived abilities (academic self-concepts) and National Curriculum Levels (academic level) on three different subjects.

#### 5.4. Data strategy

To analyse main research questions, multilevel structural equation models (MSEM, Curran, 2003) were used with Mplus Software Version 7 (Muthén & Muthén, 1998 - 2014). Because both same- and cross-ethnic friendship variables were entered in the model simultaneously, self-disclosure and anxiety variables had to be treated as observed variables, due to lower sample size in Wave 3. Similar to the previous empirical chapter, psychological well-being was indicated by Warwick-Edinburgh mental well-being scale and resilience scale; academic well-being was indicated by academic self-concepts and level. Regarding friendship measurements, friendship quality was indicated by psychological closeness and frequency of interaction. Initially, the measurement fit was assessed across each ethnic group. Next, multilevel structural equation models were constructed and partial and full mediation models were compared. Finally, indirect effects, computed with Delta method, were assessed for each indirect effect (see Chapter 4 for the goodness of fit indices).

#### 5.5. Results

**Preliminary analyses.** An initial observation of ethnic group differences and cross- and same-ethnic friendship variables revealed that overall cross-ethnic friendship quality was

higher compared to same-ethnic friendship quality,  $F(1,403) = 4.69$ , Wilks' Lambda = .99,  $p < .05$ . There was an interaction effect between friendship type and ethnic group,  $F(2,403) = 5.96$ , Wilks' Lambda = .97,  $p < .01$ ; while White European and Black children estimated higher quality cross-ethnic friendships compared to same-ethnic friendships, South Asian children estimated higher quality for their same-ethnic friends. Concerning anxiety in friendships, there was a marginally significant effect of friendship type,  $F(1,420) = 3.32$ , Wilks' Lambda = .99,  $p = .07$ . Interestingly, children estimated higher anxiety in same-ethnic friendships ( $M = 1.97$ ,  $SD = 1.14$ ) compared to cross-ethnic friendships ( $M = 1.90$ ,  $SD = .97$ ). For self-disclosure, there was an interaction between ethnic group and friendship type,  $F(2,423) = 2.97$ , Wilks' Lambda = .99,  $p = .05$ ; while White European and Black children reported similar levels of self-disclosure for their same- and cross-ethnic friends, South Asian children reported higher levels of self-disclosure for their same-ethnic friends. Means and standard deviations for each ethnic group and correlation coefficients are shown in Table 5.1 (next page).

**Table 5.1** Means, standard deviations, and correlations among main study variables

<b>W. European</b>	<i>Mean (SD)</i>	2	3	4	5	6	7	8	9	10
1 CE Quality	4.01 (.65)	.37***	.46***	.31***	-.42***	-.33***	.30***	.25**	.23**	.04
2 SE Quality	3.84 (.83)	-	.15†	.28***	-.40***	-.36***	.17*	.19*	.11	.16†
3 CE self-disclosure	3.35 (1.01)	-		.69***	-.47***	-.36***	.27**	.21**	.23**	.18*
4 SE self-disclosure	3.38 (1.12)		-		-.31***	-.61***	.28***	.22**	.26**	.28**
5 CE anxiety	1.69 (.88)				-	.55***	-.31***	-.37***	-.22**	-.27**
6 SE anxiety	1.81 (1.12)					-	-.32***	-.31***	-.26**	-.40***
7 PWB	3.59 (.74)						-	.55***	.39***	.13
8 Resilience	3.56 (.69)							-	.40***	.14
9 Ac. self-concepts	3.88 (.61)								-	.26**
10 Ac. level	11.94 (2.24)									-
<b>Black</b>	<i>Mean (SD)</i>	2	3	4	5	6	7	8	9	10
1 CE Quality	3.93 (.70)	.41***	.40***	.29*	-.47***	-.35**	.28**	.25*	.32**	.34**
2 SE Quality	3.74 (.83)	-	.32**	.53***	-.28*	-.39***	.42***	.38**	.30*	.22†
3 CE self-disclosure	3.04 (1.06)	-		.63***	-.46***	-.36**	.41***	.42***	.15	.11
4 SE self-disclosure	3.08 (1.12)		-		-.30**	-.70***	.43***	.32**	.25*	.20
5 CE anxiety	1.89 (.94)				-	.48***	-.31**	-.20†	-.10	-.25*
6 SE anxiety	2.11 (1.24)					-	-.42***	-.13	-.28*	-.29*
7 PWB	3.79 (.77)						-	.55***	.22†	.00
8 Resilience	3.65 (.86)							-	.42***	.31*
9 Ac. self-concepts	3.76 (.68)								-	.47***
10 Ac. level	10.37 (2.35)									-
<b>South Asian</b>	<i>Mean (SD)</i>	2	3	4	5	6	7	8	9	10
1 CE Quality	3.81 (.76)	.49***	.48***	.39***	-.41***	-.41***	.41***	.31***	.20**	.25**
2 SE Quality	3.91 (.85)	-	.32***	.45***	-.31***	-.47***	.33***	.22**	.09	.11
3 CE self-disclosure	2.84 (.99)	-		.73***	-.53***	-.46***	.38***	.33***	.19**	.17*
4 SE self-disclosure	3.08 (1.11)		-		-.35***	-.58***	.38***	.40***	.18*	.12
5 CE anxiety	2.10 (1.03)				-	.57***	-.41***	-.44***	-.26***	-.27**
6 SE anxiety	2.04 (1.09)					-	-.42***	-.41***	-.15*	-.22**
7 PWB	3.69 (.71)						-	.60***	.24**	.24**
8 Resilience	3.53 (.75)							-	.25**	.24**
9 Ac. self-concepts	3.90 (.62)								-	.53***
10 Ac. level	10.92 (2.54)									-

Note. W. = White; SE = same-ethnic; CE = cross-ethnic; Ac. = academic; PWB = psychological well-being.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

### **Model fit of the measurement model**

First, a confirmatory factor analysis (CFA) was performed to test the fit of the measurement model across ethnic groups and determine whether the measurement model had an acceptable fit for each ethnic group. The initial measurement model fit was assessed with all latent variables and indicated excellent fit across all ethnic groups. Table 5.2 presents initial measurement model fits for each ethnic group.

**Table 5.2** Measurement fit across ethnic groups

Ethnic group	Model fit
White Europeans	$\chi^2(42) = 23.08, p > .05$ , CFI = 1.00, RMSEA = .00, SRMR = .04
Blacks	$\chi^2(42) = 38.40, p > .05$ , CFI = 1.00, RMSEA = .00, SRMR = .07
South Asians	$\chi^2(42) = 36.07, p > .05$ , CFI = 1.00, RMSEA = .00, SRMR = .02

### **Multilevel structural equation models**

To explore whether same- and cross-ethnic friendships relate to psychological and academic well-being through different processes, psychological and academic well-being were regressed upon same- and cross-ethnic friendship measurements simultaneously and cross- and same-ethnic friendship self-disclosure and anxiety were regressed upon cross-ethnic and same-ethnic friendship quality.

First, partial mediation models including direct paths from quality to outcome variables were constructed for each ethnic group. A priori correlation term was included between mediating variables for both same- and cross-ethnic friendships, due to the high bivariate correlations (See Table 5.1). Initial fits of the baseline models (partial mediation models) are presented in Table 5.3 (next page).

**Table 5.3** Path coefficients and standard errors for the baseline model across ethnic groups

Baseline model	<b>White European</b>	<b>Black</b>	<b>South Asian</b>
SE quality → SE self-disclosure	.61 (.10)***	.78 (.15)***	.76 (.10)***
SE quality → SE anxiety	-.52 (.12)***	-.71 (.19)***	-.80 (.11)***
CE quality → CE self-disclosure	.79 (.12)***	.79 (.16)***	.71 (.10)***
CE quality → CE anxiety	-.64 (.11)***	-.66 (.16)***	-.70 (.11)***
CE quality → PWB	.13 (.14)	-.14 (.18)	.18 (.11)†
CE quality → AWB	.18 (.25)	.73 (.50)	.67 (.33)†
SE quality → PWB	.04 (.10)	.53 (.18)**	-.04 (.10)
SE quality → AWB	.06 (.19)	.33 (.22)	-.26 (.40)
SE anxiety → PWB	-.03 (.07)	-.08 (.13)	-.09 (.06)
SE anxiety → AWB	-.18 (.17)	-.15 (.25)	-.33 (.31)
CE anxiety → PWB	-.17 (.08)*	-.09 (.10)	-.22 (.06)**
CE anxiety → AWB	-.05 (.16)	.09 (.21)	-.50 (.23)*
SE self-disclosure → PWB	.11 (.09)	-.17 (.15)	.15 (.07)*
SE self-disclosure → AWB	.03 (.17)	.18 (.34)	-.10 (.31)
CE self-disclosure → PWB	-.06 (.09)	.26 (.13)*	-.12 (.07)
CE self-disclosure → AWB	.05 (.17)	-.31 (.32)	-.17 (.28)

Note. CE = cross-ethnic; SE = same-ethnic; PWB = psychological well-being; AWB = academic well-being. † $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

Model fit for White Europeans:  $\chi^2(102) = 86.78$ ,  $p > .05$ , CFI = 1.00, RMSEA = .00, SRMR = .07.

Model fit for Blacks:  $\chi^2(102) = 102.07$ ,  $p > .05$ , CFI = .99, RMSEA = .01, SRMR = .09.

Model fit for South Asians:  $\chi^2(102) = 117.65$ ,  $p > .05$ , CFI = .98, RMSEA = .03, SRMR = .07.

An initial observation of the baseline models indicated that classroom-level models did not fit the data. Therefore, these models are not further reported in this section. For all ethnic groups, the baseline model indicated good fit (See table 5.2 for model fit indices). Similarly, for all ethnic groups, both same- and cross-ethnic friendship quality was positively associated with self-disclosure and negatively associated with anxiety.

For White European children, cross-ethnic friendship anxiety was negatively related to psychological well-being ( $B = -.17$ ,  $SE = .11$ ,  $p < .05$ ). For Black children, same-ethnic friendship quality, but not cross-ethnic friendship quality, had a significant and positive association with psychological well-being ( $B = .53$ ,  $SE = .18$ ,  $p < .01$ ). On the other hand, self-disclosure in cross-ethnic friendships had a positive and exclusive relationship with psychological well-being for this ethnic group ( $B = .26$ ,  $SE = .13$ ,  $p < .05$ ). Finally, for South Asian children, cross-ethnic friendship quality, but not same-ethnic friendship quality was positively (marginally significantly) associated with both psychological and academic well-being ( $B = .18$ ,  $SE = .11$ ,  $p = .09$  and  $B = .67$ ,  $SE = .33$ ,  $p = .09$ , respectively). Similarly, only cross-ethnic friendship anxiety, but not same-ethnic friendship anxiety was related to psychological and academic outcomes ( $B = -.22$ ,  $SE = .06$ ,  $p < .01$  and  $B = -.50$ ,  $SE = .23$ ,  $p < .05$ , respectively). Moreover, same-ethnic friendship self-disclosure had a unique effect for this group by relating significantly to psychological well-being ( $B = .15$ ,  $SE = .07$ ,  $p < .05$ ).

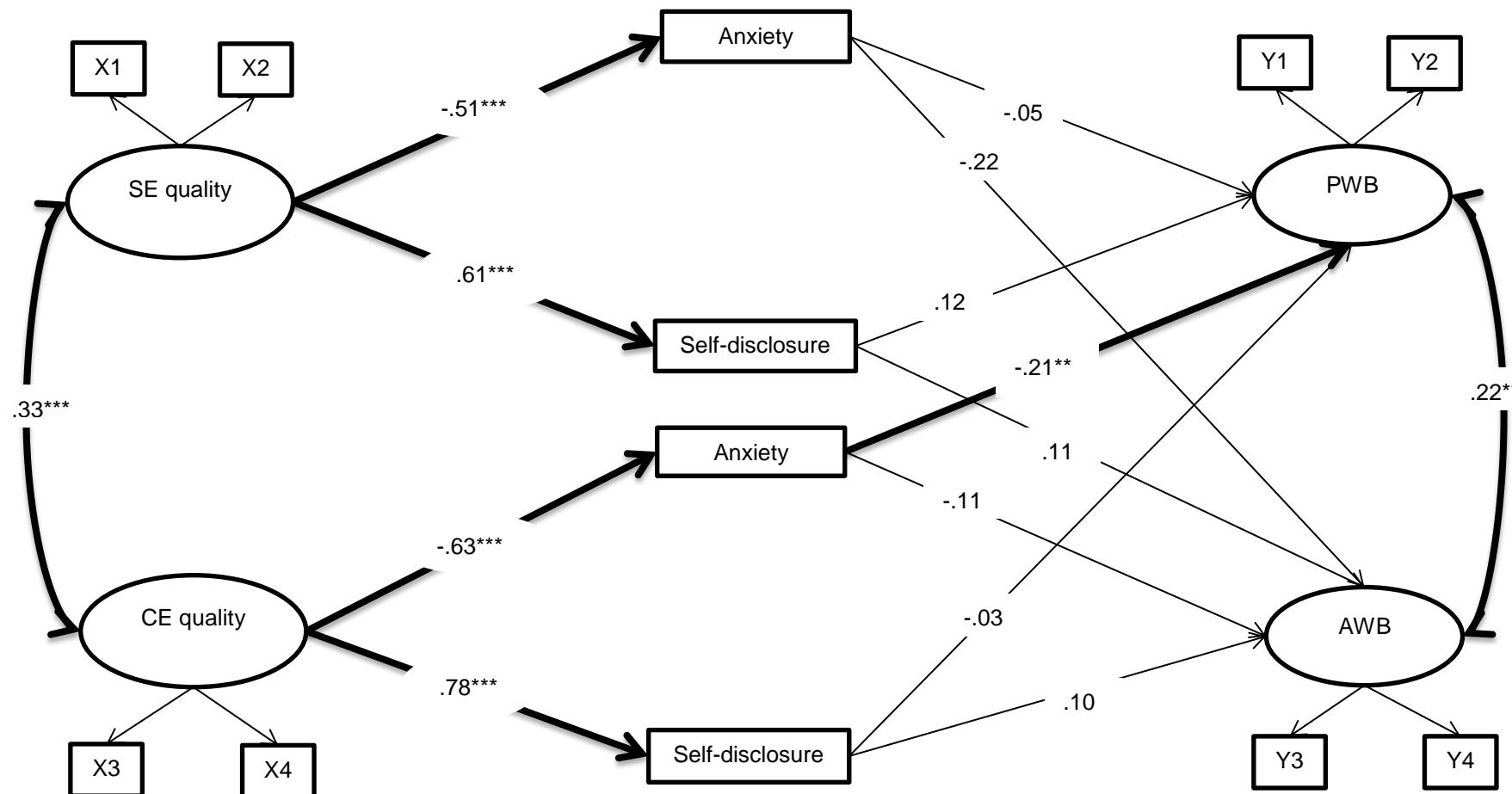
Next, these partial models were compared to fully mediated models. Findings demonstrated that after the exclusion of direct paths from quality to outcome variables, for all ethnic groups, quality was related to self-disclosure and anxiety for both same- and cross-ethnic friendships.

For White European children, the fully mediated model where the paths from same- and cross-ethnic friendship quality to outcome variables were excluded revealed

good fit and was not significantly worse than the baseline model, demonstrated by a non-significant chi-square difference test,  $\chi^2(4) = 3.38, p > .05$  (see Figure 5.2 for the final model fit and path coefficients on the next page). Hence, for White European children, the fully mediated model was retained. This model indicated that cross-ethnic friendship anxiety was exclusively and negatively related to psychological well-being ( $B = -.21, SE = .09, p < .01$ ). No other changes have been observed in the fully mediated model.

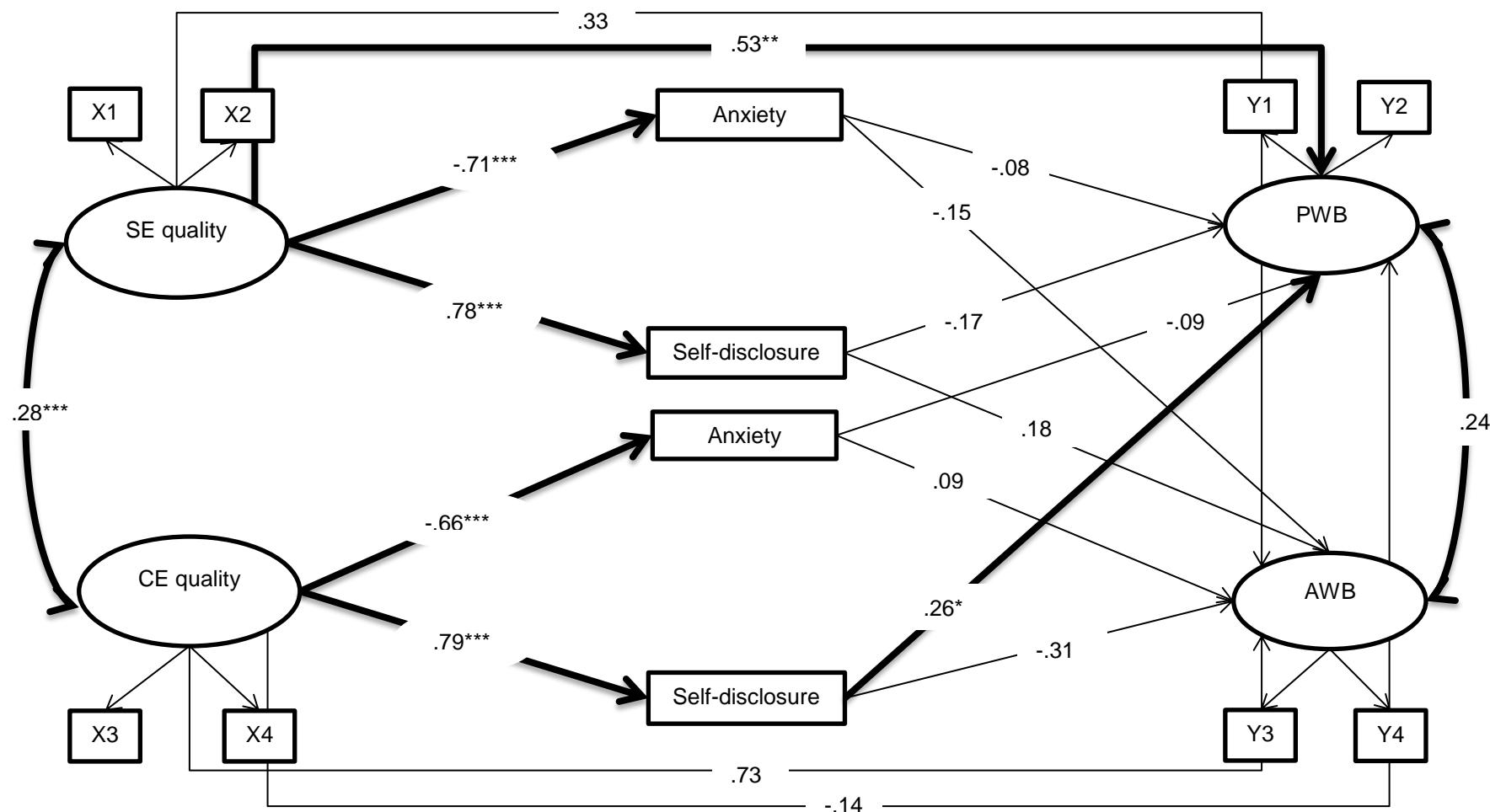
For Black children, the fully mediated model also revealed good fit. However, the chi-square difference test indicated that the fully mediated model was significantly worse than the partially mediated model,  $\chi^2(4) = 20.10, p < .01$ . This suggested the retention of the baseline model for Black children (see Figure 5.3 for the final model fit and path coefficients on page 121). This model indicated that same-ethnic friendship quality had a direct positive effect on psychological well-being ( $B = .53, SE = .18, p < .01$ ). Cross-ethnic friendship self-disclosure had also a positive association with psychological well-being ( $B = .26, SE = .13, p < .05$ ).

For South Asian children, a comparison between the partially and fully mediated model indicated that the fully mediated model was not significantly worse than the baseline model,  $\chi^2(4) = 4.88, p > .05$ . The fully mediated model showed that cross-ethnic friendship anxiety was significantly and negatively related to psychological and academic outcomes ( $B = -.24, SE = .06, p < .001$  and  $B = -.57, SE = .24, p < .05$ , respectively). Same-ethnic, but not cross-ethnic friendship self-disclosure, was also associated with psychological well-being ( $B = .14, SE = .06, p < .05$ ). Figure 5.4 presents final model fits and path coefficients for South Asians (page 122).

**Figure 5.2** Final structural model for White European children

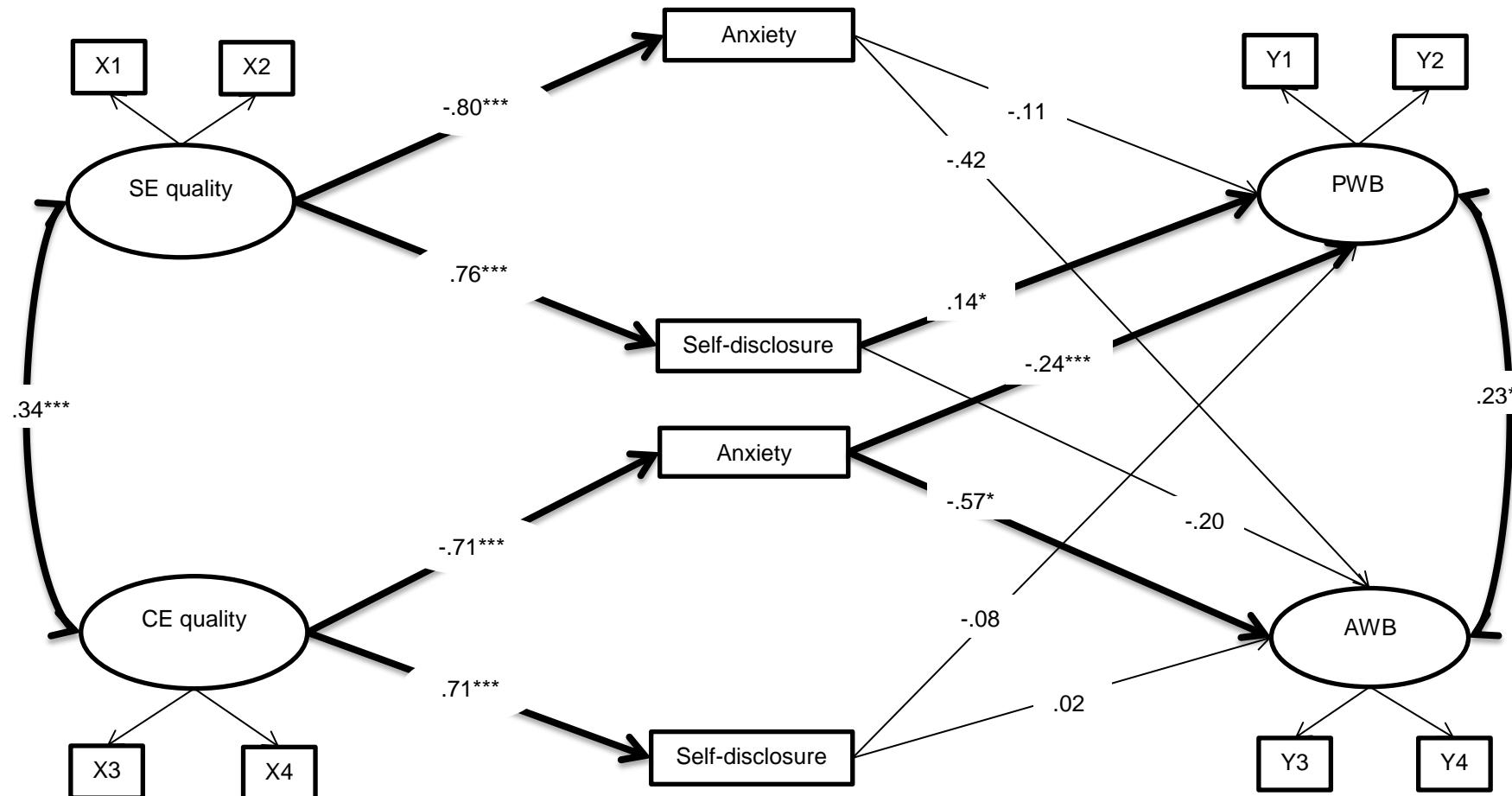
Note. N = 171. CE = cross-ethnic; SE = same-ethnic; PWB = psychological well-being; AWB = academic well-being. All path coefficients are unstandardized. All self-disclosure and anxiety variables are correlated, but path coefficients are not shown to simplify the graphs.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ . Model fit:  $\chi^2(106) = 90.16$ ,  $p > .05$ , CFI = 1.00, RMSEA = .00, SRMR = .08.

**Figure 5.3** Final structural model for Black children

Note. N = 90. CE = cross-ethnic; SE = same-ethnic; PWB = psychological well-being; AWB = academic well-being. All path coefficients are unstandardized. All self-disclosure and anxiety variables are correlated, but path coefficients are not shown to simplify the graphs.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ . Model fit:  $\chi^2(102) = 102.07, p > .05$ , CFI = .99, RMSEA = .01, SRMR = .09.

**Figure 5.4** Final structural model for South Asian children

Note. N = 202. CE = cross-ethnic; SE = same-ethnic; PWB = psychological well-being; AWB = academic well-being. All path coefficients are unstandardized. All self-disclosure and anxiety variables are correlated, but path coefficients are not shown to simplify the graphs.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ . Model fit:  $\chi^2(106) = 122.53, p > .05$ , CFI = .98, RMSEA = .03, SRMR = .08.

Indirect effects were computed with Delta method on Mplus. It was revealed that for White European children, the effect of cross-ethnic friendship quality on psychological well-being was significant through reduced anxiety (Delta indirect effect = .13,  $SE = .06, p < .05$ ). For Black children, cross-ethnic friendship self-disclosure mediated (marginally significantly) the relationship between cross-ethnic friendship quality and psychological well-being (Delta indirect effect = .21,  $SE = .11, p = .06$ ). Finally, for South Asian children, cross-ethnic friendship anxiety significantly mediated the effects of cross-ethnic friendship quality on psychological well-being (Delta indirect effect = .17,  $SE = .05, p < .01$ ) and on academic well-being (Delta indirect effect = .40,  $SE = .18, p < .05$ ). Moreover, same-ethnic friendship self-disclosure significantly mediated the effects of same-ethnic friendship quality on psychological well-being (Delta indirect effect = .10,  $SE = .05, p < .05$ ).

**Additional analyses.** Additional analyses were conducted to ascertain that the final models are the best fitting models for the current data. Hence, further models changing the direction between friendship quality and the processes of self-disclosure and anxiety were constructed. These models indicated a worse fit, demonstrated by significant chi-square tests,  $\chi^2(1) = 39.37$  for White European children;  $\chi^2(1) = 22.08$  for Black children, and  $\chi^2(1) = 60.63$  for South Asian children, all  $p < .0001$ .

## 5.6. Discussion

The aim of this study was to explore simultaneously different processes in same- and cross-ethnic friendships in relation to psychological and academic well-being among White European, Black and South Asian Year 7 secondary school children in London. This chapter presented important findings about how same- and cross-ethnic friendships are related to positive developmental outcomes. Although previous research has examined same- and cross-ethnic friendships simultaneously (e.g., Kawabata & Crick, 2008; Munniksma &

Juvonen, 2012), to my knowledge, no studies ever attempted to test the role of different mechanisms such as anxiety and self-disclosure in the relationship between cross- and same-ethnic friendships and psychological and academic functioning among children.

Results revealed that for White Europeans, intimate self-disclosure with same- or cross-ethnic friendships was not related to any outcomes, while only cross-ethnic friendship anxiety was related to psychological well-being. This shows the unique association between reduced intergroup anxiety with cross-ethnic friends and well-being in a multiethnic setting among White European children. For Black children, anxiety was not associated with well-being, but cross-ethnic friendship self-disclosure was exclusively associated with psychological well-being. For this ethnic group, the quality of close same-ethnic friends was also of unique importance as regards psychological well-being. For South Asian children, the quality of close cross-ethnic friends had a unique importance, while self-disclosure in same-ethnic friendships was exclusively related to psychological well-being. For this ethnic group, cross-ethnic friendship anxiety was uniquely associated with both psychological and academic well-being.

Hypothesis 5.1 stated that self-disclosure in same- and cross-ethnic friendships would both have a mediating role in the relationship between friendship quality and psychological and academic well-being. Findings revealed that for ethnic minority groups, self-disclosure with both cross- and same-ethnic friends seemed to be associated with well-being, yet important ethnic group differences emerged. While among Black children cross-ethnic friendship self-disclosure was uniquely associated with psychological well-being; among South Asian children, same-ethnic friend self-disclosure exclusively related to this outcome. This is partly in line with the study findings presented in Chapter 4, demonstrating self-disclosure in cross-ethnic friendships as a mediator for psychological well-being among ethnic minority children. In this chapter, it has been shown that for South Asian children, the

importance of self-disclosure with cross-ethnic friends seem to disappear when same-ethnic friendship measurements are involved.

One explanation may be because South Asian children in this research, as shown in previous chapters, reported in general lower quality cross-ethnic friendships and lower self-disclosure with their cross-ethnic friends, especially compared to Black children. Moreover, this chapter assessed more the quality of self-disclosure (not the frequency as in Chapter 4) and indicated that friendship quality and self-disclosure were higher in same-ethnic friendships compared to cross-ethnic ones for South Asian children. Hence, Black children may be able to bond more quickly and easily with their cross-ethnic friends and consequently benefit more from self-disclosure in these friendships, contrary to South Asian children who may not form such close cross-ethnic relationships. A second explanation may be religious differences which could explain why South Asian children are less likely to benefit from intimate self-disclosure with their cross-ethnic friends. The majority of South Asian children in this study were Pakistani and Bangladeshi, who are often found to have a distinctive Muslim identity (Ghuman, 1998). Hence, for these children, self-disclosure with cross-ethnic friends who are potentially from another religion may be more difficult to develop and consequently may be less likely to contribute to their overall well-being.

Interestingly, for White European children, intimate self-disclosure was not related to any of the outcome variables. This is in line with findings in Chapter 4 which showed that cross-ethnic self-disclosure was not a significant mediator for White Europeans. These findings are unexpected in terms of same-ethnic friendships, taking into account previous research which highlighted the importance of friendship intimacy and self-disclosure in well-being among this ethnic group, especially during early adolescence (e.g., Berndt, 1982; Buhrmeister & Furman, 1987; Buhrmeister, 1990). It is arguable that self-disclosure in general is a less important tool for White European children compared to ethnic minority

groups who are more likely to experience adjustment problems and discrimination-related experiences in multiethnic settings (e.g., Verkuyten & Thijs, 2002). Through self-disclosure with either same- or cross-ethnic friendships, ethnic minority children may regain confidence and may feel a sense of belonging in a challenging setting, while White European children may need less such self-disclosure in terms of psychological and academic well-being.

Regarding Hypothesis 5.2 which indicated that cross-ethnic friendship anxiety would exclusively mediate the relationship between friendship quality and positive outcomes, findings generally supported this assumption. For White European and South Asian children, cross-ethnic friendship anxiety was a unique process through which cross-ethnic friendships related to psychological well-being. For South Asian children, these effects also extended to academic outcomes. These findings have important implications for the literature on intergroup relationships, which has shown that cross-ethnic friendships decrease negative outgroup attitudes through decreased intergroup anxiety (e.g., Paolini, Hewstone, Cairns, & Voci, 2004; Turner et al., 2007). This study extended previous findings by showing that reduced anxiety may also mediate the effects of cross-ethnic friendships on psychological and academic outcomes. The lack of findings for Black children may be explained by previously stated ethnic group differences especially between South Asians and Blacks (Maxwell, 2009). Since the Black ethnic group is already less likely to experience racist bullying compared to South Asians (Eslea & Mukhtar, 2000), it is possible that anxiety in same- or cross-ethnic interactions may be a less important feature of well-being among Black children.

Finally, an investigation of the direct associations between same- and cross-ethnic friendship quality and well-being also revealed ethnic group differences. While friendship quality with close same-ethnic friends was uniquely related to positive outcomes among Black children, cross-ethnic friendship quality was uniquely associated with positive outcomes among South Asian children. These findings contradict, to some extent, previous

findings about the differential role of friendship self-disclosure among Black and South Asian children. For Black children, although cross-ethnic self-disclosure in general was more closely related to psychological well-being compared to same-ethnic self-disclosure, the quality of best same-ethnic friends was more closely related to this outcome compared to best cross-ethnic friendships. This may be explained by recent data showing that Black culture has been valued more and more in the UK since the last decade (Ali, 2003). Hence, having a close same-ethnic friend could be of special value for Black children. Moreover, in a study with Caribbean British youth, Reynolds (2007) indicated that these children, although they had friends from different ethnic groups, reported their best friends from their same-ethnic peers. The authors suggested that same-ethnic friendships may provide children with opportunities to *bond* social capital and therefore contribute to solidarity and trust in a multiethnic society, while cross-ethnic friendships are expected to *bridge* social capital by enabling children to access important information (Coleman, 1990).

Overall, this study contributes to the current understanding of cross-ethnic friendships in a multiethnic environment, by drawing upon two important processes in friendships - self-disclosure and anxiety. Since the current research shows that reduced anxiety in cross-ethnic friendships is an important process that predicts higher well-being, especially for South Asian children, it is critical to further investigate which other processes may further link this relationship. As decreased intergroup anxiety has been shown to improve outgroup attitudes, the link between anxiety and well-being may be further mediated by decreased PED. Hence, cross-ethnic friendship anxiety may be important for well-being, since it reduces feelings of discrimination. Future research could extend these findings by incorporating the role of discrimination within this context.

Additionally, Berndt (1999) indicated that friendship quality has three important features: intimacy, companionship and conflict. Hence, conflict may also define how same-

and cross-ethnic friendships relate to positive outcomes. Previous research has demonstrated mixed results for the perception of conflict in same- and cross-ethnic friendships. While some studies indicated that the perception of conflict is greater in cross-ethnic friendships (e.g., Labianca, Brass, & Gray, 1998), other research demonstrated the opposite trend (McGill et al., 2012). Future studies could explore whether conflict in cross-ethnic or in same-ethnic friendships is more destructive for children's psychological and academic well-being.

### **5.7. Conclusion**

This chapter aimed to examine whether same- and cross-ethnic friendships have differential associations with psychological and academic outcomes among White European, Black and South Asian students in a multiethnic school setting. Findings demonstrated that lower levels of anxiety in cross-ethnic friendships were related to psychological outcomes for both ethnic minority and majority children. Although same-ethnic friendship self-disclosure among South Asians and cross-ethnic friendship self-disclosure among Blacks also seemed to be positively associated with psychological well-being, cross-ethnic friendship anxiety was in general a stronger predictor of positive outcomes. Taken together, findings highlight the importance of establishing positive relationships that encompass comfort in interaction with cross-ethnic peers in increasing resilience and well-being in a multiethnic environment.

Although this chapter enlightened how cross-ethnic friendships uniquely relate to positive outcomes compared to same-ethnic friendships, a major question that should be addressed to fully disentangle the relationship between cross-ethnic friendships and well-being is how these relationships operate over time. The next chapter will, therefore, attempt to draw upon longitudinal data and provide a deeper understanding of the role of cross-ethnic friendships on positive psychological and academic outcomes.

## **Chapter 6**

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### **Cross-ethnic friendships, classroom racial climate and positive psychological and academic outcomes: A longitudinal analysis**

Previous empirical chapters demonstrated substantial evidence for the benefits of cross-ethnic friendships for children's well-being. Chapter 3 showed that cross-ethnic friendships are associated with positive psychological and academic outcomes and buffer the negative effects of PED. While Chapter 4 enlightened the relationship between cross-ethnic friendship quality and positive outcomes by demonstrating self-disclosure and affirmation as interpersonal processes functioning as mediators, Chapter 5 introduced same-ethnic friendships and indicated unique processes whereby same- and cross-ethnic friendships relate to psychological and academic well-being by highlighting the exclusive role of reduced cross-ethnic friendship anxiety. A major question to be addressed at this stage of the thesis is whether cross-ethnic friendships have similar associations with well-being over time. This chapter, relying on longitudinal data from LLSS, investigates whether cross-ethnic friendships result in increases in psychological and academic well-being over time among White European, Black and South Asian children. Furthermore, this chapter tests whether longitudinal effects of cross-ethnic friendships are moderated by classroom racial tension. Cross-lagged multilevel models demonstrated that both cross-ethnic friendship quantity and quality had positive associations with psychological and academic outcomes over time, but this depended on the ethnic group. Moreover, such positive effects of cross-ethnic friendships were stronger when classroom racial tension was lower.

## 6.1. Introduction

Research on cross-ethnic friendships has demonstrated that these types of friendships are associated with positive social outcomes such as social competence and skills (e.g., Lease & Blake, 2005) and positive outgroup attitudes (e.g., Aboud et al., 2003). These findings indicate that cross-ethnic friendships are indeed related to a host of positive outcomes in childhood. However, a major gap in this literature is the lack of large scale longitudinal designs that would clearly demonstrate the role of cross-ethnic friendships on positive psychological and academic functioning over time. Cross-sectional studies are often considered to be limited to show associations between variables at only one point of time and therefore do not reflect “change” in variables (e.g., Bijleveld & Van der Kamp, 1998). Hence, the majority of research in developmental psychology aims to highlight changes in development over time and attempts to use longitudinal designs (Kwok et al., 2008). Therefore, at this stage of the thesis, it is critical to test associations among children’s cross-ethnic friendships and well-being using such designs which are more likely to suggest cause-and-effect relationships between variables compared to cross-sectional studies (Bijleveld & Van der Kamp, 1998).

A second major gap in cross-ethnic friendship literature is the lack of empirical research demonstrating when these types of friendships are beneficial for children. The current study examined classroom racial climate<sup>6</sup> as a moderator in the relationship between cross-ethnic friendships and well-being outcomes. The perception of school or classroom climate has been previously found to affect behaviors at school and a positive school climate contributes to positive outcomes among children (e.g., Hoge, Smit, & Hanson, 1990; Koth,

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<sup>6</sup>Classroom racial climate has been previously included in Chapter 4 as a covariate and cross-sectional findings showed that classroom racial climate did not have a significant effect on the outcome variables. However, in this chapter, it is viewed as a moderator and is used in a longitudinal design revealing relationships between cross-ethnic friendships and well-being outcomes over time.

Bradshaw, & Leaf, 2008). One of the important aspects of school climate in multiethnic educational settings is likely to be the racial climate of the school/classroom which has been described as norms and values around race and interracial interactions within an institution (Chavous, 2005; Greene, Adams, & Turner, 1988). In this study, a positive classroom racial climate has been conceptualized as the absence of interracial tension within the classroom, while a negative school climate is characterized by racial conflict between different ethnic groups. This chapter aimed to investigate whether such racial tension moderates the effects of cross-ethnic friendships on psychological and academic outcomes.

The following research questions were investigated:

*Research Question 6.1:* Do cross-ethnic friendships have longitudinal associations with psychological and academic well-being?

*Research Question 6.2:* Does classroom racial tension moderate the longitudinal associations between cross-ethnic friendships and psychological and academic well-being?

A great deal of previous research, using longitudinal designs, has provided evidence for the effects of cross-ethnic friendships and intergroup contact on positive outgroup attitudes over time (e.g., Binder et al., 2009; Brown, Eller, Leeds & Stace, 2007; Feddes et al., 2009; Levin et al., 2003). On the contrary, the majority of cross-ethnic friendship research in developmental psychology literature has been cross-sectional, except three recent studies examining the role of cross-ethnic friendships in psychosocial development longitudinally. These studies revealed prospective effects of cross-ethnic friendships on peer victimization and peer support (Kawabata & Crick, 2011), self-esteem and depression (McGill et al., 2012) and sense of safety (Munniksma & Juvonen, 2012). However, no studies, to my knowledge, have examined longitudinal effects of cross-ethnic friendship quality and quantity simultaneously in relation to both positive psychological outcomes such as psychological

well-being and resilience and academic outcomes, including academic level and self-concepts. More importantly, no previous research has examined whether classroom racial climate may moderate these specific associations. Hence, using longitudinal data from LLSS and a multiethnic sample including three major ethnic groups in the UK (White European, Black, and South Asian British), this chapter investigates the consequences of cross-ethnic friendships in children's well-being over time, by testing the moderation of classroom racial tension.

Past research has examined extensively the effects of classroom context variables such as classroom/school ethnic composition in cross-ethnic friendship research (e.g., McGlothlin & Killen, 2010; Vervoort et al., 2011). In fact, Chapter 2 demonstrated that ethnic diversity was an important variable in the formation of cross-ethnic friendships in multiethnic settings. Other classroom/school factors such as structural organization (Damico et al., 1981), academic tracking and extracurricular activities (Khmelkov & Hallinan, 1999) have been found to affect the formation and maintenance of cross-ethnic friendships. For example, cooperative learning strategies, where different ethnic group students work together, result in increases in cross-ethnic friendships and positive outgroup attitudes (e.g., Slavin, 1983).

Particularly relevant to cross-ethnic friendship research is the role of classroom racial climate. Research has shown that classroom racial climate has influences on the formation of friendships and interracial behaviors (e.g., Hallinan & Teixeira, 1987; Serow & Solomon, 1979; Stearns, 2004), and academic and psychological outcomes in schools (e.g., Green et al., 1988; Johnson et al., 2001; Ryan & Patrick, 2001). For example, Mattison and Aber (2007) demonstrated that the perception of a positive school racial climate is associated with better outcomes in school such as higher grades and fewer detentions among both ethnic majority

and minority secondary school students in the US. Racial climate has been also studied in college campus settings. Accordingly, a hostile racial climate in the campus has been found to affect negatively the sense of institutional belonging (Hurtado & Carter, 1997) and adjustment among college students (e.g., Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999).

However, little is known about how classroom racial climate may affect the relationship between cross-ethnic friendships and psychological and academic outcomes. To my knowledge, only one recent study investigated a classroom-level moderator in the association between cross-ethnic friendships and developmental outcomes. Kawabata and Crick (2011) suggested that ethnic diversity of classrooms may moderate the link between cross-ethnic friendships and peer victimization and peer support, because it could set up social norms that imply the formation of cross-ethnic friendships as an acceptable behavior. The authors found that cross-ethnic friendships led to increases in peer support and decreases in peer victimization among children from diverse ethnic backgrounds. These associations were moderated by classroom ethnic diversity such that the relationships between cross-ethnic friendships and positive outcomes were stronger in more ethnically diverse school settings.

In the current study, rather than classroom ethnic diversity, a specific interest was on classroom racial tension, since it is conceivable that the racial climate perceived by children is a more important determinant of how such friendships are associated with psychological and academic outcomes. In line with this, Dejaeghere et al. (2012) indicated that classroom ethnic diversity did not have an effect on ethnocentrism among majority group late adolescents, unless the perceived intergroup relationship quality was high.

It is anticipated that cross-ethnic friendships will be an effective resource over time in an environment where racial tension is lower, since a positive racial climate (lower racial tension) should promote an inclusive norm that paves the way for the development of close cross-ethnic friendships. Research has shown that such norms both facilitate the formation of cross-ethnic friendships and mediate the process by which these friendships result in positive intergroup attitudes (Feddes et al, 2009; Jugert et al., 2011). Therefore, if cross-ethnic friendships are normal and condoned within the school climate, then any positive effects from these friendships are likely to occur.

In contrast, if the school climate involves higher racial tension, then cross-ethnic friendships are less likely to be normative and this is likely to limit any of their positive effects. Research shows that by late childhood and early adolescence, individuals are very concerned about being social excluded and are highly aware of group dynamics (see Killen & Rutland, 2011). Forming cross-ethnic friendships in a racially tense climate is likely to risk social exclusion within the peer group, and it is well known that social exclusion (even possibly its anticipation) results in poor psychological and academic outcomes (see Rubin, Bukowski, & Parker, 2006).

## **6.2. Aims and hypotheses**

In summary, this chapter aims to investigate whether cross-ethnic friendship quantity and quality have significant associations with psychological and academic well-being over time among ethnic minority and majority children recruited from ethnically diverse secondary schools in London. Moreover, this study attempts to examine whether classroom racial tension moderates this specific relationship. Therefore, it was hypothesized that:

*Hypothesis 6.1:* Both cross-ethnic friendship quantity and quality would be associated with increases in positive psychological and academic outcomes.

*Hypothesis 6.2:* Lower classroom racial tension would lead to a stronger relationship between cross-ethnic friendships and psychological and academic outcomes.

No a priori hypothesis has been suggested in terms of any ethnic group differences, since such differences have been inconsistent through previous chapters.

### **6.3. Method**

#### **Participants**

Participants were 256 White European, 118 Black and 247 South Asian Year 7 children (aged 11) who participated in LLSS. The details of the sample are described in Chapter 1 and 2.

#### **Procedure**

Data were used from LLSS conducted in nine secondary schools in London (37 classrooms). Data for LLSS were collected over three waves during the first half of each school term (Autumn, Spring, and Summer Terms, 2011-2012), with four and a half months intervals. While the 1<sup>st</sup> wave of data collection included 37 classrooms, the 2<sup>nd</sup> wave included 35 classrooms (dropout rate = 5%), and the 3<sup>rd</sup> wave included 33 classrooms (dropout rate = 11%). An observation of the differences between classrooms which continued over three waves and classrooms which dropped out at first or second waves revealed that there was no significant differences between two groups in terms of ethnic diversity, classroom racial climate, well-being and friendship measures, all  $p > .05$ . Details of the procedure are stated in Chapter 1.

#### **Materials**

Cross-ethnic friendships and well-being measurements were assessed at each wave. Classroom racial tension was measured at Time 2 and was treated as time-invariant. Although classroom racial tension may be subject to change over three waves, it could be suggested

that children may not perceive any classroom racial climate at the beginning of the school year. Therefore, measuring classroom climate at Time 2 is a good option to grasp the main climate perceived through the school year. Two further classroom-level measures - classroom ethnic diversity and classroom general climate (assessed at Time 2) - were included as control variables. The reason for including these classroom variables as covariates was to control for other possible contextual factors. In order to simplify the interpretation of the findings, data were reconstructed into two waves as earlier and later levels (Time 1 and Time 2 in original LLSS converted to earlier and later time points and Time 2 and Time 3 in original LLSS converted to earlier and later time points).

**Friendship measurements.** This chapter used both cross-ethnic friendship quantity and quality as cross-ethnic friendship measurements (see Chapter 2).

**Psychological well-being.** Warwick-Edinburgh Mental Scale and the resilience scale were used to assess overall psychological well-being. Details of these measurements are outlined in Chapter 3.

**Academic well-being.** Academic self-concepts and academic level were assessed at each wave. These measurements are described in Chapter 3.

**Classroom ethnic diversity.** This was measured by the Simpson Diversity Index (Simpson, 1949). The details of this index are presented in Chapter 2.

**Classroom racial tension.** This was measured by one item asking students' perceptions of racial tension in the classroom ("Fights occur between racial or ethnic groups in my classroom"). Although previous research has distinguished between peer and teacher racial climates (e.g., Byrd & Chavous, 2011), the current study focused only on peer racial climate, since this is more relevant to the relationship between cross-ethnic friendships and

well-being outcomes. Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). For each classroom an aggregated level of classroom racial tension was computed. Higher numbers indicated higher classroom racial tension (a more negative racial climate).

**General classroom climate.** A four-item scale assessed the general classroom climate and was used as a covariate. Sample items were: “Teaching is good in my classroom” and “Students are graded fairly in my classroom”. The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The mean classroom climate was computed by averaging all items. Higher numbers indicated a more positive classroom climate.

#### 6.4. Data Strategy

Cross-lagged multilevel models were used to analyze the results. One of the major advantages of cross-lagged models is that they allow causal implications by controlling for the temporal stability of variables. Hence, by controlling for autoregressive effects, lagged effects are considered to imply causality (e.g., Kenny, 2005). Accordingly, the variable X measured at Time 1 is considered to have a causal effect on the variable Y measured at Time 2, if the model controls for the variable Y measured at Time 1. Previous research has shown that cross-lagged analysis is the most appropriate strategy to reveal causal effects between variables (Bijleveld & Van der Kamp, 1998; Cohen, Cohen, West, & Aiken, 2003).

Analyzing longitudinal data with multilevel models has been found to be advantageous, because it accounts for both inter-individual and intra-individual differences and is flexible in terms of missing variables (e.g., Shek & Ma, 2011).

Data were restructured by transforming Time 1 and Time 2 in original LLSS to earlier and later time points and Time 2 and Time 3 in original LLSS to earlier and later time points. This way, final data included two main time points (earlier and later) nested in each individual. Hence, each individual had two sets of earlier and later time scores. As a result,

because data were nested within classrooms and time, a three-level multilevel procedure was used, considering time as the level-two variable and classroom as the level-three variable.

To test cross-lagged multilevel models, models for each dependent variable were conducted separately for each ethnic group. Ethnic diversity and general classroom climate were treated as control variables. Because initial analyses did not reveal any gender or socio-economic status differences, these variables were not further included in the models. In step two, main effects of earlier cross-ethnic friendship quality, earlier cross-ethnic friendship quantity, classroom racial tension, along with autoregressive effects were entered in the model. In step three, two cross-level interactions – Earlier cross-ethnic friendship quantity X Classroom racial tension and Earlier cross-ethnic friendship quality X Classroom racial tension - were included in the models. All variables were converted to *z-scores*. For each significant interaction, simple slope tests were conducted with -1/+1 standard deviation, following Aiken and West's (1991) model.

## 6.5. Results

**Preliminary analyses.** Tables 6.1, 6.2 and 6.3 present preliminary results. Initial mixed ANOVA procedures testing the effects of ethnic group and time on cross-ethnic friendship quantity revealed that there was no time or ethnic group effects. Concerning cross-ethnic friendship quality, results revealed a significant increase from earlier ( $M = 3.81, SD = .79$ ) to later time points ( $M = 3.93, SD = .71$ ),  $F(1,776) = 11.71, p = .001$ . Ethnic group effects were also significant,  $F(2,776) = 4.26, p < .05$ , with Black children reporting highest cross-ethnic friendship quality and South Asian children reporting the lowest level of cross-ethnic friendship quality at both earlier and later time points. No significant effect of time or ethnic group or interaction effect was observed in relation to psychological well-being, resilience and academic self-concepts. Regarding academic levels, there was a significant effect of time,  $F(1,629) = 12.22, p < .01$ , and ethnic group,  $F(2,629) = 16.20, p < .01$ . This

revealed that academic level increased significantly from earlier ( $M = 9.44$ ,  $SD = 2.12$ ) to later time points ( $M = 10.62$ ,  $SD = 2.51$ ). For both time points, White Europeans reported highest levels of academic level, while Blacks indicated lowest levels of academic level.

**Table 6.1** Means, standard deviations, and correlations among main variables at earlier and later time points for White European children

<b>White Europeans</b>	<i>Mean (SD)</i>	2	3	4	5	6	7	8	9	10	11	12	13
1 Earlier CE quantity	.58 (.27)	.50**	.18**	.07	.09†	.04	.01	-.01	.06	-.01	-.16**	-.15*	.01
2 Later CE quantity	.59 (.26)	-	.09	.13*	.05	.07	-.04	.02	-.01	.06	-.20**	-.23***	.02
3 Earlier CE quality	3.79 (.78)		-	.49***	.36***	.22***	.27***	.17**	.17**	.15**	.12*	.14*	.02
4 Later CE quality	3.91 (.75)			-	.24***	.33***	.18**	.22***	.22***	.22***	.06	.15*	.05
5 Earlier PWB	3.62 (.65)				-	.56***	.55***	.48***	.33***	.34***	.01	.07	.02
6 Later PWB	3.58 (.73)					-	.36***	.57***	.21***	.42***	-.01	.08	-.04
7 Earlier resilience	3.58 (.67)						-	.52***	.40***	.40***	.20***	.22***	.06
8 Later resilience	3.60 (.70)							-	.26***	.47***	.07	.15*	-.01
9 Earlier ac. self-concepts	3.91 (.66)								-	.54***	.39***	.38***	-.08
10 Later ac. self-concepts	3.89 (.66)									-	.32***	.35***	-.09†
11 Earlier ac. level	9.99 (2.32)										-	.66***	-.03
12 Later ac. level	11.21 (2.64)											-	-.18**
13 Racial tension	2.36 (1.11)												-

Note. N = 256. CE = cross-ethnic; Ac. = academic; PWB = psychological well-being.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

**Table 6.2** Means, standard deviations, and correlations among main variables at earlier and later time points for Black children

<b>Blacks</b>	<i>Mean (SD)</i>	2	3	4	5	6	7	8	9	10	11	12	13
1 Earlier CE quantity	.69 (.23)	.25**	.06	-.02	-.11	-.09	.01	-.12	-.01	-.10	.09	.06	-.14†
2 Later CE quantity	.70 (.22)	-	.01	.14†	-.15†	-.05	-.11	-.05	-.15†	-.09	.02	.02	-.20*
3 Earlier CE quality	3.97 (.73)		-	.27**	.18*	.16*	.19**	.17*	.26***	.21**	.21**	.13	.08
4 Later CE quality	3.98 (.74)			-	.08	.21**	-.01	.20*	.15†	.31***	.23**	.26**	.00
5 Earlier PWB	3.78 (.70)				-	.41***	.49***	.29***	.32***	.27**	.17*	.14	.20*
6 Later PWB	3.75 (.78)					-	.16*	.59***	.21*	.36***	.12	.13	.23**
7 Earlier resilience	3.58 (.72)						-	.30***	.36***	.31***	.23**	.22*	.20*
8 Later resilience	3.63 (.83)							-	.33***	.43***	.24**	.32***	.21*
9 Earlier ac. self-concepts	3.90 (.69)								-	.58***	.58***	.48***	.03
10 Later ac. self-concepts	3.83 (.70)									-	.32***	.50***	-.06
11 Earlier ac. level	8.63 (2.21)										-	.75***	-.19*
12 Later ac. level	9.69 (2.41)											-	-.19*
13 Racial tension	2.40 (1.35)												-

Note. N = 118. CE = cross-ethnic; Ac. = academic; PWB = psychological well-being.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

**Table 6.3** Means, standard deviations, and correlations among main variables at earlier and later time points for South Asian children

<b>South Asians</b>	<i>Mean (SD)</i>	2	3	4	5	6	7	8	9	10	11	12	13
1 Earlier CE quantity	.55 (.28)	.57***	.21***	.25***	.11*	.06	.08	.11†	.20***	.16**	.16**	.23***	-.01
2 Later CE quantity	.60 (.71)	-	.02	.11*	.10†	.06	.04	.10†	.06	.01	.09	.17**	-.02
3 Earlier CE quality	3.75 (.81)		-	.29***	.27***	.17**	.18***	.03	.17**	.08	.13*	.12†	.06
4 Later CE quality	3.81 (.75)			-	.21***	.37***	.19***	.28***	.23***	.23***	.22***	.26***	.02
5 Earlier PWB	3.65 (.69)				-	.46***	.60***	.33***	.41***	.30***	.31***	.30***	-.01
6 Later PWB	3.68 (.74)					-	.31***	.61***	.18**	.31***	.16**	.26***	.03
7 Earlier resilience	3.57 (.72)						-	.45***	.42***	.31***	.34***	.34***	-.07
8 Later resilience	3.54 (.74)							-	.27***	.34***	.26***	.27***	-.04
9 Earlier ac. self-concepts	4.02 (.64)								-	.56***	.53***	.47***	-.03
10 Later ac. self-concepts	3.92 (.62)									-	.47***	.51***	-.02
11 Earlier ac. level	9.25 (2.05)										-	.76***	-.07
12 Later ac. level	10.24 (2.48)											-	-.09
13 Racial tension	2.48 (1.16)												-

Note. N = 247. CE = cross-ethnic; Ac. = academic; PWB = psychological well-being.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

### Cross-lagged multilevel models

Initial unconditional models were performed for each ethnic group and dependent variable to reveal how much of the variance was explained at the classroom-level. Unconditional models with no predictor revealed that the variance explained at the classroom level was minimal for White European children (ICC = .01 for psychological well-being, .04 for resilience, .01 for academic self-concepts, and .11 for academic level, all  $p > .05$ ), while it was significant for academic self-concepts (ICC = .27,  $p < .05$ ) and academic level (ICC = .29,  $p < .05$ ) of Black children, and marginally significant for psychological well-being (ICC = .07,  $p = .08$ ) and academic level (ICC = .16,  $p = .06$ ) of South Asian children. This indicated the necessity of using multilevel procedures (for all dependent variables, multilevel models were used to keep the consistency through data analysis, although for White Europeans, classroom structure was negligible).

Table 6.4 (next page) represents final multilevel models for White Europeans. Among main effects of cross-ethnic friendships, earlier cross-ethnic friendship quality was significantly and positively associated with later resilience for White European children, after controlling for earlier levels of resilience, general classroom climate and ethnic diversity ( $\beta = .66, p = .01$ ). Similarly, earlier cross-ethnic friendship quality was positively and significantly related to later academic level for this ethnic group children ( $\beta = 1.63, p = .05$ ).

**Table 6.4.** Final cross-lagged multilevel models for White European children

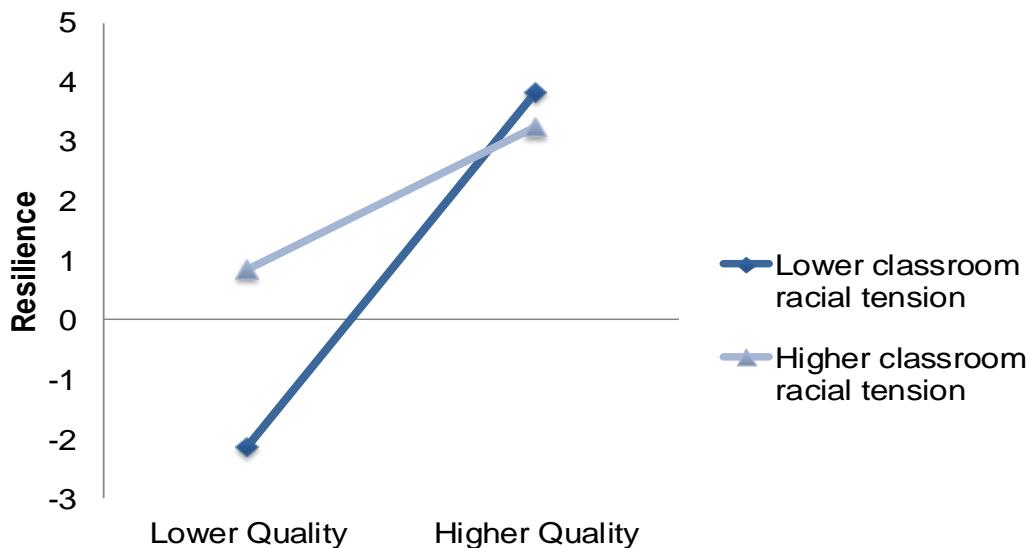
<b>White Europeans</b>	Later PWB	Later resilience	Later ac. self-concepts	Later ac. level
Intercept	4.08 (.93)***	2.54 (1.06)***	4.62 (.77)***	9.50 (3.44)***
Ethnic diversity	.17 (.41)	-.24 (.46)	-.01 (.34)	-1.89 (1.61)
General classroom climate	-.16 (.25)	.24 (.29)	-.20 (.20)	1.06 (.93)
Earlier PWB	.40 (.04)***	-	-	-
Earlier resilience	-	.42 (.04)***	-	-
Earlier ac. self-concepts	-	-	.40 (.04)***	-
Earlier ac. level	-	-	-	1.68 (.15)***
Classroom racial tension	.02 (.11)	.14 (.13)	.02 (.09)	-.45 (.44)
Earlier quantity	-.01 (.24)	-.19 (.23)	-.09 (.21)	.95 (.85)
Earlier quality	-.01 (.26)	.66 (.26)**	.30 (.24)	1.63 (.86)*
Earlier quantity X Rac. Tension	-.00 (.10)	.08 (.10)	.04 (.09)	-.49 (.36)
Earlier quality X Rac. Tension	.02 (.11)	-.28 (.11)*	-.12 (.10)	-.61 (.38)
<i>Individual variance</i>	.35 (.03)***	.31 (.03)***	.28 (.03)***	3.14 (.39)***
<i>Classroom variance</i>	.01 (.02)*	.00 (.00)	.00 (.00)	.00 (.00)
<i>Time variance</i>	.02 (.02)	.05 (.02)*	.00 (.00)	.44 (.33)
<i>-2 Log Likelihood</i>	490.49	481.53	394.80	755.02
<i>AIC</i>	496.49	487.53	400.80	761.92
<i>BIC</i>	507.04	498.10	411.12	771.45

*Note.* PWB = psychological well-being; Rac. = racial; Ac. = academic. Standardized beta coefficients and standard errors are represented in parentheses.

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

Moreover, cross-ethnic friendship quality and classroom racial tension interaction was observed in relation to resilience ( $\beta = -.28, p < .05$ ). Further simple slope tests demonstrated that cross-ethnic friendship quality increased resilience for both lower and higher racial tension groups, but this association was stronger when classroom racial tension was lower,  $t(252) = 3.80, p < .0001$ , compared to when classroom racial tension was lower,  $t(252) = 2.60, p = .01$ . These interactions are illustrated in Figure 6.1.

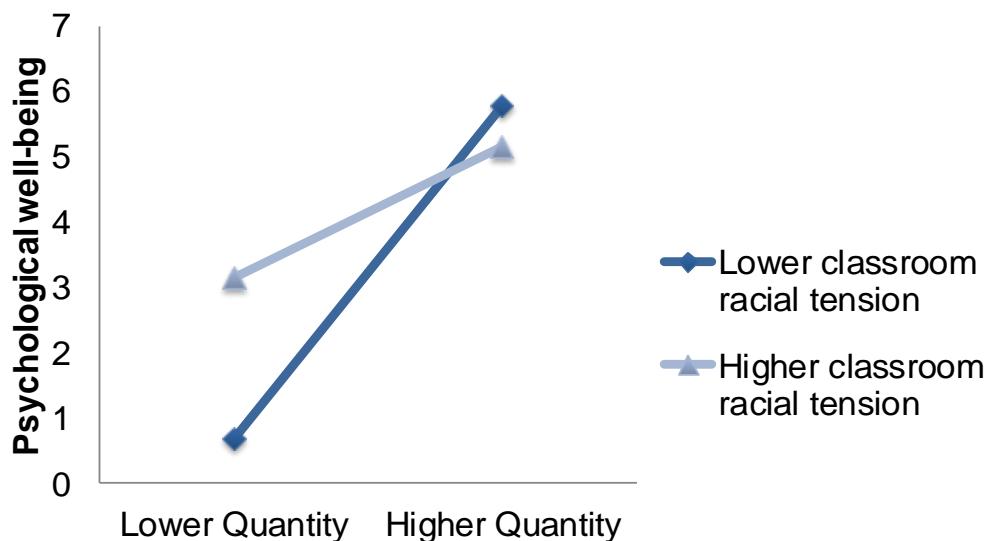
**Figure 6.1** Moderation effect between cross-ethnic friendship quality and perceived racial tension on White Europeans' resilience



For Black children, multilevel models are summarized in Table 6.5 (page 148).

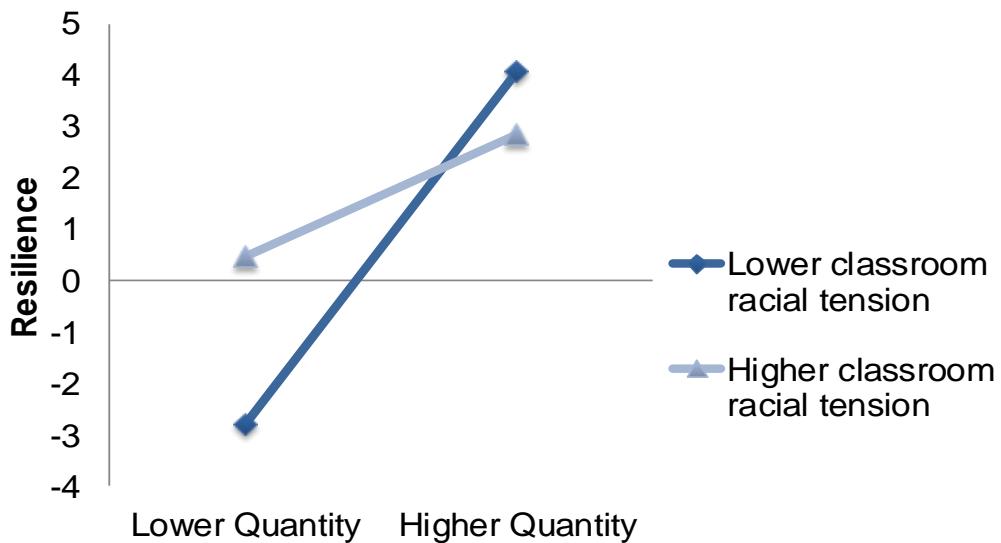
Accordingly, earlier cross-ethnic friendship quantity was marginally significantly associated with later psychological well-being, after controlling for ethnic diversity, general classroom climate and earlier psychological well-being ( $\beta = .96, p = .06$ ). Further interactions between cross-ethnic friendship quantity and classroom racial tension were also observed on psychological well-being ( $\beta = -.42, p = .08$ ). Relevant simple slope tests indicated that cross-ethnic friendship quantity increased (marginally significantly) psychological well-being more strongly when classroom racial tension was lower,  $t(114) = 1.75, p = .06$ . Although cross-ethnic friendship quantity also resulted in marginally significant increases in later psychological well-being when classroom racial tension was higher,  $t(114) = 1.70, p = .09$ , the association was stronger for the lower racial tension group (see Figure 6.2).

**Figure 6.2** Moderation effect between cross-ethnic friendship quantity and classroom racial tension on Blacks' psychological well-being



For Black children, earlier cross-ethnic friendship quantity also predicted significant increases in later resilience ( $\beta = 1.26, p < .05$ ). Furthermore, an interaction effect was observed between earlier cross-ethnic friendship quantity and classroom racial tension ( $\beta = -.61, p < .01$ ). Specifically, in classrooms where racial tension was lower, children experienced a stronger increase in resilience over time,  $t(114) = 2.65, p = .01$ . Although cross-ethnic friendship quantity also significantly increased resilience for children in racially tenser classrooms, this association was weaker,  $t(114) = 2.06, p = .04$  (see Figure 6.3).

**Figure 6.3** Moderation effect between cross-ethnic friendship quantity and perceived racial tension on Blacks' resilience



**Table 6.5** Final cross-lagged multilevel models for Black children

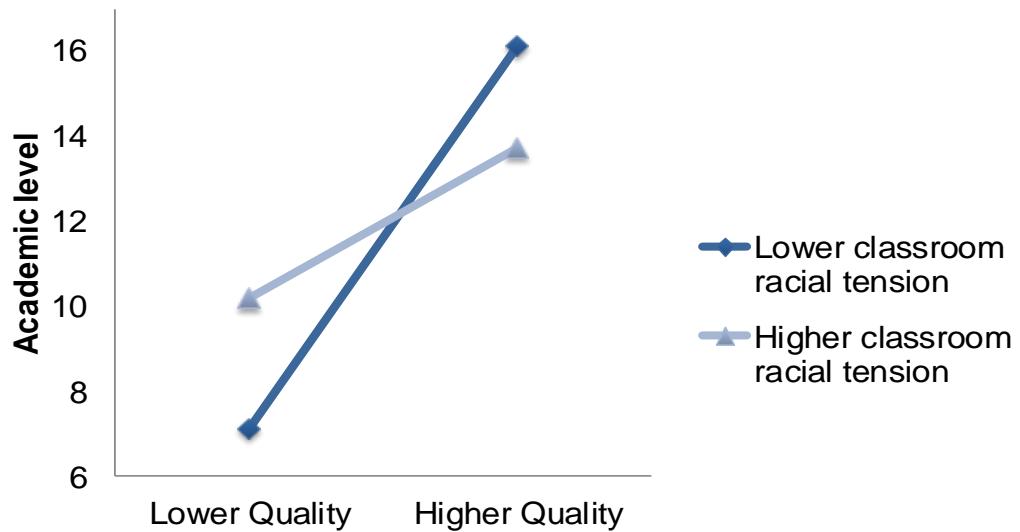
<b>Blacks</b>	Later PWB	Later resilience	Later ac. self-concepts	Later ac. level
Intercept	4.01 (1.51)**	1.57 (1.65)	1.84 (1.10)†	10.72 (3.73)***
Ethnic diversity	-.19 (.90)	.07 (1.00)	.79 (.70)	-3.22 (2.60)
General classroom climate	-.25 (.43)	.40 (.48)	.28 (.32)	.87 (1.02)
Earlier PWB	.25 (.07)***	-	-	-
Earlier resilience	-	.15 (.06)*	-	-
Earlier ac. self-concepts	-	-	.33 (.05)***	-
Earlier ac. level	-	-	-	1.73 (.18)***
Classroom racial tension	.32 (.21)	.30 (.23)	.19 (.14)	-.54 (.53)
Earlier quantity	.96 (.56)†	1.26 (.51)*	.16 (.37)	-.47 (1.24)
Earlier quality	.04 (.42)	-.60 (.39)	.19 (.30)	.71 (.98)
Earlier quantity X Rac. tension	-.42 (.23)†	-.61 (.21)**	-.10 (.16)	.29 (.52)
Earlier quality X Rac. tension	.04 (.17)	.28 (.16)	-.05 (.12)	-.37 (.40)
<i>Individual variance</i>	.51 (.07)***	.38 (.06)***	.32 (.04)***	1.92 (.40)***
<i>Classroom variance</i>	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
<i>Time variance</i>	.00 (.00)	.06 (.06)	.00 (.00)	.55 (.41)
<i>-2 Log Likelihood</i>	275.15	266.50	220.89	339.94
<i>AIC</i>	281.15	272.50	226.89	349.94
<i>BIC</i>	289.36	280.76	235.10	362.16

*Note.* PWB = psychological well-being; Rac. = racial; Ac. = academic. Standardized beta coefficients and standard errors are presented in parentheses.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

For South Asian children, neither quality nor quantity of cross-ethnic friendships had associations with later psychological well-being, resilience or academic self-concepts. However, earlier quality of cross-ethnic friendships was marginally significantly and positively associated with academic level over time ( $\beta = 1.23, p = .06$ ). A significant interaction was detected between cross-ethnic friendship quality and classroom racial tension in relation to academic level ( $\beta = -.54, p < .05$ ). Simple slope tests demonstrated that cross-ethnic friendship quality significantly increased academic level over time in classrooms where racial tension was lower,  $t(243) = 1.94, p = .04$ , whereas for children in classrooms where higher racial tension was experienced, earlier cross-ethnic friendship quality only marginally related to later academic level,  $t(243) = 1.70, p = .08$  (see Figure 6.4). Table 6.6 (next page) presents the final multilevel models for South Asian children.

**Figure 6.4** Moderation effect between cross-ethnic friendship quality and classroom racial tension on South Asians' academic level



**Table 6.6** Final cross-lagged multilevel models for South Asian children

<b>South Asians</b>	Later PWB	Later resilience	Later ac. self-concepts	Later ac. level
Intercept	2.08 (.82)*	2.78 (1.02)**	4.41 (.88)***	13.05 (3.18)***
Ethnic diversity	.22 (.33)	.34 (.44)	-.25 (.38)	-1.72 (1.38)
General classroom climate	.34 (.19)†	.14 (.24)	-.11 (.21)	-.11 (.73)
Earlier PWB	.35 (.04)***	-	-	-
Earlier resilience	-	.30 (.04)***	-	-
Earlier ac. self-concepts	-	-	.33 (.03)***	-
Earlier ac. level	-	-	-	1.90 (.12)***
Classroom racial tension	.09 (.12)	.02 (.15)	.04 (.13)	-.39 (.46)
Earlier quantity	.01 (.25)	.15 (.29)	.21 (.26)	.68 (.82)
Earlier quality	.02 (.22)	-.09 (.24)	-.18 (.19)	1.23 (.65)†
Earlier quantity X Rac. tension	-.02 (.10)	-.07 (.12)	-.05 (.10)	-.15 (.34)
Earlier quality X Rac. tension	.01 (.09)	.03 (.10)	.07 (.08)	-.54 (.26)*
<i>Individual variance</i>	.28 (.03)***	.34 (.03)***	.21 (.02)***	1.85 (.21)***
<i>Classroom variance</i>	.01 (.01)	.03 (.02)	.02 (.02)	.00 (.00)
<i>Time variance</i>	.00 (.00)	.00 (.00)	.01 (.01)	.68 (.28)*
<i>-2 Log Likelihood</i>	441.21	508.32	356.36	792.12
<i>AIC</i>	447.21	514.32	362.36	798.12
<i>BIC</i>	457.85	525.14	372.78	808.13

*Note.* PWB = psychological well-being; Rac. = racial; Ac. = academic. Standardized beta coefficients and standard errors are presented in parentheses.

† $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

**Additional analyses.** Although results revealed significant interactions between quality and racial tension on academic level only among South Asian children, an observation of beta values showed that these interactions, although non-significant, were also highly negative for White European and Black children. Therefore, this may have been an issue of power and specifically the low sample size of Black group. Hence, a further model including the total sample was performed with ethnic group, cross-ethnic friendship quality and racial climate as the main predictors, along with their interaction (Quality X Racial climate), and control variables of ethnic diversity, general classroom climate and initial academic level. A three way interaction was also included in the model (Ethnic group X Quality X Racial climate). This model indicated that ethnic group and the interaction terms between quality and ethnic group and between ethnic group, quality and classroom climate were non-significant. With the exclusion of these variables, the final model indicated that for all ethnic groups, earlier cross-ethnic friendship quality increased later academic level ( $B = 1.17$ ,  $SE = .41$ ,  $p < .01$ ). Similarly, cross-ethnic friendship quality interacted with racial climate ( $B = -.46$ ,  $SE = .17$ ,  $p < .01$ ). Simple slopes demonstrated a very similar pattern to what has been observed for South Asians; children experienced a stronger increase in academic level when racial tension was lower,  $t(617) = 3.11$ ,  $p < .01$ .

## 6.6. Discussion

Recently, a growing body of research in cross-ethnic friendship literature has started to investigate the benefits of cross-ethnic friendships in positive development. Extending these findings, the current research examined the outcomes of cross-ethnic friendships on psychological and academic functioning of children over time and tested for the moderating role of classroom racial tension in these relationships. Findings revealed that cross-ethnic

friendships may have positive outcomes that relate to well-being over time and these associations become even stronger in classrooms where racial tension is lower.

Concerning the first hypothesis of this study (Hypothesis 6.1) which stated that cross-ethnic friendships would contribute to psychological and academic well-being over time, partial evidence was found. For White European children, cross-ethnic friendship quality was associated with increases in resilience and academic level; whereas for Black children, it was the quantity of cross-ethnic friendships relating to psychological well-being and resilience over time. For South Asian children, only cross-ethnic friendship quality was marginally significantly related to increases in academic level.

Findings concerning White European children partly replicated cross-sectional results in Chapter 3, which demonstrated that cross-ethnic friendship quality was associated with higher psychological outcomes concurrently. Longitudinal results further indicated that cross-ethnic friendships are related to increases in academic level among White European children. Hence, although previous studies in this thesis demonstrated that the main effects of cross-ethnic friendships on academic outcomes were often non-significant for children from this ethnic background, longitudinally, good quality cross-ethnic friendships seem to promote the academic level of White European children, who are likely to feel more comfortable and inclusive in a multiethnic environment through such friendships over time. In fact, research has shown that White children with cross-ethnic friends are seen more positively by their peers (e.g., Lease & Blake, 2005). Therefore, it may be that higher support of friends from various ethnic backgrounds and belongingness to the classroom may be associated with higher academic motivations among these children (Goodenow, 1993). A second explanation concerning White European children may be the “downward social comparison” which suggests that especially higher status groups may perform better when they are compared to negatively stereotyped groups in the society (see Blanton, Buunk, Gibbons, & Kuyper, 1999).

Through cross-ethnic friendships, White European children may have the opportunity to take other reference points in terms of academic achievement (Antonio, 2004) and subsequently perform better over time due to their perceived highly valued academic abilities.

For South Asian children, cross-ethnic friendship quality was also related to higher academic outcomes. Again two processes may play a role here. Cross-ethnic friendships could increase social capital among this ethnic group (Coleman, 1990); South Asian children who have good quality cross-ethnic friendships may engage more in interpersonal processes and share more information about how to be successful in the academic setting. Second, similar to the possibility for White European children, South Asian children may be also likely to engage in downward social comparison, especially with Black children who are more often the targets of discrimination in terms of academic achievement in the UK (Crozier, 2005).

For Black children, the quantity of cross-ethnic friendships seemed to play a role in increases in psychological outcomes. These findings are inconsistent with cross-sectional results from Chapter 3, which demonstrated that cross-ethnic friendships did not have associations with psychological outcomes for Black children. This shows that although concurrently cross-ethnic friendship quantity did not relate to higher levels of psychological outcomes, they indeed have prospective effects on well-being. One explanation may be that the quantity of cross-ethnic friendships at the beginning of the year may not be effective resources of well-being for this ethnic group; while over time, children may feel more and more adapted to their multiethnic environment through increased numbers of cross-ethnic friendships and therefore benefit from their cross-ethnic friends in the long term.

Concerning the moderating role of classroom racial tension, findings are in line with Hypothesis 6.2 which suggested that the associations between cross-ethnic friendships and

well-being would be increased when racial tension was lower in the classrooms. This suggests that when social norms in the classroom encourage the formation of cross-ethnic friendships and ethnic groups are generally in cooperation, cross-ethnic friendships could be more beneficial in terms of increases in psychological and academic outcomes over time. Especially, concerning the academic level, classroom racial tension was a critical moderator for all ethnic groups. Although findings revealed that in many cases, cross-ethnic friendships are still effective resources when classroom racial tension was higher, these effects could be maximized by providing children with a classroom where a positive racial climate is maintained. However, caution should be taken in the interpretation of the results; although the gain from cross-ethnic friendships was higher when racial tension was lower, children with lower cross-ethnic friendship quality had better outcomes when the racial tension was higher. So, it may be that children in this group resort more to having friends from their same-ethnic group and benefit more from these friendships when the racial tension is high. Consequently, they may be able to maintain their well-being even when the racial tension was lower.

Although this study disclosed novel insights into cross-ethnic research, a number of limitations should be reported. Similar to previous chapters (except chapter 5), one limitation was the lack of same-ethnic friendship measurements for quality which restricted our understanding about the general pattern of friendships in a multiethnic environment. Second, one important limitation may be the conceptualization of classroom climate variables as time-invariant. As cross-ethnic friendships and intergroup relationships are dynamic, classroom racial tension may also show significant variations over time. Moreover, classroom racial tension was measured by a single item which is often viewed as disadvantageous over multiple-item scales (e.g., Nunnally & Bernstein, 1994). Finally, although classroom level variables such as ethnic diversity and general classroom climate are taken into account, third

parties such as teachers and parents may be further tested in the relationship between cross-ethnic friendships and well-being. While teachers' attitudes in the classroom may have critical implications in terms of encouraging or discouraging positive intergroup relationships and especially creating a positive racial climate, parents' attitudes towards cross-ethnic friendships may be also important in maximizing the effects of cross-ethnic friendships (e.g., Munniksma, Flache, Verkuyten, & Veenstra, 2012).

## 6.7. Conclusion

This study contributes to the understanding of cross-ethnic friendships in current multiethnic educational settings and extends previous findings revealing longitudinal associations between cross-ethnic friendships and positive psychological and academic outcomes among children over their first year in a London secondary school. Investigating an ethnically diverse student sample, the current research underscores the importance of cross-ethnic friendships in relation to psychological and academic functioning for both ethnic minority and majority status children. Furthermore, this study explored the moderating role of classroom racial tension and demonstrated that the long-term effects of cross-ethnic friendships could be maximized in a positive classroom racial climate. The implications of these findings are critical in particular for school policies which could adopt strategies to improve the classroom racial climate.

So far, this thesis has provided substantial insights into the role of cross-ethnic friendships to child development, highlighting in particular psychological and academic functioning. As these types of friendships relate to many positive outcomes during this period, one could question whether they also relate to other positive outcomes among children. The next chapter explores this possibility, by testing the effects of cross-ethnic friendships in relation to motivational outcomes in two experiments.

## **Chapter 7**

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### **How do mental representations of cross-ethnic friendships influence motivations towards career and academic choices?**

Previous chapters provided evidence for the associations between cross-ethnic friendships and psychological and academic functioning of children within multiethnic school contexts. It was found that cross-ethnic friendships buffer the negative effects of PED (Chapter 3) and relate to positive outcomes through affirmation of the ideal self and self-disclosure (Chapter 4). Chapter 5 demonstrated that reduced anxiety uniquely mediates the links between cross-ethnic friendships and positive psychological and academic outcomes, while Chapter 6 indicated that cross-ethnic friendships have longitudinal associations with these outcomes, and such associations are stronger in classrooms where racial tension was lower. These findings suggest that cross-ethnic friendships may be influential on other positive outcomes in young adolescence. This chapter changes the direction of attention from psychological and academic outcomes to motivational outcomes, by investigating motivations toward career choices and university applications amongst ethnic minority children. The focus was on South Asian young adolescents who are often conflicted between cultural values imposed by families and same-ethnic peers and values favoured in mainstream society. Specifically, this chapter examines whether mental representations of cross-ethnic friendships would increase South Asian students' motivations toward a non-stereotypical career pursuit (Experiment 1) and toward applying to and attending universities with a predominately White student population (Experiment 2).

Chapter 2 demonstrated clear evidence about the high frequency of cross-ethnic friendships in current multicultural educational environments such as London secondary schools. Previous research indicates that cross-ethnic friendships amongst children are associated with positive outgroup attitudes (e.g., Feddes et al., 2009) and social competence (e.g., Kawabata & Crick, 2008), and enable children to acquire a varied range of experiences, perspectives and knowledge that may not be provided by same-ethnic friendships (e.g., Turner et al., 2007). In this study, it is proposed that the effects of cross-ethnic friendships may be much more diverse than what has been suggested in previous research and may extend to motivational outcomes among ethnic minority status children.

A substantial body of research in developmental psychology has demonstrated that students' social and academic goals are associated with social and academic expectations from their peers (e.g., Wentzel, 1998). Close friends' attitudes toward academic goals are often similar in the same peer group (Epstein, 1983; Kindermann, 1993). As parental influence decreases by the beginning of adolescence, students' academic orientations are heavily influenced by their friends' values and behaviors (Crosnoe et al., 2003; Wentzel & Caldwell, 1997). Urdan (1997) demonstrated that 8<sup>th</sup> grade students' achievement goals were associated with their friends' orientations toward academic effort and achievement. More importantly, children's and adolescents' academic motivations are influenced by how much they receive peer support, such as being liked, respected, and valued in their classroom (e.g., Nelson & DeBacker, 2008). Hence, higher support from friends and belongingness in the classroom are associated with higher academic motivations (Goodenow, 1993; Wentzel, 1998). These findings indicate that motivations and goal pursuits in an academic setting are malleable and often shaped by dynamic peer relationships in the school environment.

This chapter examines how cross-ethnic friendships influence future career and academic choices of South Asian children. In Experiment 1, it was suggested that cross-

ethnic friendships would have an effect on motivations toward the pursuit of a non-traditional (non-typical among South Asians) career goal; whereas in Experiment 2, it was anticipated that cross-ethnic friendships would increase motivations towards applying for a predominantly White university and promote interest and confidence in university applications. For both studies, it was expected that cross-ethnic friendships would increase motivations towards a challenging career or academic goal. The following mechanisms were identified to support this assumption.

First, cross-ethnic friendships could promote openness and motivation toward various kinds of career and academic opportunities through generating a sense of belongingness, integration and acceptance in the mainstream society. Previous qualitative studies indicated that British South Asian adolescents, when exposed to two different cultures, may anticipate different educational and employment pathways which may not be similar to their families' traditional goals and motivations (Dale et al., 2002). Thus, cross-ethnic friends could be a marker of integration into the mainstream society, increasing adolescents' self-confidence and beliefs in their abilities to anticipate more challenging career and academic choices.

Second, cross-ethnic friends could set examples for young ethnic minorities. Through self-disclosure and other interpersonal processes with a variety of groups, young ethnic minorities may obtain various opportunities to observe, learn and experience different perspectives and therefore may be more open to consider various options that may not be highly valued or accepted within their same-ethnic community. This suggestion was empirically supported in Chapter 4, which demonstrated that both cross-ethnic self-disclosure and affirmation were associated with psychological and academic well-being of South Asians. This idea of bridging social capital (Coleman, 1990) through cross-ethnic friendships has been previously suggested to increase academic aspirations of ethnic minority

adolescents, by enabling access to important information about academic life (e.g., Stanton-Salazar, 1997).

Finally, it could be suggested that pursuing a non-stereotypical career choice and academic aspirations for a predominantly White university and attending universities would constitute challenging options for ethnic minority children, as a result of the possible anticipation of ethnic discrimination existing in these settings. However, cross-ethnic friends may reduce these negative expectations. In fact, cross-ethnic friendships have been found to decrease the negative effects of PED on psychological and academic outcomes among South Asian children (Chapter 3).

In this study, the effects of cross-ethnic friendships were examined through their mental representations. Recent research trends in cognitive psychology have shown that motivations and goal pursuits are not only consciously activated; people hold cognitive schemas about personal goals and these schemas could be activated through non-conscious processes (e.g., Aarts, Custers, & Holland, 2007; Bargh, 1990; Bargh, Gollwitzer, Lee-Chai, Barndollar & Trotschel, 2001). One of the processes whereby motivations and goal pursuits are activated is the influence of close others. Accordingly, motivations and goal pursuits are not individual processes; they are often influenced by social relationships (e.g., Urdan & Schoenfelder, 2006). Since people form mental representations of relationship partners (Anderson & Cole, 1990; Baldwin, 1992), eventually, close others may guide motivations and goal pursuits, even when they are not physically present in the situation (e.g., Fitzsimons & Bargh, 2003; Fitzsimons, Shah, Chartrand, & Bargh, 2005).

Such mental representations of relationship partners have been found to be influential in perceiving the self and personal goals (Andersen & Saribay; 2005; Baldwin & Dandeneau, 2005). For example, Baldwin, Carrell, and Lopez (1990) demonstrated that students

evaluated their research ideas more negatively after being presented subliminally with the face of a scowling department chair. Shah, Kruglanski, and Friedman (2003) found that participants performed better in a cognitive task, after they were exposed to the name of someone who would want them to do well. Therefore, evidence suggests that mental representations or psychological presence of significant others per se could influence motivations and goal pursuits.

### 7.1. Experiment 1

Experiment 1 focused exclusively on motivations toward the pursuit of future career choices. Research suggests that career aspirations are heavily influenced by social relationships during middle childhood and adolescence (e.g., Gushue & Whitson, 2006; Lent, Brown, & Hackett, 2000). Since young adolescents' social world is now likely to be partly formed of cross-ethnic friendships in multi-ethnic educational settings, it is conceivable that these types of friendships exert influences on career interests and aspirations during early adolescence, a period when young people look for advice and support in peer relationships (e.g., Eccles et al., 2006). Hence, this study tested whether South Asian children primed with the representation of a close cross-ethnic friend would be more motivated towards a hypothetical internship on a non-stereotypical career opportunity compared to participants primed with the representation of a close same-ethnic friend. At this stage, the following main research question was addressed:

*Research Question 7.1:* Do mental representations of cross-ethnic friendships increase South Asian young adolescents' motivations towards a non-stereotypical career choice?

Although a great deal of research has been devoted to academic motivations among young adolescents (e.g., Berndt & Keefe, 1996; Wentzel, 1991), little is known about how motivations toward career choices are shaped by social and relational factors during this

period. Among few studies, Foskett and Hesketh (1997) indicated that both family and friendship factors have influences on the route young people take towards a career choice. The social-cognitive career theory (Lent, Brown, & Hackett, 1994) suggests that processes whereby individuals form career interests and choices are influenced by both personal and environmental factors. Lent et al. (2000) highlighted the role of perceived social support and social relationships in the formation of career choices. These findings suggest that cross-ethnic friendships which are now common in multiethnic educational settings may affect career orientations, choices and interests, since they constitute a critical aspect of young adolescents' social environment.

Pursuing career aspirations, motivations and goals might be a complicated issue especially among young ethnic minorities. Research in the UK shows that ethnic minority group members are less successful in getting jobs, usually end up with higher unemployment rates compared to ethnic majorities and face many challenges such as ethnic discrimination in the pursuit of career goals (e.g., Basit, 1996; Constantine, Erickson, Banks, & Timberlake, 1998). Consequently, the majority of ethnic minority adolescents may limit their career options to what is typical among their own ethnic group. For instance, Arbona and Novy (1991) indicated that college students' career expectations across ethnic groups matched the distribution of jobs in the labour market.

In line with these findings, in a qualitative study, young Muslim British girls indicated that their families did not have sufficient access to different career opportunities (Siann, Knox, Thornley, & Evans, 1990) and these families were supportive of career choices as long as these choices did not harm the girl's reputation. For example, families were not supportive of career choices such as acting or working in a man's outfitting store. Thornley and Siann (1991) also indicated that South Asians were substantially influenced by family values in terms of their career aspirations. Hence, it is possible that South Asians' career options may

be limited to what their families and in general same-ethnic group members find as *acceptable* within traditional values. In this sense, cross-ethnic friends could function as external social resources of advice, support and encouragement.

Similar to previous chapters, this study focused on young adolescents (aged 13) who are likely to develop career interests during this period. Middle childhood and early adolescence are critical in terms of career decisions, since during this period, the identity of young adolescents starts to develop (e.g., McWhirter, Rasheed, & Crothers, 2000; Seligman, 1994). As early as primary school years, ethnic minority children seem to stereotype career choices for both children and adults (Frost & Diamond, 1979) and start thinking concretely about their future careers by the beginning of early adolescence (Auger, Blackburst, & Wahl, 2005; Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Therefore, peer groups in school may provide various opportunities to learn, discuss, and get access to important knowledge about non-stereotypical career choices.

### 7.1.1. Aims and hypotheses

This study aims to extend previous findings in cross-ethnic friendship literature in two ways. First, although previous research has suggested that cross-ethnic friendships are beneficial for children, to my knowledge, no study to date has ever examined the consequences of cross-ethnic friendships in motivational outcomes, specifically in relation to career choices among ethnic minorities. Second, this study constitutes one of the first attempts to use an experimental procedure in the cross-ethnic friendship literature. Previously, Page-Gould et al. (2010) used a similar experimental procedure by priming Asian and European American college students with either same- or cross-ethnic friendships. However, this procedure was applied in the framework of intergroup attitudes and the authors assessed whether cross-ethnic friendships influence expectations about a new outgroup

member. The current study used a 3 (friendship type: Same-ethnic/Cross-ethnic/Neutral) x 2 (career type: Typical/Non-typical) mixed-factorial design, with the last factor being within-participants, to test the following hypothesis:

*Hypothesis 7.1:* South Asian young adolescents would have higher levels of motivation towards applying for a hypothetical internship about a non-stereotypical career, after being primed with a close cross-ethnic friend compared to the situations where they would be primed with a close same-ethnic friend.

Because previous research on the choice of typical and non-typical career choices of South Asian youth in the UK context is limited, no specific assumption was made about whether children should report higher motivations toward stereotypical or non-stereotypical career choices.

### **7.1.2. Method**

#### **Participants**

A total of 72 South Asian British students initially participated in the study. Students were all Year 8 students recruited from two secondary schools in London (*Mean age* = 13.21, *SD* = .41; 35 girls, 37 boys). However, some children did not complete some of the main questions (such as close friend name or career names) and three children refused to take part in the experiment. With the exclusion of 19 children, the final sample consisted of 53 South Asian British children (*Mean age* = 13.15, *SD* = .36; 26 girls, 27 boys).

#### **Design and Procedure**

At the beginning of the school term (Spring Term, 2013), secondary schools which already participated in LLSS data collection were re-contacted and were informed about the experimental study. Schools comprising a significant number of South Asian children were

approached. Two schools agreed to participate in the current study. The mean ethnic diversity of the classrooms was .56 ( $SD = .02$ ) based on Simpson Diversity Index (Simpson, 1949).

The socio-economic status of schools was lower to middle class.

Teachers were informed about the ethical procedures involved in the study and opt-out forms were distributed to parents. Students were recruited in computer labs to complete online questionnaires. Data were collected by the main researcher and another PhD student from the psychology department of Goldsmiths, University of London. Before each experimental session, students were randomly assigned to same-ethnic, cross-ethnic and neutral conditions.<sup>7</sup> A 3 (Same-ethnic/Cross-ethnic/Neutral) by 2 (Typical/Non-typical) mixed-design was used.

At the beginning of each session, slips containing the name of the participant and the website of the online questionnaire were given to students (children received different web links for each condition). Next, specific instructions regarding the main aim and procedure of the study were given. Students were told that the researchers were interested in examining the determinants of career choices among young adolescents. Researchers explicitly stated that the study included sensitive topics that relate to ethnicity and personal information about people who are close to them, and highlighted that participation was completely voluntary and that data collected would be kept anonymous and confidential. Participants were instructed that debriefing forms would be distributed a week after their completion of the study, when data collection was completed within the school (this was necessary to ascertain

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<sup>7</sup>As it would have been difficult to recruit only South Asian children from classrooms, sessions included all students in the classroom and children from a diverse range of ethnic backgrounds. Students from ethnic backgrounds other than South Asian were identified with lists given by teachers before each session; they were also assigned to three different conditions, but due to the lower sample size, they were not included in statistical analyses.

that students do not disclose information about the study to others who would be recruited in further sessions). The completion of the online questionnaires took 40 minutes.

## Materials

The online questionnaire included five main sections, followed by demographic questions of age, gender, and self-reported ethnicity.

**Name listing.** Participants were initially asked open-ended questions about the names of people they are close to; including parents, favourite teachers, people they admire, and people they would like to get close to. This section also included the names of close friends from a variety of ethnic backgrounds (“Please name a close White/Black/South Asian/Mixed-ethnicity friend”).

**Covariates.** Further questions included academic self-concepts (“How well do you think you do in the following subjects?”, see Chapter 2 for details), hobbies (e.g., “What is your favourite color/movie/book/TV show?”) and the short big-five questionnaire (Brief Big-Five, Gosling, Rentfrow, & Swann, 2003, e.g.; “I see myself as someone who is reserved”), along with a resilience scale (see Chapter 2 for more details) and a self-esteem scale (Rosenberg Self-esteem Scale, 1965, e.g., “I feel that I have a number of good qualities”). The response scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

**Career choices.** The third part of the questionnaire included career names children were interested in and their perception of typicality of their career choices among their ethnic group. Students were asked to write down four different career/job names for the following questions (answers were open-ended, children were instructed to write only one job/career name for each):

- (i) a job that is TYPICAL among their ethnic group and they ARE interested in.

- (ii) a job that is TYPICAL among their ethnic group, but they ARE NOT interested in.
- (iii) a job that is NON-TYPICAL among their ethnic group and they ARE interested in.
- (iv) a job that is NON-TYPICAL among their ethnic group and they ARE NOT interested in.

**Friendship priming.** The next section included the priming procedure. Students were told that one of the names they cited in a previous section would randomly appear in this section (this procedure was in fact not random and the experimenter intentionally allocated students to different conditions). The Survey Monkey programme has an option to “insert a previously given response”; with this procedure, it is possible to extract a previously given response in a further question. For example, if a participant typed “James” for the name of a close White British friend, the programme can automatically extract the name of James in further sections and ask a specific question about James. Three conditions were used: cross-ethnic friendship condition, where the name of a White British friend appeared; same-ethnic friendship condition where the name of a same-ethnic friend (South Asian British) appeared and the neutral condition where no name appeared and participants were asked to describe their pets (or a pet they would like to have). Participants were further asked questions that relate to this specific relationship. This procedure was similar to the procedure used in experiments conducted by Fitzsimons and Bargh (2003, Study 2a/2b). Children were asked to visualize their friend (or their pet in the neutral condition), describe the physical appearance of this person in a sentence, state how long they know this person and describe this person with three words.

**Motivations toward career choices.** The final section included questions about the career names children previously stated in the previous section. The participants received two versions of motivation questions, one for the typical job they are interested in and one for the non-typical job they are interested in. This was done in order to decrease the confounding

effect of interest. The order of these two questions was randomized. Children were given the names of the typical/non-typical jobs they previously stated in a previous section and were asked to think about this career (this was arranged on SurveyMonkey with the “insert a previously given answer” option). Then, they read the following vignette:

*“Now imagine that your counsellor just told you that there is an opportunity for a 2-week internship that would be perfect for a student who considers this career. During the internship, you would be required to participate in activities that will run from early morning to evenings and be informed of what the career is about, including being given hands-on demonstration, university degrees you can pursue to get into the career and requirements for entry. In addition, you will learn how to strengthen your university application and engage in other activities that will eventually help you land this job in the future. Acceptance to this internship will be competitive, as cost of transportation, lodging, and meals will be fully covered for those who are accepted. Students who are accepted typically have to plan at least a month in advance to be able to submit a good application.”*

The vignette was followed by a questionnaire that assessed how motivated students were to apply for this internship. This part included items that tap into receiving further information (“Would you like to receive more information on this internship?”), importance (“How important would it be for you to attend this internship?”), and effort (“How much effort and time would you be willing to put into this application?”). The response scale ranged from 1 (*not at all*) to 7 (*very much*). An additional question of “application attempt” (“If you get rejected during your first application attempt, how many more times would you be willing to apply for this internship?”) was included to measure the behavioral intention to apply for the internship. The response scale for this item ranged from 1 (*I would not be willing to apply again*) to 4 (*more than twice*).

### 7.1.3. Results

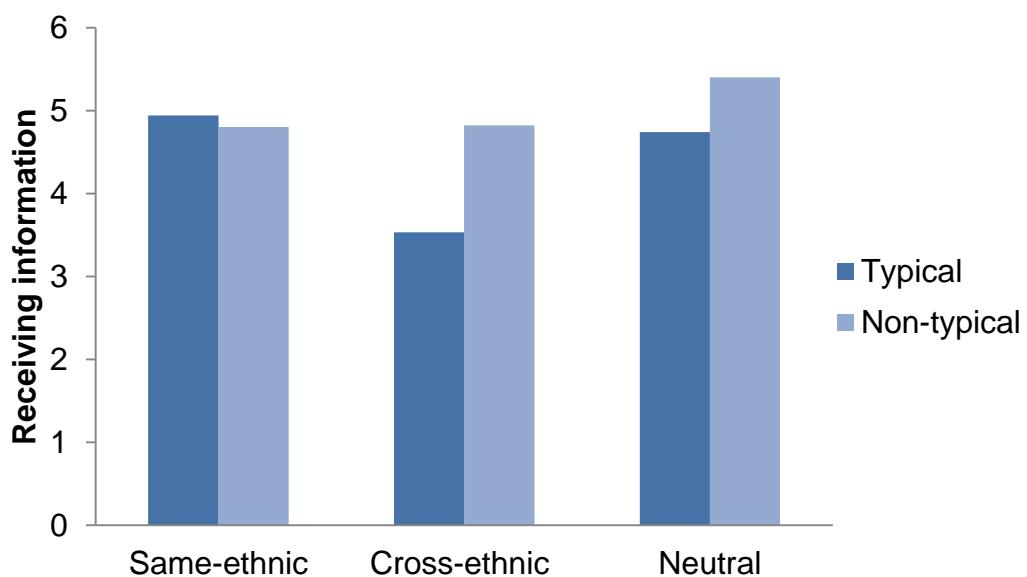
**Manipulation and awareness checks.** For manipulation check, paired-sample t-tests were conducted to compare the typicality of typical and non-typical careers. It was expected that there would be a significant difference between typical and non-typical jobs in terms of perceived typicality. Confirming this, results revealed that typical jobs were rated higher in typicality compared to non-typical jobs,  $t(42) = 1.73, p = .05$ , ( $M = 4.15, SD = 1.85$  for the typical job typicality and  $M = 3.05, SD = 2.06$  for the non-typical job typicality).

For awareness check, children were asked an open-ended question at the end of the study asking students write down what they think was the main purpose of the study. Responses did not reveal any indication of suspicion about the experimental procedure.

Initially, data analysis included a 3 (friendship condition) X 2 (typicality) X 2 (order) mixed between-within ANOVA procedures. Since there was no significant effect of order; this condition was dropped. Additionally, a check of gender, classroom ethnic diversity, resilience, self-esteem or personality measures on motivations revealed no significant effects. Therefore, further analyses did not include these variables. Academic self-concepts had significant associations with motivations toward both typical and non-typical jobs, therefore, were entered as a covariate in the following analyses. Also, it was noticed that typical jobs (but not non-typical jobs) varied substantially in terms of job status (or prestige). Hence, typical jobs were categorized into lower and higher status jobs based on their qualification level according to Standard Occupational Classification UK (2010); 41.5% of participants reported a lower status job as a typical job they were interested in and 58.5% reported a higher status job that is typical and they were interested in. Hence, the status of the typical job was also used as a covariate.

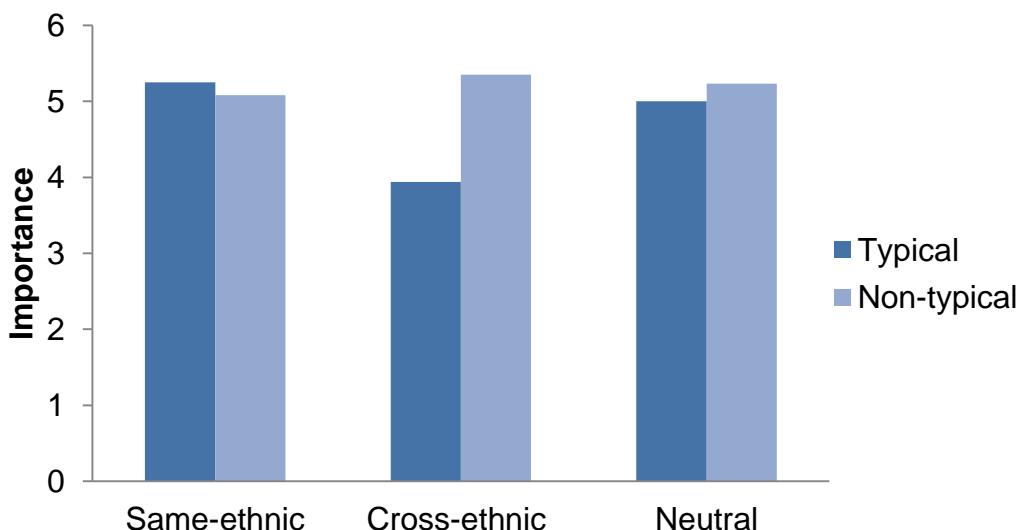
**Receiving information.** An initial mixed ANOVA test was conducted on further information request for the internship on the typical and non-typical career choice children were interested in. Results revealed that there was no main effect of friendship condition,  $F(2,47) = .90, p > .41$  or typicality,  $F(1,47) = 1.28, p = .26$ . Typical job prestige and academic self-concepts had both significant effects,  $F(1,47) = 5.69, p = .02, \eta^2 = .11$  and  $F(1,47) = 11.49, p = .00, \eta^2 = .20$ , respectively. There was a marginally significant interaction effect between friendship condition and typicality,  $F(2,47) = 2.61, p = .08, \eta^2 = .11$ . Further planned contrasts indicated that cross-ethnic friendship condition was not significantly different compared to same- and neutral conditions in terms of the non-typical job internship application. However, information requested for the typical job internship was (marginally) significantly lower in cross-ethnic friendship condition ( $M = 3.53, SD = 1.7$ ) compared to same-ethnic friendship ( $M = 4.94, SD = 2.11$ ) and neutral condition ( $M = 4.74, SD = 2.47$ ),  $t(61) = -1.73, p = .08$ . The difference between cross-ethnic and same-ethnic condition was not significant,  $t(61) = 1.60, p > .05$  (see Figure 7.1).

**Figure 7.1** Mean scores of the request for further information by career typicality and friendship type



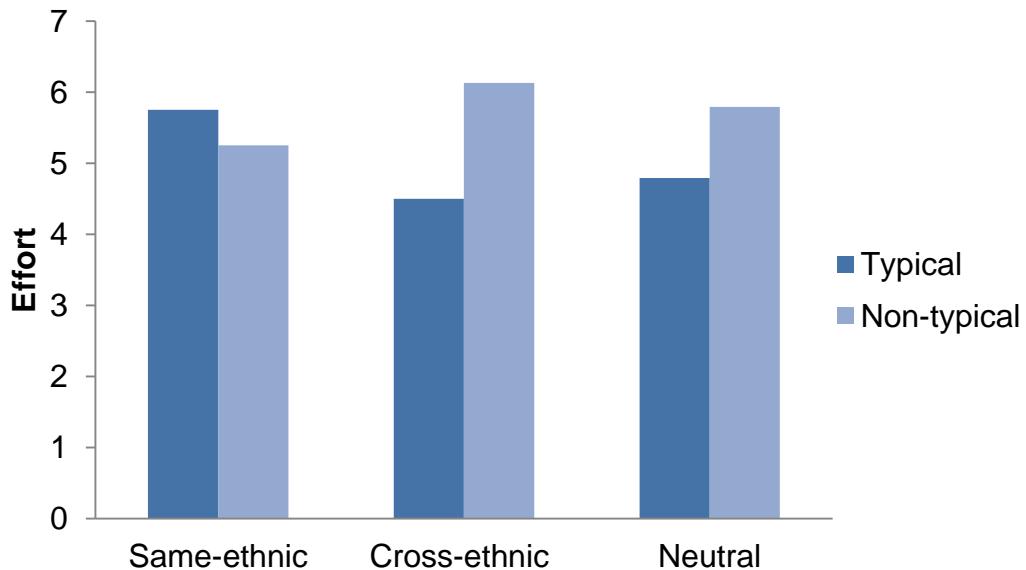
**Importance of application.** A second mixed ANOVA was conducted with children's ratings of importance given to internships on typical and non-typical careers. There was no main effect of condition,  $F(2,47) = .37, p = .69$ , but there was a main effect of typicality; children assigned more importance to applying for the internship on non-typical jobs compared to typical ones,  $F(1,47) = 6.86, p = .01, \eta^2 = .13$ . Status of the typical job did not have a main effect,  $F(1,47) = 2.44, p = .12$ , whereas academic self-concepts had a main effect,  $F(1,47) = 18.92, p = .00, \eta^2 = .29$ . There was a significant interaction between condition and typicality,  $F(2,47) = 3.74, p = .03, \eta^2 = .14$ . Planned contrasts showed marginally significant differences between cross-ethnic friendship condition and same-ethnic friendship and neutral condition,  $t(61) = -1.71, p = .08$  and between cross-ethnic and same-ethnic friendship condition,  $t(61) = -1.68, p = .08$ . Similar to the previous model, importance assigned to typical career choices was lower in the cross-ethnic friendship condition ( $M = 3.94, SD = 1.89$ ) compared to same-ethnic ( $M = 5.25, SD = 1.77$ ) and neutral conditions ( $M = 5.00, SD = 2.11$ ). No difference was observed between conditions in relation to non-typical career choices. Figure 7.2 illustrates these effects.

**Figure 7.2** Mean scores of the importance of internship by career typicality and friendship type



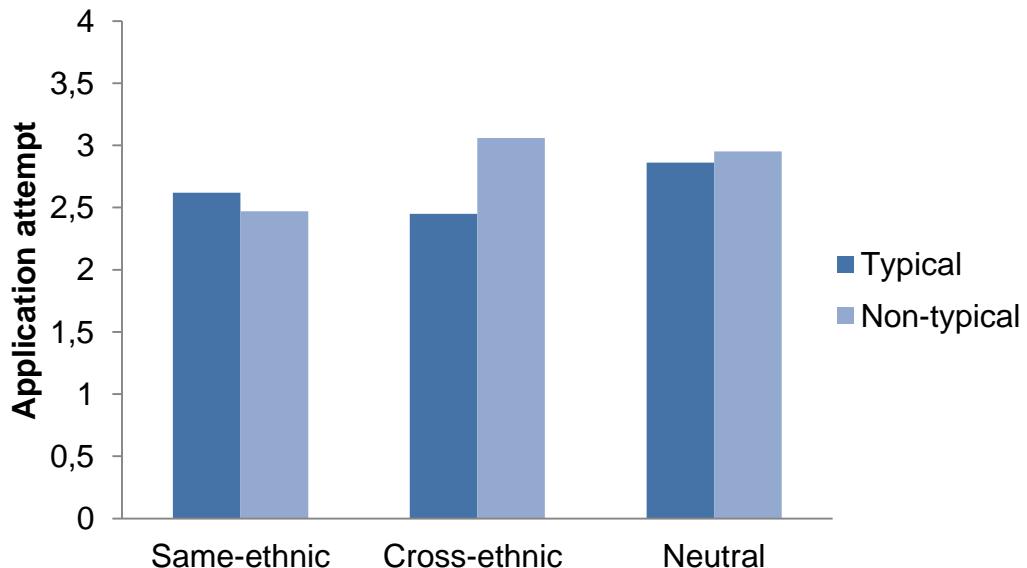
**Effort put into application.** A third mixed ANOVA was performed with effort put into an internship application. Mixed ANOVA results indicated that there was no main effect of condition,  $F(2,46) = .05, p = .95$ ; or typicality  $F(1,46) = .21, p = .65$ . Both typical job status and academic self-concepts had significant effects,  $F(1,46) = 10.13, p = .00, \eta^2 = .18$  and  $F(1,46) = 10.74, p = .00, \eta^2 = .19$ , respectively. There was a significant interaction between typicality and condition,  $F(2,46) = 4.41, p = .02, \eta^2 = .16$ . Although the trend on typical career choices seemed to be lower in the cross-ethnic friendship condition ( $M = 4.50, SD = 2.28$ ) compared to same-ethnic ( $M = 5.75, SD = 1.73$ ) and neutral conditions ( $M = 4.79, SD = 2.30$ ) and the trend on non-typical career choice seemed to be higher in cross-ethnic friendship condition ( $M = 6.13, SD = 1.59$ ) compared to same-ethnic ( $M = 5.25, SD = 1.69$ ) and neutral condition ( $M = 5.79, SD = 1.69$ ), planned contrasts did not reveal any differences between cross-ethnic friendship and other conditions and cross-ethnic friendship and same-ethnic friendship condition (see Figure 7.3).

**Figure 7.3** Mean scores of effort put for the internship by career typicality and friendship type



**Application attempt.** A final mixed ANOVA was conducted with application attempt. No significant main effect of condition or typicality was observed,  $F(2,46) = 1.53, p = .23$  and  $F(1,46) = 1.06, p = .31$ , respectively. Typical career status did not have an effect,  $F(1,46) = .28, p = .60$ , whereas academic self-concepts had a significant effect,  $F(1,46) = 3.92, p = .05, \eta^2 = .08$ . Typicality and condition interaction was also significant,  $F(2,46) = 4.13, p = .02, \eta^2 = .15$ . Planned contrasts revealed that application attempt for the typical career internship in cross-ethnic friendship condition ( $M = 2.45, SD = .83$ ) was significantly lower compared to same-ethnic ( $M = 2.62, SD = 1.02$ ) and neutral conditions ( $M = 2.86, SD = .79$ ),  $t(56) = -10.94, p < .001$ . On the contrary, application attempt for the non-typical career internship was higher in cross-ethnic friendship condition ( $M = 3.06, SD = .90$ ) compared to same-ethnic friendship ( $M = 2.47, SD = 1.86$ ) and neutral condition ( $M = 2.95, SD = .97$ ),  $t(56) = -13.02, p = .00$ . The contrast between cross-ethnic friendship and same-ethnic friendship condition was also significant,  $t(56) = -13.98, p = .02$  (see Figure 7.4).

**Figure 7.4** Mean scores of application attempt after failure by career typicality and friendship type



#### 7.1.4. Discussion

This study examined career motivations of South Asian children in relation to cross-ethnic friendships. It was hypothesized that mental representations of a close cross-ethnic friend would increase children's motivations towards a hypothetical internship on a non-stereotypical career choice. Findings provided some support for this prediction. Although cross-ethnic friendship condition did not significantly increase the majority of motivational outcomes for the non-typical career internship, the mental representation of a close cross-ethnic friend resulted in lower rates of motivation towards the pursuit of a typical career choice. Supporting evidence was found for the effect of cross-ethnic friendships on motivations towards a non-typical career internship concerning application attempt. Accordingly, children reported significantly higher numbers of attempts after first rejection for a non-typical career internship in the cross-ethnic friendship condition compared to the same-ethnic friendship condition. Furthermore, results indicated that children assigned more importance to the internship on a non-typical career compared to the internship on a typical career, regardless of the experimental condition.

Partly supporting Hypothesis 7.1, it was found that, for the majority of the motivational outcomes, thinking about a close cross-ethnic friend resulted in lower rates of motivations towards applying for an internship on the typical career option, even though the mental representation of cross-ethnic friendships did not directly lead to increases in motivations towards the internship on non-typical career choices. Specifically, children who were primed with a close cross-ethnic friend reported lower rates of further information request, gave less importance to the application, and were willing to put less effort for the application to the typical career internship compared to other conditions. This indicates that mental representation of a close cross-ethnic friend made children less disposed to choose a career that is typical among the South Asian ethnic group. It is conceivable that cross-ethnic

friendships enabled children to think about various options in terms of career choices, motivated them to consider the possibility of a more extended range of careers and broadened their perspectives in the evaluation of a career choice. By offering the opportunity to take into account various career options, cross-ethnic friendships could have decreased preconceptions about the availability of a limited number of career choices for South Asian children and consequently decreased their motivations to be engaged in a typical career internship.

Confirming the main hypothesis, it was found that application attempt for a non-typical career internship after first rejection was significantly higher in the cross-ethnic condition, in particular compared to the same-ethnic condition. This suggests that cross-ethnic friendships may function as resources that increase motivations after failure. Why were cross-ethnic friendships more effective on the application attempt after rejection compared to other motivational outcomes concerning non-typical careers? One reason may be the implication of the concept of resilience in the application attempt process. Previous chapters of this thesis demonstrated that cross-ethnic friendships were related to higher levels of resilience (e.g., Chapter 3). Therefore, such friendships may have been more effective on application attempt after failure, since these types of friendships uniquely contribute to children's resilience, promoting their motivation to bounce back after failure.

Implications of the results are also important in terms of the evaluation of career choices among ethnic minorities, in particular South Asians, in the UK. Previous research has implied that ethnic minority youth are usually likely to be oriented towards careers that are stereotypical among their ethnic group (e.g., Arbona & Novy, 1991; Thornley & Siann, 1991), partly as a result of expected ethnic discrimination in predominantly White career settings (Basit, 1996; Constantine et al., 1998). Ethnic minority youth usually feel that they have a limited range of career choices, since the highest status jobs are often difficult to

obtain (e.g., Weinstein, 1989). Contrary to this mainstream evidence, current findings showed that children gave more importance to get accepted for an internship on a non-typical career opportunity compared to an internship on a typical career opportunity.

A couple of mechanisms could explain these findings. First, research on career choices of ethnic minorities suggest that although ethnic minorities are generally reluctant to apply for highly prestigious universities because of the fear of discrimination (e.g., Ball, Reay, & David, 2002), some ethnic minorities may also resort to over-education and aspire to be engaged in highly ambitious career pathways in order to attain jobs that are deemed to be occupied by ethnic majority status groups (e.g., Basit, 1996). This kind of upward social mobility and highly ambitious career aspirations are usually imposed on children by their families (Mirza, 1992). In a recent study with Pakistani British youth and their parents, Shah, Dwyer, and Modood (2010) found that parents held high career aspirations for their children, since this could pave the way for their social mobility. Hence, young adolescents may be likely to aim for highly ambitious careers that may not be typical among the same-ethnic group and thus give more importance to get a career in a non-typical, potentially higher status job. A second explanation may be the familiarity of the jobs for children and their access to knowledge about the jobs they reported. Because children possibly were less familiar with non-typical career choices they were interested in and may not have sufficient information about these choices, they may be more likely to be engaged in an internship that includes access to knowledge about such careers.

It is important to note that findings relating to the neutral condition were somehow unexpected. Although no specific assumption has been made in terms of the neutral condition, results revealed that children in the neutral condition were often as motivated as children in the cross-ethnic friendship condition towards both typical and non-typical career

options. One reason for that may be the use of pets in the neutral condition. Previous research has shown that pets have important roles in preadolescents' development; children who have pets report higher self-concepts, self-esteem and autonomy (Van Houtte & Jarvis, 1995). In fact, the neutral condition could have resulted in higher motivations compared to both friendship conditions, because pets may function as companions/friends that elicit feelings of unconditional love and positive regard (e.g., Davis & Juhasz, 1985) and provide social support (e.g., McConnell, Brown, Shoda, Stayton, & Martin, 2011; McNicholas & Collis, 2006).

In summary, this study has three main implications. First of all, findings provide initial support for the function of cross-ethnic friendships in relation to motivational outcomes for career choices. Although cross-ethnic friendships may not directly lead to higher motivations towards non-typical career choices, they may lead children to get less fixed to a limited range of typical career options. More importantly, these types of friendships could uniquely increase motivations after initial failure, which implies their critical role in improving the resilience of ethnic minority children. Second, this study showed that it is possible to manipulate cross-ethnic friendships by simply mentally representing them. This suggests that cross-ethnic ethnic friendships in schools are strong enough to be effective by their psychological presence per se. Third, this study is critical in investigating the career motivations and aspirations of South Asians, a growing ethnic minority group in the UK. Most of the previous literature in this sense has been qualitative (e.g., Shah et al., 2010) and do not show specific relationships between cross-ethnic friendships and career motivations.

Although this study extends previous findings in several ways, it had a few limitations to be considered. First of all, children were recruited from two schools which varied in ethnic diversity. Although classroom ethnic diversity did not have significant effects on the outcome

variables, it is possible that typical and non-typical jobs, as well as the quantity and quality of cross-ethnic friendships may be different across specific classroom contexts. Future research including a larger sample size recruited from a larger set of classrooms should investigate the specific effects of cross-ethnic friendships on motivations.

Second, jobs reported by children varied substantially in terms of typicality, status and familiarity. Although children were allowed to report typical/non-typical jobs they were interested in, a significant number of students were excluded because they did not know which jobs are typical or non-typical among their ethnic group. This shows that children may have had difficulties in defining stereotypical jobs among their ethnic group. Future research may use different techniques for asking children the careers they would like to pursue in the future. For example, a pilot study could be conducted among a similar sample to find out which careers are generally seen as typical and non-typical for South Asian children of this age group. Then children could have been given a list of typical and nontypical career options and therefore choose the ones they were interested in.

Third, the neutral condition posed problems in the interpretation of the results as discussed above. Finally, although some evidence was provided for the effects of cross-ethnic friendships, it is still not clear through which processes cross-ethnic friendships influenced motivations toward career choices. For example, self-efficacy or perspective-taking may be important mechanisms that could potentially mediate the effects of cross-ethnic friendships on motivational outcomes. Nevertheless, Experiment 1 was an important first attempt to reveal associations between cross-ethnic friendships and motivational outcomes among children.

## 7.2. Experiment 2

Experiment 1 provided initial evidence for associations between cross-ethnic friendships and motivational outcomes. This study showed that some children had only a limited amount of knowledge about the typicality of careers they want to pursue in the future, probably because of the age group of the sample (13 years-old) and the low accessibility of the motivational outcomes (career choices) to children. In Experiment 2, a more accessible motivational outcome - academic motivation - was examined among older adolescents (16-17 years-old). Moreover, the neutral condition in Experiment 1 was one of the limitations; because the main interest was to examine the unique effects of cross-ethnic friendships compared to same-ethnic friendships and to simplify the design of the study, Study 2 included only same- and cross-ethnic friendship conditions. By focusing on Year 12 South Asian girls who are expected to apply for universities within one year, this study investigated whether adolescents who are mentally presented with cross-ethnic friends would be more motivated to apply for a university with predominantly White students compared to adolescents primed with same-ethnic friends. Moreover, this study examined whether cross-ethnic friendships would promote South Asian adolescents' general interest to apply for universities and their confidence in acceptance into a university. Therefore, the following research questions were addressed:

*Research Question 7.2.1:* Do mental representations of cross-ethnic friendships increase South Asian adolescents' motivations towards applying for a predominantly White university?

*Research Question 7.2.2:* Do mental representations of cross-ethnic friendships increase South Asian adolescents' general interest in applying for universities and confidence in getting an acceptance?

Research in the UK educational system shows that ethnic minority status groups still do worse in Higher Education compared to White British students (Connor, Tyers, Modood & Hillage, 2004). The attainment of ethnic minority populations to British Higher Education has been consistently shown to be lower compared to Whites (e.g., Richardson, 2008). Studies in the UK have also demonstrated that with the exception of Chinese students, ethnic minorities had lower rates of success compared to Whites during the university application process (Shiner & Modood, 2002). For example, McManus, Richards, Winder, Sproston, and Styles (1995) suggested that ethnic minorities are 1.46 times less likely to be accepted to medical schools, after controlling for academic qualifications. Even in academically higher positions, ethnic discrimination still seems to be a pertinent part of educational life among ethnic minorities; such that at each stage of education, ethnic inequalities are suggested to be reinforced through discrimination (Cheng & Heath, 1993).

Only few studies examined particularly the experiences of university applications of ethnic minority students and the majority of this literature reveals data from two decades ago, which may not reflect the current context of London schools. It has been shown that ethnic minority students may feel unwanted, alienated and underrepresented in some of the higher education institutions and often complain about the expectation of racism (e.g., Acland & Azmi, 1998; Allen, 1988). For example, while for White students, dropout rates in college were associated with academic variables, dropout rates of Black students were linked to social alienation beside academic factors (Suen, 1983). Moreover, minority students have been often found to feel higher levels of social isolation compared to Whites, particularly in predominantly White universities (Loo & Rollison, 1986). Therefore, such anticipations may lead ethnic minority students to refrain from applying to predominantly White universities.

An initial observation of university admissions in the UK indicates that Black Caribbean and Pakistani students had lower rates of admission to old universities (which are often considered to be highly selective and prestigious) and more likely to enrol into new universities compared to White British students (Modood & Shiner, 1994). This suggests that ethnic minority students may be less likely to choose predominantly White universities as a result of ethnic discrimination concerns. For example, Zimdars (2010) suggested that the differences in admission rates to the University of Oxford are likely to be explained by homophilic tendencies among choosers. In fact, such findings led England University Foundation Council to consider the anonymity of university applications, to prevent ethnic minority students' reluctance to apply to selective universities with the fear of discrimination (Curtis, 2005).

In this study, it is argued that peer relationships, in particular cross-ethnic friends, would predict adolescents' future academic choices. Previous research has demonstrated that peer relationships are influential in academic goal pursuit during adolescence. For example, Berndt and Keefe (1996) demonstrated that dyadic friendships in adolescence promote positive academic behaviors such as academic studying and making future plans for attending college. A great deal of research has indicated that there is a positive association between peer support and close friendships and academic motivation at school (e.g., Berndt, Hawkins, & Jiao, 1999; Ryan, 2000; Wentzel, 1998). Hence, peer relationships during adolescence may be important resources motivating children towards their academic goals. Since today peer relationships are likely to be partly formed of cross-ethnic friendships, it is conceivable that these types of friendships would influence academic choices in secondary school.

It is suggested that the mental representation of a close cross-ethnic friend would increase motivations toward university applications and particularly applications to a

predominantly White university. Previous chapters have shown that cross-ethnic friendships are directly and indirectly associated with psychological well-being, resilience and positive academic outcomes among South Asian children. Moreover, cross-ethnic friendships are shown to buffer the effects of PED. Hence, it could be suggested that these types of friendships would promote the motivation to apply to a predominantly White university and the general interest in attending universities, since they could decrease the expectations of further negative intergroup experiences and promote self-confidence in the academic setting by increasing resilience in a challenging environment. Moreover, such friendships could enable children to learn various perspectives in the evaluation of possible academic futures, and provide opportunities to consider a wide range of possible academic choices.

### **7.2.1. Aims and Hypotheses**

Based on the previous findings in cross-ethnic friendship literature and in this thesis, the following hypotheses were constructed:

*Hypothesis 7.2.1:* Cross-ethnic friends would increase motivations towards applying to a predominantly White university among South Asian young adolescents.

*Hypothesis 7.2.2:* Cross-ethnic friends would increase interest in attending universities in general and the expectancy of receiving an acceptance among South Asian young adolescents.

In order to test hypothesis 7.2.1., a 2 (friendship type: Same-ethnic / Cross-ethnic) X 2 (university type: Predominantly White / Ethnically diverse) mixed-factorial design, with the last factor being within-participants, was used. To test hypothesis 7.2.2., univariate designs were used to assess the effect of friendship type (Same-ethnic / Cross-ethnic, between participants) on general attitudes towards university acceptance.

### **7.2.2. Method**

#### **Participants**

A total of 42 students participated in the study. Participants were all Year 12 female students recruited from an all-girl school located in Greater London. The school was lower to middle SES and contained a high percentage of South Asian students. The mean age was 16.38 ( $SD = .59$ ). Two students self-identified with a different ethnic background than South Asian (one mixed White-Asian and one White European). With the exclusion of two participants, 40 children (100% Bangladeshi) were included in the final data analysis.

#### **Design and Procedure**

The participating school was contacted via the outreach management team at Goldsmiths, University of London. The school contained a high percentage of South Asian students (98% Bangladeshi). The school was contacted at the end of Autumn Term (2013) and the experiment was run during the final week of Autumn Term by the main researcher and two PhD students who agreed to help in data collection. The responsible teacher, who was informed about the study, also helped in the recruitment process. Students were recruited in computer labs and two classrooms participated in the study.

The sessions started with instructions about the experiment. Participants were told that the participation was voluntary and they could withdraw at any time they felt uncomfortable. Researchers explicitly stated that the study included sensitive topics that relate to ethnicity and personal information about people who are close to them, and highlighted that participation was completely voluntary and that data collected would be kept anonymous and confidential. The instructions stated that the aim of the study was to find out future academic aspirations of adolescents and what they thought about this process.

A 2 (Same-ethnic / Cross-ethnic) X 2 (predominantly White / Ethnically mixed, within participants) mixed-factorial design was used. Students were randomly allocated to four different conditions. Similar to Experiment 1, children received slips that contained the web link of the online questionnaire. The completion of the total questionnaire took approximately 40 minutes. At the completion of the questionnaires, children read the debriefing forms. Children were allowed to ask questions to the experimenter during the experiment without disturbing other students.

## Materials

The questionnaire included four main sections followed by demographic questions of age, gender, self-reported ethnic background and religion. Academic self-concepts (see chapter 3 for details) and GCSE levels were also asked at the beginning of the questionnaire.

**Name listing.** The exact same procedure in Experiment 1 was used for name listing. Students were asked to write down names for each relationship partner. Embedded in this section were the names of same-ethnic (“Please write down the name of a close South Asian friend”) and cross-ethnic friends (“Please write down the name of a close White British friend”).

**Friendship priming.** Name listing section was followed directly by the friendship priming procedure. The same procedure as in Experiment 1 was applied. Students were asked to think about their same- or cross-ethnic friend, visualize them and describe their appearances (see Experiment 1, friendship priming section). To strengthen the effect of the priming procedure, children were further asked to indicate the extent at which their friend affirms their ideal selves (e.g., “X understands the kind of person I am” or “X makes me feel like a better person”, see Chapter 5 for the affirmation scale). The response scale ranged from

1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's Alpha coefficient of the scale was .85, demonstrating good reliability.

**Applying to universities.** In this section, children were given information about two universities, University A and University B. The names of the primed friends were also included in this section (with the “insert a previously given response” option on Survey Monkey). To set up the scene, participants were asked to read the following vignette:

*“In this section, we are interested in your future choices in higher education. Imagine that it is time for you to consider applying for universities and you need to make a decision about which universities you would like to apply. Imagine that you’re talking to your friend X about applying to universities. You and X decide to look up some universities and go visit them together. You and your friend X look up two universities that match your academic abilities. Both University A and University B aim to provide high quality courses on a number of subjects you are interested in. The education and teaching, as well as research resources are good. They have innovative teaching and learning methods, and provide a good potential for their students after graduation. Both universities are committed to recruiting students from diverse backgrounds and have committed to providing full academic bursaries (covering tuition and board) to promising candidates from disadvantaged backgrounds.”*

Next, students were presented with specific information about University A and B (half of the participants received University A first and half of the participants received University B first). Specific information about the universities was given in images and pie charts. Students first saw a campus picture with a green college setting with students. In the predominantly White university, students in the picture were mainly from a White background; in the ethnically diverse university, students were from a variety of ethnic backgrounds. The two pictures were created in Photoshop in order to create a similar

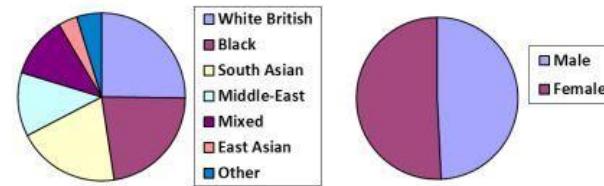
university background, but different student groups (identical number of students). See Figures 7.5 and 7.6 for campus pictures presented to participants (pages 186 and 187).

Along with the campus pictures, students saw two pie charts, one demonstrating the ethnic background, the other demonstrating the gender breakdown for each university. Furthermore, this section also included two graphs demonstrating fictional university scorings and opportunities for social clubs, location and potential for bursary. These data were kept identical across two conditions.

Next, motivational outcomes were used to assess the extent to which students would like to apply for universities. Three items that tap into students' motivation to request further information ("Would you like to request further information about this university?"), importance given to application ("How important would it be for you to attend this university?") and confidence in acceptance ("How confident would you be that you would get accepted to this university?"). The response scale ranged from 1 (*not at all*) to 7 (*very much*).

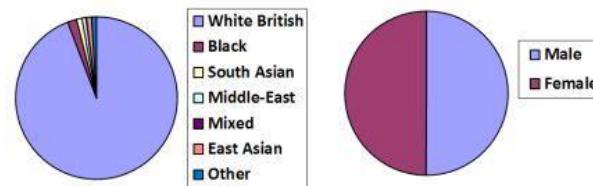
Finally, students were asked to rate their likelihood of studying A-level courses ("How likely are you to study A-levels?"), their interest in attending universities ("How interested are you in attending universities?"), and their chances of getting accepted into a university ("What do you think are your chances of getting into a university?"). The response scale for these items ranged from 1 (*not very much*) to 7 (*very much*).

An awareness check where students were asked to write the main purpose of the study was also added at the end of the questionnaire.

**Figure 7.5** University A (ethnically diverse)

Potential for full time bursary:	Available
Location:	Convenient
Student organizations:	Over 200
Staff to students ratio:	1/18

Score type	Score	Maximum score
Entry standard	306	530
Student satisfaction	3.73	5.00
Research assessment	5.25	6.62
Graduate prospect	63.6	100
Overall score	600	1000

**Figure 7.6** University B (predominantly White)

Potential for full time bursary:	Available
Location:	Convenient
Student organizations:	Over 200
Staff to students ratio:	1/18

Score type	Score	Maximum score
Entry standard	305	530
Student satisfaction	3.75	5.00
Research assessment	5.24	6.62
Graduate prospect	63.8	100
Overall score	600	1000

### 7.2.3. Results

**Awareness check.** None of the participants indicated that they understood the real aim of the study. Students often indicated that the real purpose of the study was to understand young people's attitudes towards university applications. Students also frequently mentioned that they understood that the main difference between universities was their ethnic composition.

**Preliminary analyses.** Preliminary analyses indicated that mean GCSE levels and academic self-concepts were not associated with motivations, therefore these were not further included in data analysis.

#### Motivations toward a predominantly White university

Table 7.1 demonstrates means and standard deviations across conditions.

**Table 7.1** Means and standard deviations for motivations towards a predominantly White and ethnically diverse university across conditions

	Predominantly White University	Ethnically diverse university
<b>Further request for information</b>		
Same-ethnic	5.05 (1.64)	6.05 (1.27)
Cross-ethnic	4.45 (1.73)	5.40 (1.47)
<b>Importance of application</b>		
Same-ethnic	4.58 (1.35)	5.53 (1.35)
Cross-ethnic	4.00 (1.73)	4.95 (1.39)
<b>Confidence in acceptance</b>		
Same-ethnic	3.42 (1.17)	4.95 (1.61)
Cross-ethnic	4.50 (1.67)	4.84 (1.68)

To test the effect of mental representations on motivations towards a predominantly White and ethnically diverse university, initially 2 (friendship condition: Same-ethnic / Cross-ethnic, between participants) X 2 (university type: Predominantly White / Ethnically diverse, within participants) X 2 (order, between participants) mixed-factorial designs were used.

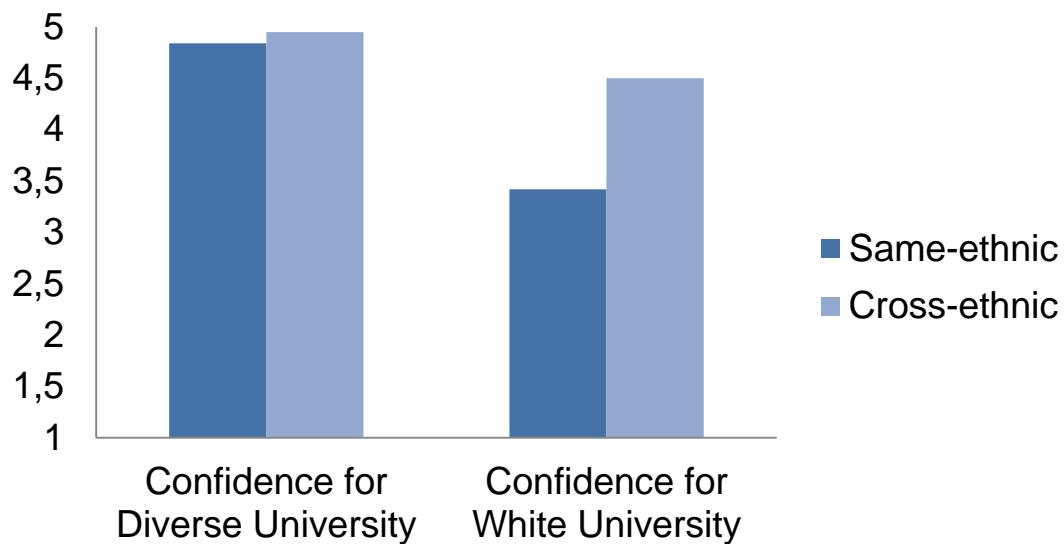
**Further information request.** An initial mixed ANOVA showed that order did not have a significant main effect. Therefore, this condition was dropped. A further 2 (friendship condition) X 2 (university type) ANOVA demonstrated that there was no effect of friendship condition,  $F(1,37) = .01, p = .92$ . There was a main effect of university type,  $F(1,37) = 16.94, p = .00$ ; participants requested further information more for an ethnically diverse university compared to a predominantly White university.

**Importance of application.** An initial 2 (friendship condition) X 2 (university type) X 2 (order) ANOVA indicated that order did not have any significant effect. A further 2 (friendship condition) X 2 (university type) ANOVA revealed a significant main effect of university type,  $F(1,36) = 11.38, p = .00$ . Participants indicated greater importance for the ethnically diverse university compared to the White university. There was no main effect of friendship condition,  $F(1,36) = 2.28, p = .14$ . There was no interaction between condition and university type.

**Confidence in acceptance.** Further mixed ANOVA results (2 X 2 X 2) regarding confidence in acceptance indicated that there was a main effect of order,  $F(1,35) = 4.90, p = .03$ . Therefore, order was kept in the model as a second between-participant variable. There was a main effect of university type,  $F(1,35) = 15.31, p = .00$ ; participants were more confident to get accepted into an ethnically diverse university. Friendship condition did not have a significant effect,  $F(1,35) = 7.20, p = .15$ . There was a significant interaction between

friendship condition and university type,  $F(1,35) = 4.39, p = .05, \eta^2 = .10$ . Further univariate tests demonstrated that confidence levels in getting acceptance from a diverse university was not significantly different in the cross-ethnic and same-ethnic condition ( $M_{\text{Same-ethnic}} = 4.84, SD_{\text{Same-ethnic}} = 1.68$  and  $M_{\text{Cross-ethnic}} = 4.95, SD_{\text{Cross-ethnic}} = 1.61$ ),  $F(1,37) = .10, p > .86$ . On the other hand, there was a significant difference between confidence levels in getting acceptance from a predominantly White university ( $M_{\text{Same-ethnic}} = 3.42, SD_{\text{Same-ethnic}} = 1.17$  and  $M_{\text{Cross-ethnic}} = 4.50, SD_{\text{Cross-ethnic}} = 1.67$ ); children in the cross-ethnic friendship condition indicated higher levels of confidence in getting accepted into a predominantly White university compared to children in the same-ethnic friendship condition. Figure 7.7 illustrates this effect.

**Figure 7.7** Confidence to get accepted from a predominantly White and ethnically diverse university across friendship type

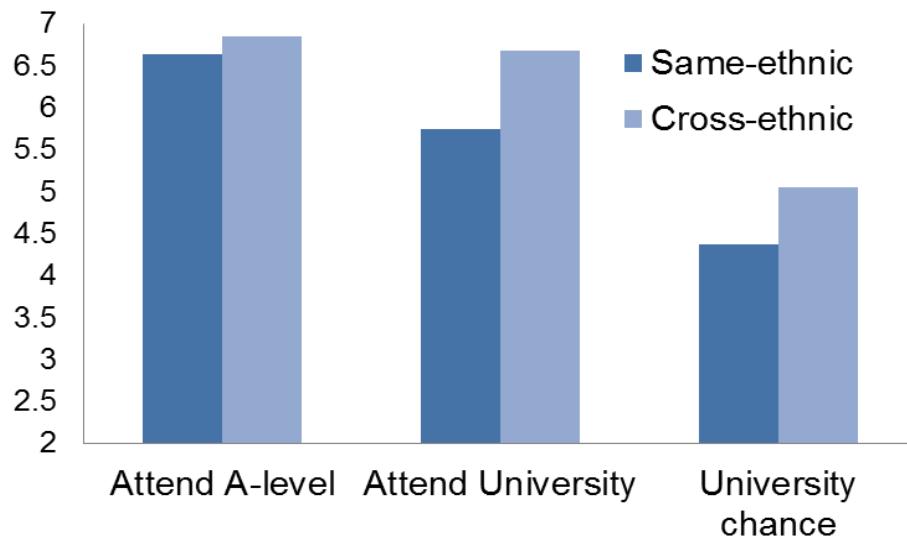


### Motivations towards general university applications

Since at this stage of data analysis, the aim was to examine the effect of friendship mental representations on general university applications, univariate analyses were conducted to reveal the effects of condition on further motivational outcomes (see Figure 7.8). Findings indicated that the mean levels of the likelihood of studying A-levels was relatively higher in

the cross-ethnic condition ( $M = 6.84, SD = .50$ ) compared to the same-ethnic condition ( $M = 6.63, SD = .60$ ). However, the difference was non-significant,  $F(1,35) = 1.29, p > .05$ . On the other hand, there was a strong and significant effect of friendship condition on the interest in attending universities,  $F(1,35) = 7.02, p = .01, \eta^2 = .17$ . Accordingly, children mentally presented with cross-ethnic friends ( $M = 6.68, SD = .75$ ) reported higher level of interest in attending universities compared to children mentally presented with same-ethnic friends ( $M = 5.74, SD = 1.33$ ). Results in relation to chances of getting acceptance from a university also showed that children in the cross-ethnic friendship condition ( $M = 5.05, SD = .94$ ) indicated higher rates of chances compared to children in the same-ethnic friendship condition ( $M = 4.37, SD = 1.26$ ); this difference was marginally significant,  $F(1,36) = 3.58, p = .06, \eta^2 = .09$ .

**Figure 7.8** Future academic motivations by friendship type



#### 7.2.4. Discussion

Experiment 2 aimed to examine whether mental representations of cross-ethnic friends have influences on South Asian adolescents' future academic choices. It was investigated whether cross-ethnic friendships would increase motivations towards applying for a predominantly White university and whether these friendships would foster the general

interest and confidence in attending a university. Findings revealed that participants primed with cross-ethnic friends had higher levels of confidence in getting accepted into a predominantly White university compared to children primed with same-ethnic friends. There was no difference in confidence levels in terms of a diverse university. No evidence was found in relation to further information request or importance given to application. Further univariate results demonstrated that cross-ethnic friendships increased interest in attending universities and perceived chances of getting accepted in a university.

Confirming partly Hypothesis 7.2.1 which suggested that cross-ethnic friendships would increase motivations toward applying for a predominantly White university, evidence was found for the confidence levels. Specifically, it has been demonstrated that South Asian adolescents in the cross-ethnic friendship condition reported higher levels of confidence in getting into a predominantly White university compared to adolescents in the same-ethnic friendship condition. This finding is critical, since previous research has implied that youth from ethnic minority groups are often reluctant to apply for predominantly White universities, and have lower rates of success in the university admission process (e.g., Shiner & Modood, 2002). Hence, cross-ethnic friendships may be influential resources that promote self-confidence in attaining a challenging academic goal. This is in line with Chapter 3, which showed that cross-ethnic friendships buffer the effects of discrimination on academic outcomes. Hence, cross-ethnic friendships may have increased such self-confidence to get accepted into a predominantly White university, since they reduce the anticipation of ethnic discrimination in further intergroup encounters (Mendoza-Denton et al., 2006). This effect was observed only for the predominantly White university, which suggests that cross-ethnic friendships are particularly important for challenging settings, where the perception of ethnic discrimination is more likely to be experienced.

Results did not indicate any effect of cross-ethnic friendships on further information request or importance given to the application, as opposed to Hypothesis I. It is possible that children were not particularly more interested in applying to a predominantly White university in the cross-ethnic friendship condition, while they may still be more confident to get an acceptance from such a university. As previous chapters demonstrated that cross-ethnic friendships are directly and indirectly associated with resilience, children may maintain their confidence levels in a future challenging academic environment, such as a predominantly White university. These findings are critical, because self-confidence has been found to be one of the most important predictors of academic performance (e.g., Tavani & Losh, 2003). In fact, self-efficacy theories (Bandura, 1997) suggest that the belief in one's capabilities is one of the factors affecting academic achievement (e.g., Bandura, 1986; Chemers, Hu, & Garcia, 2001).

Findings are in line with a qualitative study conducted in London secondary schools, investigating processes leading to university choices (Ball et al., 2002). Similar to their conclusion, it was found that children had higher inclination towards an ethnically diverse university compared to a predominantly White university. Particularly, participants reported more information request, more confidence for acceptance and give more importance to an ethnically diverse university compared to a predominantly White one. The most plausible explanation for this, as Ball et al. suggested, is the anticipation of ethnic discrimination in predominantly White settings. Hence, the ethnic composition of the university seems to be a pertaining factor in the application process for ethnic minority students.

Regarding findings in terms of motivations towards general university applications suggested in Hypothesis 7.2.2, it was found that cross-ethnic friendships had a strong positive influence in increasing interest in attending universities. Participants also reported higher

levels of confidence in receiving an acceptance from a university. This finding has a critical implication for the study of ethnic minority students in the academic setting, since ethnic minority students are often underrepresented in the UK Higher Education (e.g., Richardson, 2008). Therefore, even attending universities may constitute a challenging experience for ethnic minority students. Here, it has been shown that cross-ethnic friendships are important aspects of students' lives, contributing to future academic goals by fostering their self-confidence in continuing to Higher Education.

Although this study constitutes an initial step to understanding future academic aspirations of ethnic minority adolescents in the UK, a lot of questions still remain unanswered. One question to be addressed is whether the effects could be generalized to other ethnic minority groups in the UK, or to the ethnic majority group. It is known that the South Asians in the UK are often ethnically segregated compared to other ethnic groups (e.g., Maxwell, 2009). It is more questionable whether ethnic composition of universities is an important aspect of university applications among ethnic majority status students. As it has been shown in the literature, ethnic composition is likely to be a less influential factor in White students' academic motivations compared to ethnic minority students' academic motivations (Suen, 1983), since ethnic discrimination in the academic setting is a more critical component of academic life amongst ethnic minorities. However, recent statistical research has shown that White British students are becoming numerical minorities in educational settings in London (e.g., Cohen, 2012). This suggests that White European youth may be concerned about ethnic competition, therefore may also consider ethnic composition an important feature of their university choices. Future research could also incorporate the concept of perceived ethnic discrimination into research on academic motivations, to reveal whether cross-ethnic friendships reduce the expectancy of future discrimination in a predominantly White university.

Moreover, this study included only one ethnic minority group, female students and one school in data collection. The ethnic diversity of the school is also questionable, since the study took place in an ethnically homogenous school which contained a high number of South Asian children. Future research should replicate this study by including different ethnic groups, classrooms and a larger sample. Previous research has also shown that other social relationships such as parents and teachers may also have major influences in children's educational choices (e.g., Ryan, Stiller, & Lynch, 1994). Future research may explore different aspects of social interactions children use in their academic choices.

One important question to be addressed is whether ethnic minority adolescents would have different academic choices, if the status of the predominantly White university was significantly higher than the status of the ethnically diverse university. In this study, the two universities were shown as identical in terms of academic prestige and success. It would have been interesting to explore whether children would still prefer an ethnically diverse university when there are visible status differences between universities. It is possible that cross-ethnic friendships may have different implications when the status of universities is a salient aspect of choices.

In summary, Experiment 2 unveiled associations between cross-ethnic friendships and future academic motivations, by investigating the effect of mental representations of cross-ethnic friends on motivations toward applying for a predominantly White university and the general motivation towards university applications. It has been found that cross-ethnic friends are effective tools that motivate children towards challenging choices in the academic setting. The role of cross-ethnic friendships in such academic motivations among ethnic minorities is therefore critical in contributing to the understanding of ethnic minority attitudes towards Higher Education.

### 7.3. General conclusion

In conclusion, this chapter provides initial support for the effects of cross-ethnic friendships in motivations towards future career and academic choices of young ethnic minority adolescents. Findings of Experiment 1 suggested that cross-ethnic friends may indeed have important implications for the career aspirations, interests and orientations of South Asian early adolescents. Experiment 2 focused on academic motivations among South Asian adolescents and uncovered the role of cross-ethnic friendships on motivations towards applying to a predominantly White university and general motivation towards university applications. Both studies pointed to the malleability of motivations toward future choices, suggesting that the social environment, especially cross-ethnic peers and friends, may play a critical role in the development of career and academic interests and aspirations. Implications of this chapter are critical for school policies aiming to increase academic and career aspirations among ethnic minority students.

## Chapter 8

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### Cross-ethnic friendships and well-being: New perspectives in the light of ethnic group differences and school policies

It is not surprising that research investigating the effects of cross-ethnic friendships has flourished considering the major impact of intergroup contact theory (Allport, 1954) in psychological research and recent social psychology trends indicating the positive contribution of ethnic diversity and social integration on positive intergroup attitudes and behavior (see Brown & Hewstone, 2005). The majority of studies on intergroup relationships focused on the reduction of ethnic prejudice and discrimination through intergroup contact and friendships (e.g., Pettigrew & Tropp, 2006). However, an emerging literature has started to pay more attention to the developmental outcomes and predictors of cross-ethnic friendships in the last decade (e.g., Kawabata & Crick, 2008; Munniksma & Juvonen, 2011). This research field is new, but has paved the way to understanding various outcomes of cross-ethnic friendships in childhood, especially in multiethnic educational settings.

With this thesis, I aimed to contribute to this research literature, by:

- i) Examining cross-ethnic friendships in secondary schools around London, UK.

Although recent statistical research has pointed to sharp increases in ethnic diversity in European societies (e.g., Hooghe et al., 2008), the formation and the consequences of cross-ethnic friendships (as the ultimate form of positive intergroup relationships) specifically in London secondary schools have not been systematically examined in previous empirical research.

- ii) Studying the consequences of cross-ethnic friendships in relation to both positive psychological and academic outcomes which are the main aspects of the healthy

functioning of children in secondary schools. By including measures of psychological well-being and resilience, as well as academic self-concepts and levels, I sought to provide an understanding of how cross-ethnic friendships relate to the development of a healthy sense of psychological and academic functioning at the individual level.

- iii) Examining cross-ethnic friendships among different ethnic groups, by drawing upon similarities and differences between ethnic minority and majority status children, as well as variations between different ethnic minority status groups.
- iv) Investigating specific mechanisms that reveal how and when cross-ethnic friendships contribute to psychological and academic outcomes both concurrently and over time. Using different methodological approaches, I aimed to provide a more extended understanding of cross-ethnic friendships during childhood and early adolescence.
- v) Exploring whether the benefits of cross-ethnic friendships are much more diverse than they have been suggested in previous research. I attempted to test the effects of cross-ethnic friendships on ethnic minority youth's motivations towards future career and academic choices, by using cross-ethnic friendship mental representations in an experimental design.

This chapter aims to present a summary of the findings in the light of cross-ethnic friendship literature and ethnic group differences, discuss the practical implications of the findings and suggest future directions into cross-ethnic friendship research.

### **8.1. Summary of the findings**

**Chapter 2.** Motivated by recent statistical research emphasizing the increasing trend of ethnic diversity in London secondary schools, this first empirical chapter investigated the prevalence of cross-ethnic friendships in these multiethnic settings and provided an initial

understanding of cross-ethnic friendships as a function of ethnic group differences and ethnic diversity.

Findings revealed that cross-ethnic friendships were not as rare and low in quality as they were found in previous research (e.g., Hallinan & Teixeira, 1987). In fact, for all ethnic groups, cross-ethnic friendships were even more frequent than same-ethnic friendships. This study further provided useful findings about the effect of ethnic diversity; after controlling for a number of variables, such as ethnic identity and perceived ethnic discrimination (PED), classroom ethnic diversity predicted cross-ethnic friendship quantity. White European children reported higher levels of quantity and lower levels of quality cross-ethnic friendships compared to other ethnic groups, when ethnic diversity was lower. This was explained by the ethnic competition theory (Blalock, 1967) which suggests that Whites may feel threatened by increasing numbers of ethnic minority students in the classroom. Nevertheless, White European children still indicated higher quality cross-ethnic friendships when ethnic diversity was higher. This finding, along with findings revealing the high quantity and quality cross-ethnic friendships across all ethnic groups, suggest how social integration starts to take shape in childhood within multicultural educational settings.

This chapter uniquely contributed to the field of cross-ethnic friendships, by demonstrating for the first time, that cross-ethnic friendships may exceed same-ethnic friendships in terms of quantity in current multiethnic educational contexts and highlighted the specificity of the social context where intergroup relationships are studied.

**Chapter 3.** The second empirical chapter sought to illustrate the associations between cross-ethnic friendships and positive psychological (well-being and resilience) and academic outcomes (academic level and self-concepts). Moreover, this chapter aimed to test whether these types of friendships buffered the negative effects of PED on psychological and

academic well-being. Accordingly, cross-ethnic friendships had direct associations with positive outcomes for White European and South Asian children, but not for Black children. On the other hand, the buffering effects of cross-ethnic friendships were observed in relation to psychological outcomes among White Europeans and academic outcomes among Blacks. For South Asian children, cross-ethnic friendships had buffering effects for both psychological and academic outcomes. These findings showed that as expected cross-ethnic friendships had a protective role against the negative effects of PED.

There were also differences in terms of cross-ethnic friendship quantity and quality; while quality generally had more direct associations with psychological outcomes, quantity had stronger buffering effects against PED, in particular for ethnic minority status children. This suggests, in line with previous research demonstrating the buffering effects of cross-ethnic friendships in further intergroup experiences (e.g., Mendoza-Denton et al., 2006), a greater number of cross-ethnic friendships may decrease the negative effects of PED through consistent disconfirmation of further discrimination expectancies. Cross-ethnic friendships functioned as protective mechanisms for White European children too, who are also likely to experience difficulties in a multi-ethnic context where they are numerical minorities.

These findings provided evidence for the benefits of cross-ethnic friendships for both ethnic majority and minority children's psychological and academic outcomes in multiethnic educational contexts and showed that cross-ethnic friendships may be critical resources that protect children from the negative effects of discrimination experiences.

**Chapter 4.** Building upon findings in Chapter 3 which demonstrated the benefits of cross-ethnic friendships, the third empirical study examined processes whereby cross-ethnic friendships, in particular quality, related to psychological and academic outcomes by testing cross-ethnic self-disclosure and affirmation of the ideal self as potential mediators. Multilevel SEMs indicated that for all ethnic groups affirmation significantly related to both

psychological and academic outcomes. Cross-ethnic friend affirmation was a significant mediator concerning the psychological well-being of White Europeans and both psychological and academic outcomes of South Asians. For ethnic minority status children, self-disclosure also functioned as a mediator between quality and psychological well-being.

This chapter was critical in terms of studying for the first time possible mechanisms that link cross-ethnic friendships to well-being. Furthermore, this study was unique in studying affirmation for the first time among children and cross-ethnic friendships. Consistent with previous research highlighting the benefits of affirmation in close relationships (e.g., Rusbult et al., 2009), cross-ethnic friend affirmation was an important process for both ethnic minority and majority status children. In line with ethnic group differences detected earlier, for White European children, cross-ethnic friendships were more strongly related to psychological outcomes compared to academic outcomes. For South Asian children these interpersonal processes, in particular affirmation, were important in contributing to both psychological and academic outcomes.

Self-disclosure with cross-ethnic friends was only a significant mediator for ethnic minority children and for psychological outcomes. Self-disclosure may be a less powerful mediator compared to affirmation, because affirmation in this study was conceptualized as an unconditionally positive, encouraging and motivating behavior from other ethnic group members. Such affirmation is likely to provide positive expectations in the environment and contribute to feelings of belongingness, acceptance and integration into a multiethnic setting. Contrary to what is suggested about self-disclosure in increasing social capital and academic outcomes (e.g., Stanton-Salazar & Dornbusch, 1995), self-disclosure was associated with only psychological outcomes. This suggests that such self-disclosure helped children more to maintain a healthy sense of psychological functioning rather than accessing information about how to be academically successful.

**Chapter 5.** The main objective of Chapter 5 was to integrate same-ethnic friendships into cross-ethnic friendship research and shed light into unique processes whereby cross-ethnic friendships relate to psychological and academic outcomes. This chapter distinguished between two processes, intimate self-disclosure and friendship anxiety, in order to determine which particular dimensions of friendships are unique mediators in relation to positive outcomes. It was found that reduced anxiety in cross-ethnic friendships was a significant and unique mediator on White Europeans' psychological well-being and South Asians' psychological and academic well-being. In terms of intimate self-disclosure, South Asian children benefited more from same-ethnic friendships, while Black children benefited more from cross-ethnic friendships. These findings showed that cross-ethnic friends' unique associations are mainly provided through their aspects that relate to reduced anxiety among both White European and South Asian children, whereas these unique associations were in terms of intimate self-disclosure for Black children.

These findings fit previous studies in the literature that showed the benefits of reduced intergroup anxiety and increased self-disclosure on intergroup attitudes (e.g., Turner et al., 2007). Findings extend previous research by showing the role of these mechanisms on psychological and academic outcomes and incorporating same- and cross-ethnic friendships simultaneously. For Black children, intimate cross-ethnic self-disclosure was a more important resource for well-being, since for this ethnic group children reduced anxiety in cross-ethnic friendships may not be an influential aspect of school life considering that they are already more integrated especially compared to South Asians. For South Asians and White Europeans, cross-ethnic friendship anxiety seemed to be significant, because a positive interaction with cross-ethnic friends where children enjoy each other's companionship is likely to foster adaptation and integration, paving the way for the development of positive outcomes.

**Chapter 6.** This chapter sought to demonstrate longitudinal associations between cross-ethnic friendships and psychological and academic outcomes, by introducing classroom racial climate as a moderator in this relationship. Results indicated that, initial levels of cross-ethnic friendship quality predicted later resilience and academic level for White Europeans and later academic level for South Asians. Once data were analyzed using the total sample, earlier cross-ethnic friendship quality predicted later academic levels for all groups. For Black children, it was earlier cross-ethnic friendship quantity which predicted later psychological well-being and resilience. Furthermore, classroom racial tension was a significant moderator in all of these relationships, such that longitudinal associations between cross-ethnic friendships and positive outcomes were stronger when classroom racial tension was lower.

Comparing these longitudinal results to cross-sectional results in Chapter 3, significant differences were observed. For example, while cross-sectionally cross-ethnic friendship quantity was related to academic levels; longitudinally, cross-ethnic friendship quality was a predictor of academic levels. On the other hand, cross-ethnic friendship quantity was not significantly associated with psychological outcomes among Black children in cross-sectional analyses, whereas they were significantly associated with both psychological well-being and resilience over time. Hence, it is critical to take into account the concurrent and prospective effects of cross-ethnic friendships, which may illustrate different pictures about the associations between cross-ethnic friendships and psychological and academic outcomes.

Moreover, it was found that classroom racial climate is likely to be an important moderator in how cross-ethnic friendships are linked to well-being. Although in both lower and higher racial tension classrooms, cross-ethnic friendships seemed to increase positive outcomes, this effect was stronger in classrooms where racial tension was lower. This

provides another important finding about the context-dependent and dynamic nature of cross-ethnic friendships, which is often unique to the environment characterized by various contextual factors.

**Chapter 7.** Chapter 7 represents the final empirical chapter of this thesis. This chapter attempted to experimentally manipulate cross-ethnic friendships and test whether the benefits of cross-ethnic friendships extend to motivational outcomes. Focusing on South Asian young adolescents, I aimed to examine whether mental representations of cross-ethnic friends would increase motivations toward an internship on a non-typical career opportunity (Experiment 1). Findings indicated that children had an increased motivation to apply for an internship on a non-typical career option after initial failure when they were primed with a close cross-ethnic friend. However, this effect did not extend to other motivational outcomes, such as the likelihood of further information request or importance assigned to the application. For these outcomes, it was found that cross-ethnic friendships decreased motivations towards the typical career internship.

Experiment 2 concentrated on future academic goals among South Asian adolescents. As expected, cross-ethnic friendship priming resulted in increased confidence in getting acceptance into a predominantly White university. Moreover, children in the cross-ethnic friendship condition reported higher levels of interest in attending universities and higher chances of getting accepted.

Although these studies partially confirmed my initial hypotheses, results provided evidence for how these types of friendships may be effective resources that could affect children's motivations towards various kinds of career and academic opportunities. Findings complement previous results in this thesis, highlighting the protective role of cross-ethnic friendships in psychological and academic functioning and resilience.

## **8.2. Implications of the findings**

In summary, this thesis builds upon previous research by investigating cross-ethnic friendships, in particular their formation and consequences on positive psychological, academic and motivational outcomes. Several implications of the findings are worthy to discuss. In this section, I will summarize what we could learn from the findings and how we could use them for practical purposes.

**Cross-ethnic friendships are dynamic and context-dependent.** Today, understanding cross-ethnic friendships and their roles in children's development is a priority in social and developmental psychology, since these friendships are now formed extensively in current multiethnic educational contexts. Compared to the majority of past research which demonstrated the rarity of cross-ethnic friendships (e.g., Hallinan & Teixeira, 1987; Howes & Wu, 1990), today children do not only *form* these types of friendships, but they also *engage* in various interpersonal processes in these friendships. This shows how cross-ethnic friendships have recently become a major aspect of children's social environment and suggests that the meaning of cross-ethnic friendships, as well as their formation, development and consequences are subject to change in time; parallel to demographic, political and sociological changes at the society level. Hence, attention should be paid to how current cross-ethnic friendships and their consequences have changed over time between different ethnic groups.

Furthermore, these types of friendships are context-dependent. The term *context* may represent various factors, including micro-level contextual variables, such as classroom racial climate or composition, and macro-level contextual variables, such as specific intergroup relationships within the city or the society. Previous research has particularly demonstrated that intergroup relationship context in the US is often different compared to the context of Europe (e.g., Zick et al., 2008), based on differential intergroup relation histories in two continents. Such differences require social researchers to replicate previous findings in

different contexts that vary substantially in terms of ethnic composition, interethnic relationships and attitudes, and political agendas in relation to ethnic minority and majority status groups in the society.

**Schools as effective social contexts for the development of cross-ethnic friendships.** Contextual factors within schools have important implications for how cross-ethnic friendships could be encouraged and stimulated in classrooms. Findings showed that classroom ethnic diversity had positive associations with cross-ethnic friendship quantity, but not with quality. This suggests that classroom ethnic diversity may offer opportunities for cross-ethnic friendships and consequently increase the number of cross-ethnic friendships, but it may not be an effective strategy per se to increase closeness in such friendships. Previous research has suggested that ethnic diversity of classrooms may provide opportunities for cross-ethnic friendships, but may not unconditionally lead to close cross-ethnic friendships (e.g., Moody, 2001). This implies that third parties such as schools should aim for better organizational practices that maximize the positive perception and embracement of intergroup relationships. They should also put effort into encouraging good quality cross-ethnic friendships at the individual level, given that close cross-ethnic friendships provide benefits in terms of both psychological and academic outcomes in the school setting. Findings demonstrate that White Europeans also benefit from the quality of cross-ethnic friendships, suggesting that these practices would not potentially compromise the psychological and academic well-being of the majority status children.

Similar practical implications should also offer new insights for the development of educational interventions related to the intergroup contact literature. Most of the intervention programs in this literature often aim to use intergroup contact as a strategy to reduce prejudice (see Aboud et al., 2012). Current findings emphasize that educational interventions should not only target the improvement of intergroup relationships, but also the development

of various positive psychological and academic outcomes among children. In fact, cooperative learning strategies where children study in group harmony and cooperation have been indicated to result in better educational outcomes in multicultural contexts (e.g., Aronson, 1978; Slavin, 1983). These strategies could reinforce the helping behavior and reduce feelings of social threat from different ethnic group members (Cohen & Lotan, 1995).

**The importance of social norms.** Findings suggest that social dynamics in the schools/classrooms affect how cross-ethnic friendships operate in an educational setting. Apart from the high frequency of cross-ethnic friendships which is possibly a result of social norms that reinforce the development of cross-ethnic friendships in a multiethnic environment, racial tension was also an influential factor in the occurrence of cross-ethnic friendship effects on well-being. This indicates that the maintenance of a positive climate around race and ethnicity is critical to maximize the gain from cross-ethnic friendships in terms of well-being.

However, such encouragements should not lead to an exclusion from the same-ethnic peer group. Tropp, O'Brien, and Migacheva (2014) showed that children's interest in cross-ethnic friendships was based on inclusive norms from ingroup members rather than the outgroup members. Hence, although social norms should encourage the formation of cross-ethnic friendships in the classroom as a normative behaviour, possible benefits of same-ethnic friendships in positive development should not be ignored. Actually, Chapter 5 indicated that intimate self-disclosure with same-ethnic friends was more closely related to well-being for South Asian children compared to self-disclosure with cross-ethnic friends. Hence, both same- and cross-ethnic relationship norms should be considered simultaneously in the classroom setting.

**Cross-ethnic friendships are multi-dimensional.** A further implication from the findings suggests that cross-ethnic friendships should not be considered a unidimensional

concept. This thesis provided evidence for how cross-ethnic friendship quantity and quality may have differential outcomes in relation to psychological and academic outcomes. Previous research examining the consequences of cross-ethnic friendships has often relied on one aspect of cross-ethnic friendships, such as the number of cross-ethnic friends (e.g., Munniksma & Juvonen, 2011; Tran & Lee, 2011) or having a cross-ethnic friend or not (e.g., Kawabata & Crick, 2008; Lease & Blake, 2005). Such approach to cross-ethnic friendships is often limited, since different aspects of these types of friendships may relate differentially to various aspects of positive development. Therefore, it is critical to incorporate these various aspects of cross-ethnic friendships into research, in order to fully understand the role of these friendships in children's healthy functioning in educational settings.

**The *how* and *when* of cross-ethnic friendships.** Given that cross-ethnic friendships are associated with positive psychological and academic outcomes for both ethnic minority and majority children in multiethnic educational environments, it is important to determine how and when these types of friendships are the most beneficial for children. Accordingly, evidence was found for the mediating effects of cross-ethnic friend self-disclosure and affirmation of the ideal self. Although cross-ethnic friendship literature has been mainly concerned to reveal the mediators of cross-ethnic friendships on outgroup attitudes (e.g., Feddes et al., 2009), learning about the interpersonal processes whereby these friendships relate to positive outcomes is vital to foster these positive outcomes. Moreover, reduced anxiety in cross-ethnic friendships was a unique process whereby these friendships relate to positive outcomes. Hence, schools' efforts should concentrate not only in increasing good quality cross-ethnic friendships, but also reinforce encouragement and cooperation between different ethnic group members and create a social environment where children do actually cross ethnic boundaries.

It is also important to detect when cross-ethnic friendships are beneficial for children, in particular classroom-level moderators; this would allow school practitioners to provide positive classroom-level factors which would magnify the benefits of these types of friendships. This thesis demonstrated classroom racial climate as an important moderator, such that the longitudinal effects of cross-ethnic friendships are maximized when classroom racial tension is lower. Therefore, practices which convey cross-ethnic friendships and interactions as a positive behavior in classrooms and foster cooperation among different ethnic groups should be prioritized in schools where ethnic diversity and cross-ethnic friendships already provide such opportunities.

**The role of cross-ethnic friendships across ethnic groups.** Another important implication of the study was how consequences of cross-ethnic friendships varied across ethnic groups. Previous studies have been often limited to detect such differences (e.g., Hunter & Elias, 1999; Kawabata & Crick, 2008) or have been restricted to one ethnic group (e.g., Tran & Lee, 2011). Other studies showed that cross-ethnic friendships may be more beneficial for ethnic minority children. For example, cross-ethnic friendships have been found to increase the sense of safety only among children of ethnic minority status (Munniksma & Juvonen, 2012).

Findings of this thesis demonstrated that for White European children, cross-ethnic friendships often related to psychological outcomes, whereas for South children this association extended to both psychological and academic outcomes. For Black children, there was an inconsistent pattern; while in cross-sectional studies cross-ethnic friendships amongst this ethnic group did not have direct significant associations with positive outcomes, such friendships had positive effects on psychological well-being and resilience over time. The role of friendship quality and quantity also had differential outcomes across ethnic groups. While for White Europeans, quality was generally a more important resource, for ethnic

minority status children both quality and quantity had significant associations with positive development. Beside these differences, some findings were consistent across all ethnic groups; affirmation of the ideal self, for example, strongly related to both psychological and academic outcomes for all ethnic groups, suggesting the generalizability of this finding across different groups.

These results have substantial implications for cross-ethnic friendship literature emphasizing the nature of intergroup relationships in different ethnic groups. Differences were detected not only in terms of status differences, but also between ethnic minority groups such as South Asian and Black children. This requires an understanding of cross-ethnic relationships at the societal level. This issue is especially complicated in the UK which has been welcoming major migration from a varied range of countries for years. Research in the UK suggests that South Asian and Black ethnic groups have different patterns of integration ways and acculturation processes, based on their historical influences in this country. Maxwell (2009) indicated that South Asians in the UK are more segregated compared to Blacks. Moreover, South Asian children have been specifically found to be the target of ethnic discrimination in schools (Eslea & Mukhtar, 2000). This could explain why cross-ethnic friendships were in fact a more efficient resource for this ethnic group relating to both psychological and academic outcomes. For South Asian children, cross-ethnic friendships also seemed to influence motivations towards future academic and career choices.

Moreover, it is critical to discuss which factors are predominantly influential in the academic and psychological well-being of various ethnic groups. Inconsistent patterns of relationships between cross-ethnic friendships and well-being across different ethnic groups may be explained by these different influences. Previous research has suggested that there are universal and culture-specific aspects of resilience and such effects vary in terms of the amount of influence they exert on well-being (Ungar, 2008). This suggests that while cross-

ethnic friendships may be an important factor fostering resilience and well-being among one ethnic group of children, other factors such as ethnic identity and ethnic socialization may be more effective resources of healthy functioning for other ethnic groups.

### **8.3. Limitations and future directions**

Although this thesis extended cross-ethnic friendship literature by addressing various research questions, it had a number of significant limitations that should be noted in order to improve further cross-ethnic friendship research.

First, it is necessary to state the extent at which these findings could be generalizable to other settings. This study had the advantage to examine cross-ethnic friendships in the specific context of London secondary schools, since this illustrated the context-dependent and dynamic nature of cross-ethnic friendships. However, it is not known whether cross-ethnic friendships would have similar associations with these positive outcomes in more homogeneous settings, or in other similarly ethnically diverse city contexts in different countries. Moreover, the sample of schools in this thesis were drawn from lower to middle SES areas in Greater London; cross-ethnic friendships may not be as effective in this sample as in higher SES schools. Differences between schools may have posited significant variations, as schools not only vary in terms of ethnic composition, but also in terms of size, academic organization and teaching; these variables could not be controlled in the current thesis. Besides, the ethnic composition of the classrooms, although generally characterized by great ethnic diversity, was different in terms of which groups are predominant in the school. A major drawback was that the schools usually contained a higher number of South Asian students compared to Black students as the dominant minority status group. This also resulted in lower numbers of Black participants, which could explain to some extent why some relationships had lower significance levels for this group.

Second, it is necessary to discuss the cross-ethnic friendship measurements in the current study. The literature on peer relationships has shown that different techniques may be used for friendship assessment. One of the frequently used methods is the peer nomination technique, where children are required to write three to five of their friends and then indicate the ethnic group of these friends. A considerable number of studies in intergroup relations literature have previously used peer nomination technique in order to assess the number of same- and cross-ethnic friendships (e.g., Feddes et al., 2009; Graham et al., 2014; Munniksma & Juvonen, 2012). Other studies have also used roaster-and-rating technique to measure same- and cross-ethnic friendships. With this technique, children are asked to nominate all their classmates and rate them in terms of acceptance (Schofield & Whitley, 1983). Schofield and Whitley (1983) stated that the use of peer nomination technique resulted in higher same-ethnic preference compared to the roaster-and-rating method. This indicates that the type of friendship measurement may have influences on the number of their friends children report.

In the current study, children were asked two open-ended questions requiring them to indicate the number of friends they had from the same- and cross-ethnic group. This method of friendship reporting had some advantages, such that it was easy to guess and allowed children to make quick judgments. Also, it did not limit children to only three or five friends. Another reason for the use of an open-ended question was the complexity of defining cross-ethnic friendships in the multiethnic setting of London. As children may have thought of cross-ethnic friendships in terms of various dimensions of ethnicity, such as national, racial and religious differences, friendship numbers were based on what children considered as 'cross-ethnic'.

On the other hand, this method may have resulted in the overestimation of friendship numbers (as a way of positive self-presentation) and variance in estimations. Although this

variance was decreased by using a ratio measure for cross-ethnic friendship numbers (cross-ethnic friendship quantity computed by taking the ratio of the number of cross-ethnic friends to total number of friends reported), the reporting of same- and cross-ethnic friendships could have included the larger peer network group of children, rather than a narrow focus on close same- and cross-ethnic friendships.

Moreover, cross-ethnic friendship measures relied on unilateral friendship measurements; the reciprocity of cross-ethnic friendships could not be assessed. For example, Aboud et al. (2003) highlighted the importance of reciprocity in same- and cross-ethnic friendships and suggested that the measurements should include mutual nominations. Similarly, the use of reciprocal friendships may have resulted in lower numbers of friendship nominations and a greater focus on close friendships. Regarding the associations between cross-ethnic friendships and psychological and academic outcomes, it is plausible that reciprocal cross-ethnic friendships are likely to be more closely related to well-being measures. Future studies may concentrate on different levels of friendship measurements and may apply different techniques, such as social network analysis (e.g., Streeter & Gillespie, 1993).

Third, this thesis sought to highlight specific mediators and moderators in the relationship between cross-ethnic friendships and positive outcomes, yet only accounted for a limited number of variables. Future research should illustrate a more extended picture of these relationships by testing other potential mediators and moderators in this framework. For example, future studies could test the mediating role of perspective-taking and social norms which have been previously tested within the context of outgroup attitudes and intergroup relationships (e.g., Feddes et al., 2009). Other mediators such as social competence and skills which have been demonstrated to relate to cross-ethnic friendships (e.g., Kawabata & Crick, 2008) could be examined in the light of psychological and academic well-being. Children

who observe their friends benefitting from cross-ethnic friendships in the academic setting and enjoying integration and acceptance into a multiethnic setting may be more likely to put effort in engaging in such friendships. Future research should also explore whether individual-level variables or personality moderate the effects of cross-ethnic friendships on well-being. For example, it is possible that cross-ethnic friendships may be more strongly related to positive outcomes for children who are extraverted and open to experience.

Forth, this thesis focused on cross-ethnic peer relationships as an important predictor of psychological well-being and resilience in the school setting. This could have underscored the effects of cross-ethnic friendships in other settings, such as neighbourhoods. Moreover, it was not possible to address a major component of children's social relationships during adolescence - the effect of parents. Previously, Munniksma et al. (2012) indicated that parents may resist to their children's cross-ethnic friendships. It is important to incorporate the family ecology into cross-ethnic friendship research, since parents may constitute third parties affecting the development of friendships.

Furthermore, it is a well-known fact that especially ethnic minority children's parents exert influences on how children are ethnically socialized (see Hughes et al., 2006). Besides, ethnic identity may be another dimension which should be incorporated into the study of cross-ethnic friendships in future studies. Although in Chapter 2, ethnic identity was used as a covariate in the formation of cross-ethnic friendships, further effects of ethnic identity may be discussed in the light of cross-ethnic friendship literature. Especially for Chapter 7, the manipulation of cross-ethnic friendships may have activated ethnic group membership and may have made one's own ethnic identity salient. Hence, it is possible that the actual manipulation was the salience of ethnic group membership, rather than cross-ethnic friendships per se.

One the other hand, although integration and segregation of ethnic groups were used as evidence for the relationships between cross-ethnic friendships and positive outcomes, the current research did not specifically measure these psychological processes. As integration and segregation are core concepts in the acculturation literature (e.g., Berry, 1990), it would have been interesting to see whether the benefits of cross-ethnic friendships occur, since cross-ethnic friendships would signify an integrative acculturation strategy which usually tend to result in the highest psychological adaptation compared to other strategies (e.g. Ward & Kennedy, 1994). In other words, is it cross-ethnic friendships per se bringing out the positive developmental outcomes, or is it cultural integration and adaptation as a general acculturative strategy that is associated with positive developmental outcomes? Future research should address these questions in order to discover the distinctive outcomes of cross-ethnic friendships for child development.

Fifth, this study emphasized only positive aspects of cross-ethnic friendships such as self-disclosure and reduced anxiety. Pettigrew (1998) suggested that research in intergroup relationships should also focus on the negatives of these relationships. Like all friendships, cross-ethnic friendships are subject to include negative processes, such as conflict and tension. How are such conflicts in cross-ethnic friendships associated with psychological and academic well-being in multiethnic settings? Future research should integrate both positive and negative aspects of these relationships, in order to fully understand their implications in children's world.

Finally, this thesis was concerned only with middle childhood/early adolescence and the secondary school. Previous research in cross-ethnic friendships has been similarly devoted to primary or secondary school children's cross-ethnic friendships and their consequences (e.g., Lease & Blake, 2005; Munniksma & Juvonen, 2011). Although with Chapter 6, I aimed to investigate cross-ethnic friendships over the first year of secondary schools, future research should focus on how these consequences change across a wider range

of period, e.g., from the beginning to the end of secondary school; this could inform us when cross-ethnic friendships are especially important in children's lives in relation to their psychological and academic functioning.

#### **8.4. Conclusion**

In summary, cross-ethnic friendship literature has recently started to examine various positive social and psychological outcomes of cross-ethnic friendships and highlight the role of these friendships in positive development. In this thesis, incorporating both academic and psychological factors, as well as motivational outcomes, I aimed to offer new perspectives into cross-ethnic friendship research. Specifically, examining the formation of these friendships in multiethnic educational environments and their consequences in positive outcomes, this thesis demonstrated that through their direct and buffering effects against PED, and via interpersonal mechanisms, cross-ethnic friendships indeed foster children's healthy functioning.

This thesis demonstrated that not only cross-sectionally, but also longitudinally, such friendships provide advantages for children, especially when classroom racial tension is lower. Furthermore, positive consequences of these friendships are not limited to psychological and academic outcomes, but extend to motivational outcomes in future career and academic choices. Therefore, this thesis should pave the way to further research in cross-ethnic friendships, by showing how cross-ethnic friendships could function as unique resources fostering psychological, academic and motivational functioning among ethnic minority and majority status children in ethnically diverse contexts.

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**Appendix A - Sample informed consent and debriefing forms for LLSS****INFORMED CONSENT FORM****Welcome to the Ethnic Group Relationships Study!**

This is a questionnaire for a psychology study at a university in London. We are trying to understand about your ‘cross-ethnic friends’ (friends who are from different ethnicities than yours) and how they may affect your life.

Your participation in this research is completely voluntary, and you can withdraw at any time you feel uncomfortable. You can also choose not to answer some of the questions and continue with the next question. However, please try to answer as many questions as you can.

\*If you are willing to participate in this research please tick the box below confirming that you accept to take part in this study.

**“I have read the above information and I am willing to take part in the research. I understand the procedures involved, and the objectives of the research.”**

## DEBRIEFING FORM

**Please detach and keep this form.**

***'Perceptions of Cross-ethnic Friendships and Ethnic Discrimination in Secondary Schools: A Resilience Perspective'***

The purpose of this study is to explore cross-ethnic friendships in schools. Past research shows that cross-ethnic friendships are helpful in improving interracial relationships. Therefore, we think cross-ethnic friendships will be positive for the members of ethnic minority groups. Your participation in this study is very valuable, because volunteers like you are very important in helping researchers to find solutions to social issues. Therefore, thank you very much for your time and effort.

If you have any questions, concerns, or complaints about this research, please feel free to contact the researcher, Sabahat Cigdem Bagci ([s.bagci@gold.ac.uk](mailto:s.bagci@gold.ac.uk)) or her supervisors; Dr Herbert Blumberg ([h.blumberg@gold.ac.uk](mailto:h.blumberg@gold.ac.uk)), Professor Peter Smith ([p.smith@gold.ac.uk](mailto:p.smith@gold.ac.uk)) and Dr Madoka Kumashiro ([m.kumashiro@gold.ac.uk](mailto:m.kumashiro@gold.ac.uk)).

**Appendix B – Questionnaire Time 1 for LLSS****1. ID number:** \_\_\_\_\_**2. How old are you? (years)** \_\_\_\_\_**3. What is your gender?** Male       Female

**4. Ethnicity is defined as a group of people who share a cultural, religious and geographical history (e.g., White British, Black Caribbean, Indian British...). Which one would BEST describe your ethnic origin? (pick only one)**

<b>White</b>	<b>Black or Black British</b>
<input type="checkbox"/> British	<input type="checkbox"/> African
<input type="checkbox"/> Irish	<input type="checkbox"/> Caribbean
<input type="checkbox"/> Other European Community	<input type="checkbox"/> Any other Black background (please specify)
<input type="checkbox"/> Any other White background (please specify):	
<b>Asian or Asian British</b>	<b>Mixed</b>
<input type="checkbox"/> Indian	<input type="checkbox"/> White and Black Caribbean
<input type="checkbox"/> Pakistani	<input type="checkbox"/> White and Black African
<input type="checkbox"/> Bangladeshi	<input type="checkbox"/> White and Asian
<input type="checkbox"/> Chinese	<input type="checkbox"/> Any other mixed background (please specify)
<input type="checkbox"/> Any other Asian background (please specify):	
<input type="checkbox"/> Other (please specify):	

**5. What is your father's job? (if you don't know, continue to next question)**

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**6. What is your mother's job? (if you don't know, continue to next question)**

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**7. What kind of housing do you live in?** Council house Privately rented house Family owned house Other (please specify): \_\_\_\_\_

**8. What is your religion?**

- |                                       |                                    |                                   |
|---------------------------------------|------------------------------------|-----------------------------------|
| <input type="checkbox"/> No religious | <input type="checkbox"/> Christian | <input type="checkbox"/> Buddhist |
| <input type="checkbox"/> Hindu        | <input type="checkbox"/> Jewish    | <input type="checkbox"/> Muslim   |

Other (please specify):

**9. Please think about your academic achievements and try to be as accurate as possible.****9.1 What are your Key Stage 2 scores in the following subjects?**

Maths \_\_\_\_\_ English \_\_\_\_\_ Science \_\_\_\_\_

**9.2 How well do you think you do in the following subjects?**

	Poor			Excellent	
Maths	1	2	3	4	5
English	1	2	3	4	5
Science	1	2	3	4	5

**10. Please think about your friends you 'hang out' with regularly.**

- How many of your friends are from your same ethnic group? (please write in number)
- 

- How many of your friends are from a different ethnic group? (please write in number)
- 

**11. Please think about your 3 best cross-ethnic friends you have. If you don't have any, leave blank and go to Question 12.****11.1 Think about your first cross-ethnic friend...**

- What is the ethnicity of this friend? \_\_\_\_\_

- How frequently do you interact with this friend? \_\_\_\_\_

Not very frequently	1	2	3	4	Very frequently
	5				

- How close do you feel to this friend?

Not very close	1	2	3	4	Very close
	5				

**11.2 Think about your second cross-ethnic friend...**

- What is the ethnicity of this friend? \_\_\_\_\_

- How frequently do you interact with this friend? \_\_\_\_\_

Not very frequently	1	2	3	4	Very frequently
	5				

How close do you feel to this friend?

Not very close				Very close
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

### **11.3 Think about your third cross-ethnic friend...**

What is the ethnicity of this friend? \_\_\_\_\_

How frequently do you interact with this friend?

	Not very frequently			Very frequently	
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

How close do you feel to this friend?

Not very close					Very close
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	

**12. Please indicate how often you are very good at...**

	<b>Almost never</b>				<b>All the time</b>
1. Figuring out problems and planning how to solve them?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2. Carrying out the plans you make for solving problems?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
3. Getting over quickly from bad experiences?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4. Learning from your mistakes?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**13. Please indicate how have you been feeling recently...**

	None of the time			All of the time
1. I've been feeling optimistic about the future.	1	2	3	4
2. I've been feeling useful.	1	2	3	4
3. I've been feeling relaxed.	1	2	3	4
4. I've been feeling interested in other people.	1	2	3	4
5. I've had energy to spare.	1	2	3	4
6. I've been dealing with problems well.	1	2	3	4
7. I've been thinking clearly.	1	2	3	4
8. I've been feeling good about myself.	1	2	3	4
9. I've been feeling close to other people.	1	2	3	4
10. I've been feeling confident.	1	2	3	4
11. I've been able to make up my own mind about things.	1	2	3	4
12. I've been feeling loved.	1	2	3	4
13. I've been interested in new things.	1	2	3	4
14. I've been feeling cheerful.	1	2	3	4

**14. Please indicate how you feel about your ethnic identity.**

	<b>Strongly disagree</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Strongly agree</b>
1. I feel good about my ethnic group.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2. I am proud of being a member of my ethnic group.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
3. It is important to me that I am a member of my ethnic group.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4. I like meeting and getting to know people from ethnic groups other than my own.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5. I sometimes feel it would be better if different ethnic groups don't try to mix together.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
6. I often spend time with people from ethnic groups other than my own.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
7. I don't try to become friends with people from other ethnic groups.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
8. I am involved in activities with people from other ethnic groups.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
9. I enjoy being around people from ethnic groups other than my own.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**15. We are also interested in whether you feel you are treated differently because of your race or ethnicity at school and outside school. How often do you feel...**

	<b>Never</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>All the time</b>
1. That teachers call on you less often they call other kids because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
2. That teachers grade you harder than they grade other kids because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
3. That you get disciplined more harshly by teachers because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
4. That teachers think you are less smart than you really are because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
5. That people expect that you would get good grades because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
6. Like you are not picked for certain teams or other school activities because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
7. That you get in fights with some kids because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
8. That kids do not want to hang out with you because of your race or ethnicity?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	

### **Appendix C – Questionnaire Time 2 for LLSS**

#### **1. How long have you been living in the UK?**

Since birth       Since age \_\_\_\_\_

#### **2. Is English your first language (native language)?**

Yes       No

#### **3. How many books do you have in your house?**

None       A few       Some       A lot

#### **4. Please think about your academic achievements and try to be as accurate as possible.**

##### **4.1.What are your Key Stage 2 scores in the following subjects?**

Maths \_\_\_\_\_ English \_\_\_\_\_ Science \_\_\_\_\_

##### **4.2.How well do you think you do in the following subjects?**

	<b>Poor</b>	<b>Excellent</b>		
Maths	1	2	3	4
English	1	2	3	4
Science	1	2	3	4

#### **5. Please think about your friends you ‘hang out’ with regularly.**

How many of your friends are from your same ethnic group? (please write in number)

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How many of your friends are from a different ethnic group? (please write in number)

---

#### **6. Please think about your 3 best cross-ethnic friends you have. If you don't have any, leave blank and go to the next question.**

##### **6.1. Think about your first cross-ethnic friend...**

What is the ethnicity of this friend? \_\_\_\_\_

How frequently do you interact with this friend?

Not very frequently	Very frequently			
1	2	3	4	5

How close do you feel to this friend?

Not very close	Very close			
1	2	3	4	5

**6.2. Think about your second cross-ethnic friend...**

- What is the ethnicity of this friend? \_\_\_\_\_
- How frequently do you interact with this friend?

Not very frequently	Very frequently			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

- How close do you feel to this friend?

Not very close	Very close			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**6.3. Think about your third cross-ethnic friend...**

- What is the ethnicity of this friend? \_\_\_\_\_
- How frequently do you interact with this friend?

Not very frequently	Very frequently			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

- How close do you feel to this friend?

Not very close	Very close			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**7. My cross-ethnic friends....**

	Strongly disagree			Strongly agree
1. Understand the kind of person I most want to become.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
2. Believe that I can achieve the most important dreams in life.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
3. Bring out the best in me.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
4. Make me feel like a better person.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
5. Encourage me to talk about all kinds of possible future for me.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
6. Sometimes make me feel my dreams are stupid.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

**8. How often do you talk to one of your cross-ethnic friends about...**

	Strongly disagree			Strongly agree
1. How you are feeling?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
2. How well you are doing at school?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
3. Your dreams and fears for the future?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
4. What you want to be when you grow up?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
5. An important secret you have?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

**9. How often does one of your cross-ethnic friends talks to you about...**

	<b>Strongly disagree</b>			<b>Strongly agree</b>
1. How he/she is feeling?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
2. How well he/she is doing at school?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
3. His/her dreams and fears for the future?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
4. What he/she wants to be when you grow up?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
5. An important secret he/she has?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

**10. Please indicate how often you are very good at...**

	<b>Almost never</b>			<b>All the time</b>
1. Figuring out problems and planning how to solve them?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
2. Carrying out the plans you make for solving problems?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
3. Getting over quickly from bad experiences?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
4. Learning from your mistakes?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

**11. In my school,...**

	<b>Never</b>			<b>All the time</b>
1. Teaching is good	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
2. Teachers are interested in students	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
3. Discipline is fair	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
4. Students are graded fairly	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
5. Fights occur between racial and ethnic groups	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

**12. Please indicate how have you been feeling recently...**

	<b>None of the time</b>	<b>All of the time</b>			
	1	2	3	4	5
1. I've been feeling optimistic about the future.	1	2	3	4	5
2. I've been feeling useful.	1	2	3	4	5
3. I've been feeling relaxed.	1	2	3	4	5
4. I've been feeling interested in other people.	1	2	3	4	5
5. I've had energy to spare.	1	2	3	4	5
6. I've been dealing with problems well.	1	2	3	4	5
7. I've been thinking clearly.	1	2	3	4	5
8. I've been feeling good about myself.	1	2	3	4	5
9. I've been feeling close to other people.	1	2	3	4	5
10. I've been feeling confident.	1	2	3	4	5
11. I've been able to make up my own mind about things.	1	2	3	4	5
12. I've been feeling loved.	1	2	3	4	5
13. I've been interested in new things.	1	2	3	4	5
14. I've been feeling cheerful.	1	2	3	4	5

## Appendix D – Questionnaire Time 3 for LLSS

**1. Please think about your academic achievements and try to be as accurate as possible.**

**a. What are your Key Stage 2 scores in the following subjects?**

Maths \_\_\_\_\_ English \_\_\_\_\_ Science \_\_\_\_\_

**b. How well do you think you do in the following subjects?**

	Poor				Excellent
Maths	1	2	3	4	5
English	1	2	3	4	5
Science	1	2	3	4	5

**2. Please think about your friends you ‘hang out’ with regularly.**

How many of your friends are from your same ethnic group? (please write in number)

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How many of your friends are from a different ethnic group? (please write in number)

---

**3. Please think about your 3 best cross-ethnic friends you have. If you don’t have any, leave blank and go to the next question.**

**3.1. Think about your first cross-ethnic friend...**

What is the ethnicity of this friend? \_\_\_\_\_

How frequently do you interact with this friend?

Not very frequently	Very frequently
<b>1</b>	<b>2</b>

How close do you feel to this friend?

Not very close	Very close
<b>1</b>	<b>2</b>

**3.2. Think about your second cross-ethnic friend...**

What is the ethnicity of this friend? \_\_\_\_\_

How frequently do you interact with this friend?

Not very frequently	Very frequently
<b>1</b>	<b>2</b>

How close do you feel to this friend?

Not very close	Very close			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**3.3. Think about your third cross-ethnic friend...**

- What is the ethnicity of this friend? \_\_\_\_\_
- How frequently do you interact with this friend?

Not very frequently	Very frequently			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

How close do you feel to this friend?

Not very close	Very close			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**4. Please think about your 3 best same-ethnic friends you have. If you don't have any, leave blank and go to the next question.****4.1. Think about your first same-ethnic friend...**

- How frequently do you interact with this friend?

Not very frequently	Very frequently			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

How close do you feel to this friend?

Not very close	Very close			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**4.2. Think about your second same-ethnic friend...**

- How frequently do you interact with this friend?

Not very frequently	Very frequently			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

How close do you feel to this friend?

Not very close	Very close			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**4.3. Think about your third same-ethnic friend...**

- How frequently do you interact with this friend?

Not very frequently	Very frequently			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

How close do you feel to this friend?

					Very close
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	

### 5. How often do you do the following with your cross-ethnic friends?

	None of the time	All of the time			
1. I share my feelings and thoughts with my cross-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2. I talk about my future plans with my cross-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
3. If I had a family problem, I would talk about this to my cross-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4. I feel comfortable interacting with my cross-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5. I am relaxed with my cross-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
6. I tell my secrets to my cross-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

### 6. How often do you do the following with your same-ethnic friends?

	None of the time	All of the time			
1. I share my feelings and thoughts with my same-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2. I talk about my future plans with my same-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
3. If I had a family problem, I would talk about this to my same-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4. I feel comfortable interacting with my same-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5. I am relaxed with my same-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
6. I tell my secrets to my same-ethnic friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**7. Please indicate how often you are very good at...**

	<b>Almost never</b>				<b>All the time</b>
1. Figuring out problems and planning how to solve them?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2. Carrying out the plans you make for solving problems?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
3. Getting over quickly from bad experiences?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4. Learning from your mistakes?	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**8. Please indicate how have you been feeling recently...**

	<b>None of the</b>				<b>All of the</b>
1. I've been feeling optimistic about the future.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2. I've been feeling useful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
3. I've been feeling relaxed.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4. I've been feeling interested in other people.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5. I've had energy to spare.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
6. I've been dealing with problems well.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
7. I've been thinking clearly.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
8. I've been feeling good about myself.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
9. I've been feeling close to other people.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
10. I've been feeling confident.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
11. I've been able to make up my own mind about things.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
12. I've been feeling loved.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
13. I've been interested in new things.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
14. I've been feeling cheerful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

## Appendix E. Ethics form for LLSS

PSYCHOLOGY DEPARTMENT ETHICAL APPROVAL FORM																																																					
Tick one box: <input checked="" type="checkbox"/> POSTGRADUATE project <input type="checkbox"/> UNDERGRADUATE project <span style="float: right; margin-top: -20px;">✓ Q 14</span>																																																					
Title of project <i>Perceptions of Cross-ethnic Friendships and Ethnic Discrimination in Secondary Schools: A Resilience Perspective</i> Name of researcher(s) Sabahat Cigdem Bagci Name of supervisor(s) Herbert Blumberg, Peter Smith, Madoka Kumashiro																																																					
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**PLEASE TICK EITHER BOX A OR BOX B BELOW AND PROVIDE THE DETAILS REQUIRED IN SUPPORT OF YOUR APPLICATION. THEN SIGN THE FORM.**

A. I consider that this project has **no** significant ethical implications to be brought before the Departmental Ethics Committee.

PLEASE TICK:

Give a brief description of participants and procedure (methods, assessments used etc) in up to 150 words.

*This form (and any attachments) should be submitted to the Departmental Ethics Committee where it will be considered by the Chair before it can be approved.*

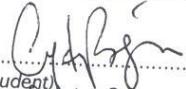
B. I consider that this project **may** have ethical implications that should be brought before the Departmental Ethics Committee, and/or it will be carried out with children or other vulnerable populations.  PLEASE TICK:

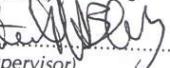
Please provide all the information listed below in a separate attachment.

1. Title of project.
  2. Purpose of project and its academic rationale.
  3. Brief description of methods and measurements.
  4. Participants: recruitment methods, number, age, gender, exclusion/inclusion criteria.
  5. Consent and participant information arrangements, debriefing.
- Please attach intended information and consent forms, and any debriefing information.**
6. A clear but concise statement of the ethical considerations raised by the project and how you intend to deal with them.
  7. Estimated start date and duration of project.

*This form with attachments should be submitted to the Departmental Ethics Committee for consideration.  
If any of the above information is missing, your application will be returned to you.*

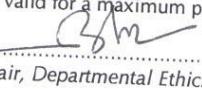
We are familiar with the BPS Guidelines for ethical practices in psychological research, and have discussed them.

Signed.....  Print Name...Sabahat Cigdem Bagci. Date...2<sup>nd</sup> June 2011.  
(Student)

Signed.....  Print Name..... H. BLUMBERG Date..... 2/6/2011  
(Supervisor)

#### STATEMENT OF ETHICAL APPROVAL

This project has been considered using agreed Departmental procedures and is now approved. This approval is valid for a maximum period of five years.

Signed.....  Print Name..... Prof. J. Bhattacharyya Date..... 14-07-11  
(Chair, Departmental Ethics Committee)

(ETHICSformMay08)

## Appendix F – Ethics form for experimental studies included in Chapter 7

<b>PSYCHOLOGY DEPARTMENT ETHICAL APPROVAL FORM</b>																																																		
Tick one box: <input checked="" type="checkbox"/> <b>POSTGRADUATE</b> project <input type="checkbox"/> <b>UNDERGRADUATE</b> project																																																		
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PLEASE TICK EITHER BOX A OR BOX B BELOW AND PROVIDE THE DETAILS REQUIRED IN SUPPORT OF YOUR APPLICATION. THEN SIGN THE FORM.

A. I consider that this project has **no** significant ethical implications to be brought before the Departmental Ethics Committee.

PLEASE TICK:

**Give a brief description of participants and procedure (methods, assessments used etc) in up to 150 words.**

*This form (and any attachments) should be submitted to the Departmental Ethics Committee where it will be considered by the Chair before it can be approved.*

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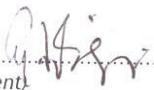
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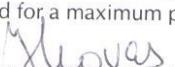
We are familiar with the BPS Guidelines for ethical practices in psychological research, and have discussed them.

Signed..........Print Name...Sabahat C. Bagci.....Date.....15<sup>th</sup>.04.13.....  
(Student)

Signed..........Print Name..Dr.....Name..Madoka.....Kumashiro.  
Date...16/4/13.....  
(Supervisor)

#### STATEMENT OF ETHICAL APPROVAL

This project has been considered using agreed Departmental procedures and is now approved. This approval is valid for a maximum period of five years.

Signed..........Print Name.....Y. Kavas.....Date.....07.05.13.....  
(Chair, Departmental Ethics Committee)

(ETHICSformMay08)