

THE IMPACT OF SOCIAL CONTEXTS IN SCHOOLS: ADOLESCENTS WHO ARE NEW  
TO CANADA AND THEIR SENSE OF BELONGING

by

Monique H el ene Gagn e

B.Sc. University of Victoria, 2004

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

The Faculty of Graduate Studies

(Human Development, Learning, and Culture)

THE UNIVERSITY OF BRITISH COLUMBIA  
(Vancouver)

March 2009

  Monique H el ene Gagn e, 2009

## Abstract

The purpose of this study was to investigate the ways in which school social context impacts sense of school belonging for adolescents who are new to Canada, in relation to those who are not new. More specifically, do perceptions of similarity to others at school, school diversity, and five types of social support predict higher levels of school belonging for participants. 733 adolescents (282 males and 451 females) from grades 5 to 12 were recruited from schools in the Lower Mainland of British Columbia. Hierarchical Multiple Regression analyses were used and it was found that Perceived Similarity, Adult Support for School Help, Adult Support for Personal Help, and Peer Support for ‘Hanging Out’ contributed to the prediction of School Belonging for participants. Furthermore, moderator analysis indicated that newer generation Canadians had a stronger relationship between Adult Support for School Help and School Belonging. Similarly, newer generation Canadians showed a stronger relationship between Peer Support for Personal Help and School Belonging. The implications for adolescents who are newer to Canada and less new to Canada are discussed.

## Table of Contents

Abstract.....	ii
Table of Contents.....	iii
List of Tables.....	v
List of Figures.....	vi
Acknowledgements.....	vii
INTRODUCTION.....	1
LITERATURE REVIEW.....	5
Immigration and School.....	5
Acculturative Stress.....	6
Belonging.....	7
School Social Context.....	10
Racial/Ethnic Background, Language, and Generation Status.....	11
Social Support.....	14
Summary.....	19
METHOD.....	21
Participants.....	21
Procedures.....	23
Measures.....	24
Demographic Information.....	24
Sense of School Belonging Scale.....	27
School Social Context Questionnaire.....	28
Diversity Index.....	32

## Table of Contents (cont'd)

Translations.....	32
Overview of Analysis.....	33
RESULTS.....	36
Research Question One.....	37
Research Question Two.....	44
Research Question Three.....	45
Research Question Four.....	48
DISCUSSION.....	53
Social Support at School.....	53
School Belonging.....	55
Limitations and Future Directions.....	64
Conclusion.....	66
REFERENCES.....	68
APPENDIX A.....	80
APPENDIX B.....	83
APPENDIX C.....	87
APPENDIX D.....	88

## List of Tables

Table 1. Frequencies and Percentages of the Study Demographic Variables.....	22
Table 2. Summary of T Tests Used to Compare the Original School Social Context Questionnaire Likert scale with the Improved Scale.....	31
Table 3. Descriptive Statistics for Social Support Variables Before and After Recoding.....	36
Table 4. Summary of the Hierarchical Regression Model representing Adult Support for School Help as Predicted by Generational Status and Years in Canada (N = 733).....	39
Table 5. Summary of the Hierarchical Regression Model representing Adult Support for School Help as Predicted by Generational Status and Years in Canada (N = 733).....	40
Table 6. Summary of the Hierarchical Regression Model representing Peer Support for School Help as Predicted by Generational Status and Years in Canada (N = 733).....	41
Table 7. Summary of the Hierarchical Regression Model representing Peer Support for Personal Help as Predicted by Generational Status and Years in Canada (N = 733).....	42
Table 8. Summary of the Hierarchical Regression Model representing Peer Support for 'Hanging out' as Predicted by Generational Status and Years in Canada (N = 733).....	43
Table 9. A Hierarchical Regression Model Summary representing Sense of School Belonging as Predicted by Social Context variables at school (N 733).....	46
Table 10. Hierarchical Regression Moderation Analysis where Sense of School Belonging is Predicted by the Interaction Between Generation Status and Social Support Variables at School (N = 733).....	49
Table 11. Correlation Matrix for all variables in the regression models.....	88

## List of Figures

Figure 1. The Interaction Between Generational Status and Adult Support for School Help on Sense of School Belonging.....	51
Figure 2. The Interaction Between Generational Status and Peer Support for Personal Help on School Belonging. ....	52

## Acknowledgements

A sense of school belonging is certainly not only a factor for the development of adolescents at school. As an MA student at UBC, this has never been more clear. From the onset of my inclusion in the DCTech lab, I have felt the absolute power of a strong and supportive community. I can thank nobody more than members of the DCTech team for the completion of this thesis: Dr. Jennifer Shapka, Rubab Arim, Danielle Law, and Brent Olson. These individuals have helped me to gain such a respect for the importance of social support that I can only hope to pay it forward to future generations of graduate students. I want to specifically thank my supervisor, Dr. Jennifer Shapka. I am sincerely in awe of your ability to be a teacher, a mentor, and an amazing source of support. I want to thank Dr. Nand Kishor and Dr. Ishu Ishiyama who have provided me with support and feedback throughout this process. I have benefited and will continue to benefit greatly from their expertise. I want to thank my partner who, having immigrated to Canada as an adolescent himself, has ever so patiently answered my constant flow of questions over the past four years. Thank you Jin for your love, support, and insight. I want to thank my family and friends, most of whom will likely never read this document. Having said that, they are central to the completion of this thesis for their care, support, and unconditional love - ready and willing to support me in whatever it is I choose to do.

## Chapter 1 - Introduction

Over 262,000 people became new permanent residents in Canada in 2005; thus, marking the largest migration to Canada since 1913 (Citizenship and Immigration Canada, 2005).

Twenty-two percent of those new permanent residents were children under the age of fifteen (Citizenship and Immigration Canada, 2005). These children represent a major proportion of Canada's population and will have a tremendous impact on the future of our society.

In a summary of the G8 Report on diversity and integration, an emphasis was placed on the potential school systems can offer to the needs of young newcomers (Citizenship and Immigration Canada, 2006). There is a growing belief that schools should be recognized as having power and potential as a major socialization force (Hymel, Schonert-Reichl, & Miller, 2007). This power and potential is particularly relevant for newcomers because their experiences with school transitions are argued to have a tremendous impact on their overall adjustment in their new home (Rich, Ari, Amir, & Eliassy, 1996). As such, it is critical to first establish the extent to which schools are meeting the needs of new Canadians so that they can become competent and productive citizens. In borrowing the words from Claude Steele, "It is one thing to integrate a school setting or work place. It is another thing to make that setting a place where they feel like they belong" (National Research Council, 2007, p. 3). The extent to which adolescents who are new feel as though they feel a sense of belonging at school will be the focus of the present study.

A sense of school belonging is defined as "the extent to which students feel personally accepted, respected, included and supported by others in the school social environment" (Goodenow, 1993, p.80). The exploration of students' sense of belonging in the school context is



especially worthy given that we tend to bond with the people and institutions that help satisfy our needs (Watson, Battistich, & Solomon, 1997). Findings that affirm a persons' sense of belonging to the school institution would therefore provide strong evidence to suggest that their social and emotional needs are being met at school.

The construct of belonging is particularly salient for adolescent development (Goodenow, 2000). Much research in adolescent development has found that this is potentially a time of vulnerability and feelings of isolation (Osterman, 2000). Several studies have also found that high school students are much more prone to feeling a lack of school support and disengagement in comparison to elementary school students (Certo, Cauley, & Chafin, 2003). There is evidence to suggest that some adolescents are more vulnerable to these feelings of isolation and estrangement than others (Goodenow, 1993), in particular, adolescents who are newcomers (Eccles & Midgley, 1989).

The main concerns for people who have immigrated are related to difficulties in adapting to a new culture. A new culture is likely to have different values and oftentimes, different role expectations for newcomers in relation to their native culture (Segal, 1991). This process of adaptation to a new culture is referred to by many theorists as *acculturation* (Birman, 1994; Liebkind & Jasinskaja-Lahti, 2000). The process of acculturation can be a difficult and distressing experience for adolescents (Segal, 1991), and is often labeled *acculturative stress* (Madhavappallil & Choi, 2006). Many studies have elucidated the risk and protective factors associated with acculturation and acculturative stress (Liebkind & Jasinskaja-Lahti, 2000). For example, extant research has found that acculturative stress is inversely related to psychological well-being, which in turn increases the risk of psychological distress for adolescents who have immigrated (Berry, Poortinga, Segall, & Dasen, 1992).

Given that adolescent newcomers are susceptible to feelings of isolation and estrangement at school for developmental reasons and because of their acculturation experiences, there is a valid concern that they may not be feeling welcome at school (Liedloff, 1986). That is, they may be at an increased risk for lacking a sense of school belonging. Despite this risk, little is known about the specific factors that may affect an adolescent's sense of belonging at school (Anderman, 2003).

Canadian schools vary in the cultural composition of their student bodies, in terms of their racial/ethnic and linguistic background: Some are extremely homogenous, others are extremely diverse, and yet others lie somewhere on this continuum. Social psychological literature suggests that the ways in which young people see themselves as part of a larger context, such as schools, is heavily influenced by the ways in which they interact with their social context (Sonderegger, Barrett, & Creed, 2004). This literature generally purports that amidst cultural transitions, social support is positively related to psychological well-being at school (Coleman, 1961; Sonderegger et al., 2004). However, there have been few research contributions in the area of social support at school for new young Canadians. Moreover, the research that has been conducted in this area has been criticized for its narrow view of social support (Chen, 2001). The literature on school social network formations, for adolescents who have immigrated, is generally restricted to friendship formations (Tsai, 2006; Kao & Joyner, 2006). This critique is often extended to mention the lack of differentiation between type and quality of social support (Chen, 2001). In addition to these critiques, more recent critiques have suggested that the literature rarely takes into account the larger social context of the school (Tsai, 2006).

The current study examined these questions, namely, the impact of school social context for new young Canadians on their sense of school belonging. Four research questions guided this

inquiry: (1) Do adolescents who are newer to Canada report fewer perceived people they can go to for social support after controlling for demographic variables? (2) Do adolescents who are newer to Canada feel a lower sense of school belonging, in the presence of demographic variables? (3) In what ways does school social context impact school belonging, controlling for demographic variables? And finally, (4) Are adolescents who are newer differently impacted by school social support than those who have been here longer?

## Chapter 2 - Literature Review

### Immigration and School

Much research and program development pertaining to young newcomers' has focused on academic achievement (Fuligni, 1997). Data from the National Longitudinal Survey of Children and Youth (NLSCY) suggests that the majority of children who are newcomers to Canada do, generally, succeed academically (Beiser, Hou, Hyman, & Tousignant, 1998). Similar to youth who have not immigrated, the school success of students who are newcomers is positively associated with parental educational attainment, occupation, and income. It is, however, important to mention that there are many new Canadians who tend to stray from this pattern of academic success (Gibson, 1991).

The majority of adolescents who immigrate to Canada are of Asian descent, having immigrated from places like China, India, and the Philippines (Citizenship & Immigration Canada, 2005). Although the "Asian" social category is a sweeping, broad categorization, the group is often labeled the "model" minority (Yeh et al., 2005). The stereotype of the "model minority" involves the generalization that people of Asian descent do well in school; thus, the assumption is often made that this group has relatively few psychological problems (Yeh et al., 2005). The perception that adolescent immigrants who are of Asian descent have few problems perhaps lead to the dearth of research on these young immigrants and their psychological well-being (Yeh et al., 2005; Chiu & Ring, 1998). In fact, several researchers in the field have argued that young immigrants' psychological well-being, as they strive to adapt in a new country, has been neglected in the literature (Harker, 2001; Kuo & Roysircar, 2004; Liebkind & Jasinskaja-Lahti, 2000).

Fortunately, the idea that we need to pay heed to the social and emotional needs and status of *all* adolescents in schools is gaining momentum and empirical support (Hymel et al., 2007). This focus can be partly attributed to the scientific base connecting social and emotional learning to school success (Zins, Bloodworth, Weissberg, & Walberg, 2004). Students are more apt to learn and be academically successful when they perceive that their school values them and cares about them (Elias, 2006). The current study will add to this burgeoning literature by looking at the social and emotional well-being of newcomer Canadians.

#### Acculturative stress

Immigration can be considered a major life transition for anyone, adult or child. This process of adapting to a new culture is often termed acculturation (Liebkind & Jasinskaja-Lahti, 2000). Acculturation was previously considered as a complete immersion into a new culture. However, recent views of acculturation have evolved to emphasize a more dynamic and fluid process (Madhavappallil & Choi, 2006). Many researchers are now envisioning the acculturation process as selective and shifting. That is, people who have immigrated are seen as adopting some aspects of the new culture and maintaining other aspects of their native culture (Berry, 2003).

Acculturative stress, which is closely related to the process of acculturation, refers to the specific stressors that are sometimes associated with adapting to a new culture (Madhavappallil & Choi, 2006). This concept has been empirically validated with a large number of cultural groups (Choi, 1997; Fuligni, 2001; Sam & Berry, 1995). Although there is evidence to suggest a substantial number of people in the process of acculturation experience some acculturative stress, there is significant variation between and within cultures (Krishnan & Berry, 1992).

Several factors have been shown to be associated with acculturative stress (Madhavappallil & Choi, 2006). Of particular interest is the association found between

acculturative stress and a lack of social support. Social support has not only been found to be related to lower levels of acculturative stress, but it has also been shown to function as a moderating factor between acculturative stress and mental well-being. That is, people with higher levels of social support tend to report higher levels of mental well-being, even in the face of acculturative stress (Choi, 1997).

### Belonging

The importance of belonging has increased from a hypothetical need (Maslow, 1943) to a fundamental human motivation (Baumeister & Leary, 1995). An analysis of the large body of work in this area suggests that the need to belong influences not only cognitive processes and behavior, but also social-emotional development and well-being (Baumeister & Leary, 1995). Perceptions of acceptance, inclusion, and feelings of being welcome have been found to be linked to a broad range of positive affects such as happiness, contentment, and calm (Osterman, 2000). Conversely, perceptions of rejection, exclusion, and being ignored are found to be associated with anxiety, depression, jealousy, and loneliness (Osterman, 2000). In supporting these findings, social neuroscience research also suggests that human beings are physiologically built to connect with others (Goleman, 2006).

Belonging to a community is frequently considered the foundation for learning and emotional support (Maehr & Midgley, 1996). Furthermore, recognition of the impact of school belonging on student success has increased (Hymel et al., 2007). Evidence suggests that students function better when they perceive that their need to belong is met in the school context (Ryan, 1995). Rejection by peers at school is associated with far-reaching adjustment problems, such as low self-esteem, anxiety, depression, criminal behavior, and early school withdrawal (McDougall, Hymel, Vaillancourt, & Mercer, 2001).

Adolescents' sense of belonging is now widely accepted as an important variable in academic motivation and achievement (Osterman, 2000). Goodenow (1993) found that 1/3 of the variance in interest, importance, and value students placed on their academic work was accounted for by their sense of belonging at school. Moreover, these behaviors were found to be highly associated with achievement. Conversely, a sense of exclusion is consistently found to be associated with lower interest in school, lower achievement, and school dropout (Osterman, 2000). Furthermore, a large scale study conducted in Canada found that adolescents who felt most connected to school were more likely to indicate they had plans for post-secondary education (McKay, 1999) and together these findings suggest a positive correlation between belonging and academic success. In conjunction with these findings, the research that suggests Canadian newcomers are generally succeeding academically (Beiser, Hou, Hyman, & Tousignant, 1998), leads many to the assumption that these Canadian adolescents are also thriving socially and emotionally. That is, as their academics improve, so do their feelings of belonging and enjoyment at school. Not only is this assumption empirically unfounded, it is a likely contributor to the dearth of investigations pertaining to adolescent newcomer social and emotional well-being in Canada. In fact, research conducted in Israel, another country with high levels of immigration, has shown that although newcomers were able to close the gap academically within three years, strong feelings of isolation were sustained (Rich et al., 1996). More specifically, using a large scale survey conducted through Israel's Ministry of Education, these authors found that 40% of newcomers still felt like outsiders three years after their immigration. We also know that social problems at school, such as social isolation, have been found to have negative effects on newcomers' general well-being (Venger & Kozulin, 1993).

These findings clearly highlight the fact that we cannot make assumptions about the populations emotional well-being based on proxy information, such as academic achievement.

There is a growing acceptance that the need for belonging and necessary school supports will likely vary depending on the student and the context within which they find themselves (Osterman, 2000). Eccles and Midgley's (1989) "Stage-environment fit" theory serves to elucidate the position that different children at different developmental stages will benefit from different educational environments. More specifically, they argue that adolescents can be particularly vulnerable to school maladjustment and this is only magnified if the child is in the midst of a significant transition or period of stress (Eccles & Midgley, 1989). There is also strong support for the notion that adolescence is developmentally a period of time when feeling a sense of belonging is particularly important (Anderman, 2003). Furthermore, there is evidence to suggest that students' sense of alienation increases in adolescence (Rumberger, 1995). It is argued then, that newcomers to Canada who have undergone major transitions during adolescence, may have a particularly difficult time adjusting to school, especially if their school environment is not conducive to fostering their own optimal development, and that this might be occurring in the face of academic success.

School Belonging is a particularly fitting construct given the cross-cultural nature of the current study. Although no construct is argued to be devoid of cultural influence, it should be noted that the need to belong, after extensive review was declared as a "fundamental human motivation" (Goodenow, 2000, p. 326), making it a particularly suitable candidate for conducting the current cross-cultural study.



### School Social Context

Recently Georgiades, Boyle, & Duku (2007) have highlighted the need to examine the contextual influences related to adjustment for young people who have immigrated. Their study found that children who are recent immigrants benefited from living in neighborhoods with other immigrants. This data which was drawn from the NLSCY showed that children who live in neighborhoods with others who are similar to them in terms of their immigration status (immigrants or non-immigrants), had more positive emotional and behavioral developmental outcomes. These lower levels of emotional-behavioral problems were hypothesized to be related to increased social support, social cohesion, and trust in where they live (Georgiades et al., 2007). In addition to this, we know that research in the Canadian context supports the notion that large differences in cultural values and customs have the potential to create acculturative stress (Dion & Dion, 1996). Having said that, it is important to keep in mind that schools where ethnic diversity is accepted can be breeding grounds for positive experiences for newcomers in which healthy relationships and ethnic identities may be formed (Ishiyama, 1989).

Sociological theory argues that perceived membership in any group or organization is partially derived from social and environmental conditions (Finn, 1989). Pile and Thrift (1995) point out that individuals and collectives do not truly make sense outside of the system. Indeed, there is burgeoning support within the literature suggesting that the association between child and peer characteristics and levels of adjustment is moderated by the specific context (Kinderman, 1996). In light of the diversity of the student bodies prevalent in Canadian school systems, it is vital to attend to the ways in which student body composition may influence a students' social and emotional adjustment at school.

Unfortunately, there is a lack of research that elucidates the extent and impact of belonging for students' from diverse cultural groups (Anderman, 1999), despite evidence which suggests that experiences associated with certain cultural backgrounds may negatively affect belonging (Faircloth & Hamm, 2005; Goodenow, 1993). Also, it has been found that newcomers who experience marked cultural contrasts in their host country tend to perceive that they have many barriers they need to overcome within the school system (Phelan, Yu, & Davidson, 1994). For example, some students reported a "pressure to hide ethnic self" and feeling as if they were "picked on" for reasons of race and values (Phelan et al., 1994, p. 422).

In taking into account the research above and the possible contextual factors that may affect new young Canadians at school, a number of variables were included in the study. These variables were added to account for the possible effect school composition may have on a given student. The first pertains to how similar an adolescent perceives themselves to be to others at school. Also, the ethnic diversity of each school's student body was considered.

#### Racial/Ethnic Background, Language, and Generational Status

An endless number of variables could be argued to affect similarity and diversity in the school social context. The present study will consider only variables that are hypothesized to differentially affect adolescents who have immigrated. These include: racial/ethnic background, language, and generational status.

**Race and Ethnicity.** Countless studies have examined the dynamics of race, ethnicity, and children. Yet, our knowledge in this area remains far from complete (Onyekwuluje, 1998). It is recognized here that although researchers fervently question whether between-group variance significantly exceeds within-group variance (Gallander, Wintre, Sugar, Yaffe, & Costin, 2000),

race is nevertheless a social category that people perceive and may have an important impact on an individual's sense of belonging.

Developmental research suggests that adolescence is a time in which people become more exclusive in their friendship formations. In contrast to younger children, adolescents begin to form friendships based on perceived similarities with others, often with the use of external markers such as skin colour (Bernt, 1981). This pattern of friendship formation has been shown to be moderated by factors such as a child's social milieu, their cultural status, and the level of contact they have with people who they perceive as different from themselves (Rotheram & Phinney, 1987). In both Canadian and American contexts, there is evidence suggesting that ethnic and racial perceptions were highly influential in friendship choices for people who have immigrated, for both first and second generation immigrants (Phan, 2003; Quillian & Campbell, 2003).

It has been argued that unless children are exposed to events that facilitate a shift in thinking, they will maintain the beliefs and attitudes they have learned and accumulated in childhood and adolescence (Aboud, 1998). This shift in thinking, or perhaps the maintenance in ways of thinking, has been argued to be influenced in several manners. First, it has been found that the development of relationships with individuals, who are perceived to be different, supports a shift in attitude (Onyekwuluje, 1998). Second, it is argued that the social structure of the school as a whole, meaning the schools' cultural composition, may have the ability to impact individuals' attitudes and relations towards others who are perceived as different (Cohen, 1982).

**Generational Status.** The research on immigration typically restricts the definition of 'immigrant' to people who have immigrated themselves. There is a burgeoning interest however, in different generations of people who immigrate. Often overlooked is the 1.5 generation and

second generation immigrant. The term second generation immigrant refers to a person who has parents who immigrated, while the 1.5 generation immigrant label refers to people who immigrated at a young age with their family (Harker, 2001). Typically, the research in this area has operated under the assumption of a straight line assimilationist model (Edmonston & Passel, 1994). That is, the longer a person who immigrates spends in a new country, the better their psychological outcomes become (Edmonston & Passel, 1994). More recently however, studies suggest that people who are immigrants may actually have deteriorating psychological effects the longer they spend in the new country (Rumbaut, 1997). This is coupled with findings showing that, in some cases, first generation immigrants have higher levels of well-being than their second generation counterparts (Harker, 2001). Although the reason for these differences have yet to be clarified, the fact that the differences are noticeable, provides solid reasoning for the present study to take into account both 1.5, and 2<sup>nd</sup> generations of people who have immigrated.

Language. Learning a new language is often one of the most obvious hurdles to overcome as a newcomer in a new country, as well as in a new school. Research has found that individuals who cannot speak the language of the majority find it difficult to form friendships and social networks (Tsai, 2006). Research also suggests that language ability for adolescents who have immigrated is a salient aspect of their social relationship choices at school. For example, those who have immigrated have been found to suffer from a fear of embarrassment and/or harassment by non-immigrant peers if they have not yet mastered the dominant language (Tsai, 2006). As such, it has been theorized that children who immigrate choose friends who can speak their native language and avoid those who do not, in an attempt to protect their psychological well-being (Tatum, 1999). These findings suggest that language ability may play a

large role in the school social context for newcomers and therefore is taken into account in the present study.

### Social Support

Adolescents who immigrate are often faced with the challenge of leaving their friendships and social networks behind and making new connections upon arriving in a new country (Tsai, 2006). In general, peer groups and social networks have long been venerated by theorists and researchers as influential in child development (Piaget, 1932; Sullivan, 1953). They are thought to be key in dealing with emotional stressors and adjustment (Rubin, Bukowski, Parker, 1998) and for providing children with extraordinary opportunities to learn from others (Hartup, 1992). Peers also tend to evaluate and react to other peers according to culturally established norms and values, thereby creating the potential to regulate one another's behavioral and developmental processes (Chen, 2001). Research has shown that developing social ties can be a more daunting and challenging task for new adolescents than for young children (Tsai, 2006) which is unfortunate given that adolescence is a time known for an increased need for positive and supportive relations, with both peers and adults outside of their family (Anderman, 2003). The examination of social supports and network formations for newcomers has yet to be investigated in Canada (Tsai, 2006). This examination should include examining how school-based social support is related to social and emotional experiences (specifically feelings of belonging). The current study will do just this.

Schools provide adolescents with a particularly salient social experience. Frequent contact with peers and involvement in common activities are thought to contribute to the strong socialization force within the school context (Kinderman, 1993). A major potential of school for new Canadian youth is that it caters to the building of friendships and social networks, thereby

allowing them to gain information about the new culture at hand (Raffo & Reeves, 2000). Unfortunately, despite the highly social context school typically provides, the correlations have generally been weak with regards to friendship formations at school and emotional adjustment (Chen, 2001). These weak findings have been argued to be a result of studies limiting the interest of social interaction at school to specific dyadic, “best” friend types of relations instead of the broader context of peer groups and networks which may prove to hold important insight (Chen, 2001). Furthermore, the varying cultural backgrounds and social circumstances experienced by adolescents, particularly in the Canadian multicultural contexts, could be argued to have a substantial impact on the structure and function of peer groups (Chen, 2001).

In the interest of attending to the variety and nature of social supports children may have at school, it is imperative to adopt a broad notion of school social interaction and support. Indeed, it has been argued that the source of social support (i.e., peer, teacher, and family) as well as the type of social support (i.e., emotional, instructional, and companionship) must be distinguished (Wenz-Gross, Siperstein, Untch, & Widaman, 1997). For example, students may ask adults for advice related to school, but they may choose to attain advice from peers with regards to interpersonal relationships, such as dating (Sebald, 1989). Although many studies have concluded that students use different people for different types of social support, there have been few studies that have attempted to make these distinctions (Wenz-Gross et al., 1997). This distinction is especially relevant to the present study given that an adolescents’ sense of school belonging may be differentially affected by the sources and types of social support available to them in the school context. For this reason, the present study took both sources and types of social support into account.

These distinctions were captured in the current study by addressing several aspects of social support at school. Given that the function of social ties can vary tremendously, an attempt was made to account for the different possible functions of school social support, specifically, school help, personal help, and companionship. 'School help' is defined as social support provided to a student in an attempt to aid with tasks related to school and academic achievement (i.e., helping with homework). Personal help is a type of social support for help with social and emotional issues a student may have (i.e., asking for help because of feelings of sadness, anger, or stress). 'Hanging out' is defined as any tie that provides social support in the area of playful companionship (i.e., having lunch together, playing sports).

Peer Social Support. There is a large body of research to suggest that students tend to view school more favorably and perform better at school when they are accepted by their peers (Ladd, 1990). Coupled with these findings, it seems of value to consider the research that suggests that intimate friendships at school are key to psychologically bonding to schools and in turn, feeling a sense of school belonging (Ryan, 2001). In a study of newcomers in Alberta, adolescents who had immigrated tended to gravitate to peers from the same ethnic group as themselves (Hebert, 2005) and they found an enhanced sense of security and identity from sharing the same language and culture despite the entirely new setting. Hebert suggested that social networking with individuals who are culturally similar may help to ease the transition for new Canadians.

Despite this, a number of studies have found that minority groups tend to report lower levels of intimate relationship formations with people within the school context (e.g. Faircloth & Hamm, 2005) with three main explanations put forth to explain these findings: (1) Their ethnic group may be underrepresented at school, causing them to turn to relationships outside of school;

(2) Parents may discourage interaction with their peers at school; (3) Certain family practices may encourage strong family ties at the expense of strong school peer ties (Faircloth & Hamm, 2005).

It is clear however, that youth from certain ethnic groupings tend to have easier transitions than others, and several factors may contribute to their ease of adaptation. In the Canadian context, it has been found that East/South East Asian youth tend to adapt to their new country with more ease than South Asian/Middle Eastern youth (Hebert, 2005). Several reasons support this finding: (1) Canada has a longer history of immigration with East Asian/South East Asian populations; (2) There are simply more people of East Asian/South East Asian descent living in Canada; (3) Given the above factors, the Canadian population in general is more exposed to and accepting of East Asian/South East Asian cultural practices. Taking into consideration the above three reasons, there may be less discriminatory behaviour directed toward East Asians/South East Asians in comparison to other minority groups (Hebert, 2005).

These findings fit with Hebert's (2005) showing that East Asian/South East Asian youth who are new to Canada tend to report more friends inside and outside of school and thereby are able to accumulate more social capital. Interestingly, the South Asian/Middle Eastern youth reported fewer friendships but with some evidence that the ties they had were slightly stronger than those reported by the East Asian/South East Asian youth (Hebert, 2005). However, it was hypothesized that the strong ties found in the South Asian/Middle Eastern group is associated with a lack of friendships formed outside their ethnic subgroup thereby contributing (or caused by) social isolation from the larger community (Hebert, 2005). In support of this hypothesis, a recent study looked at inter-ethnic friendship in relation to co-ethnic friendships. It was found



that the co-ethnic relationships were more likely to be characterized by greater closeness and more sustainability (Schneider, Dixon, & Udvari, 2007).

Conversely, it has been found that acquaintances characterized by heterogeneity (varying culture, ethnicity, and social class) are critically important for the integration of youth who are new to Canada, as these ties enhance autonomy and accessibility to varying resources (Hagan, 1998). As new Canadian youth begin to adapt and integrate into Canadian society, there is evidence to suggest they loosen their ties with friends from their own ethnic group and extend their social relations to include friendships with different ethno-cultural and mainstream groups in a manner that more proportionally represents the Canadian society (Hebert, 2005). Certainly, peer social support is essential for adolescents who are new to Canada in their school transition. The current study will not only take this into account, it will consider the notion that certain groups may need as well as receive different amounts of peer support in order to feel a sense of belonging at school.

**Adult/Teacher Social Support.** In the context of the school, it has been established that the role of the teacher is important to students, not only academically, but socially and emotionally as well (Furman & Buhrmester, 1992). Adolescence is developmentally a time when students are looking to adults other than their parents for support (Goodenow, 1993). However, students tend to report lower levels of perceived teacher support during adolescence. That is, they may be receiving less support at a time when developmentally they may be needing more (Midgley, Feldlaufer, & Eccles, 1989). This is likely due to the structure of schooling for adolescents, where different teachers teach each subject, which reduces the likelihood that strong teacher-student bonds will develop.

Perceived teacher support has been shown to be even more important for adolescents who have immigrated than adolescents who are native to that country. In a study conducted in the Netherlands, researchers found that adolescents who had immigrated placed a larger emphasis on teacher support, both instructionally and emotionally, than did students who were native to the country (Vedder, Boekarts, & Seegers, 2005). This outcome was also found in the United States (US), with the addition that adolescents who had immigrated tended to rely on teacher support at school more than peer support (Morrison, Laughlin, San Miguel, Smith, & Widaman, 1996). Taking into consideration the important roles adults may play in the lives of adolescents who have immigrated, it was important in the current study to take both adult and peer relations at school into account.

### Summary

Adolescents who immigrate are vulnerable to feeling as though they do not belong. As outlined in this literature review, there appear to be three main reasons. First and foremost, they are adolescents. Due to the myriad of changes associated with this developmental period, they are more vulnerable to the negative ramifications of social isolation. Second, they are likely dealing with a life-altering cultural transition associated with being a newcomer to Canada, and finally, their ethnicity, race, language, and immigration status may create barriers to feelings of belongingness. Given that a sense of belonging may be just what a person who has immigrated needs for psychological well-being and adaptation, this study investigated the ways in which the school social context is related to a sense of school belonging for newcomer adolescent Canadians.

The school social context was investigated by taking into account several dimensions of support that are relevant to students who are newcomers. First, school composition was

examined. School composition was defined here as participants' perceptions of racial/ethnic and linguistic similarity and the ethnic diversity present in the participants' school. Second, peer social support at school was considered. Third, adult support at school was considered. Taken together, the school composition and social support variables will hereafter be referred to as the School Social Context.

The present investigation was elucidated through four main research questions: First, do adolescents who are newer to Canada report fewer people they can go to for social support, in the presence of demographic variables? It was expected, based on past research, that adolescents who were newer to Canada would report less social support than those who were less new. Second, do adolescents who are newer to Canada feel a lower sense of school belonging than those who are not new? Based on the already standing literature, adolescents who were new to Canada, were hypothesized to report lower levels of school belonging, in comparison to students who were not new to Canada. Third, how does school social context impact school belonging? And finally, are adolescents who are newer differently impacted by school social support than those who have been here longer? It was expected that students who perceive less social support at school, less similarity, and less diversity would also report a lower sense of school belonging.

## Chapter 3 - Method

### Participants

Participants were recruited from six secondary schools and two elementary schools (71% and 29% of the sample, respectively) in the lower mainland of British Columbia. There were 733 participants in total: 282 males and 451 female, all between the ages of 10 and 18 (mean age = 15), ranging from grades 5 to 12. The gender split was not equal, with 38.5% male participants and 61.5% female participants. See Table 1 for sample frequencies and percentages for grade, school, ethnicity, and immigration status, respectively.

The 2007/2008 British Columbia (BC) Ministry of Education data set revealed that the gender split in the present sample was not consistent with the gender proportions at the school, district, or province level. The sample in the present study was a sample of convenience and the disproportionate amount of females in the present sample can be accounted for in two ways: First, we had access to several all-girls classes. Second, we also had access to several classes that were predominantly female. Both of these situational factors certainly skewed the gender ratio in the current sample. It should be noted that the proportion of students who completed the study was not skewed by gender and that gender was controlled for in all of the analysis. Still, as the sample is not gender representative, results need to be interpreted with caution.

In order to determine the extent to which majority and minority groups within each school were being represented in the present study, Non-English home languages reported by the 2007/2008 BC Ministry of Education were also compared with the current sample. The top three Non-English home languages were used to determine whether or not the present sample represented the array of cultures present in each of the schools. As it turned out, the top three Non-English home languages in the current sample matched with the top three Non-English

home languages reported by the Ministry for the schools in the present study. The exception was one school where the vast majority of the population speaks only English at home. For this school, the sample did include participants with Non-English home languages but naturally, it was difficult to retain similar proportions with such small numbers. Given that Non-English home languages reported by the Ministry and the current sample are fairly consistent with one another, I argue that we can move forward with a fair degree of confidence that both majority and various minority groups within each of the schools are being represented in this study.

The data collection was part of a larger study examining social responsibility in schools. As such, all students at participating schools formed the subject pool for this study, irrespective of immigration status. As the Lower Mainland is comprised of a mosaic of ethnicities and newly immigrated youth, it served as a prime location for capturing different school social contexts and unique combinations of 1.5, 2<sup>nd</sup>, and 3<sup>rd</sup> or more generation immigrants and non-immigrants.

Table 1. Frequencies and Percentages of the Study Demographic Variables

	Frequency	Percentage
Grade		
5	32	4.4
6	77	10.5
7	83	11.3
8	150	20.5
9	75	10.2
10	148	20.2
11	79	10.8
12	89	12.1
Not Lone Parent	516	70.4
Lone Parent	217	29.6

table continues

Table 1(continued).

	Frequency	Percentage
<b>Ethnicity</b>		
Asian	335	45.7
European	247	33.7
Other	129	17.6
<b>Generation Status</b>		
1.5	137	18.7
2	270	36.8
3	305	41.7

### Procedure

We approached various elementary and secondary schools in the Lower Mainland. Upon attaining permission from the school board, principals, and teachers, we had a short information session with each class to outline the study and its objectives. In this session, students were informed about the nature of the study, as well as important aspects of the research procedure such as confidentiality and consent. Students were provided with a consent and an assent form to be completed by their parents and themselves, respectively.

Approximately one week later, we returned to the school to group-administer the survey during class time. We distributed 1487 consent forms and 733 students returned their consent and assent forms and were able to participate, meaning we had a 49% response rate. Students who participated were given directions on how to complete the questionnaire and were instructed to ask for clarification if they did not understand something, at any time during the survey. Students who did not return their consent forms were asked to work quietly at their desks. Students who completed the questionnaire were asked to work quietly until all their classmates

had finished. No talking was allowed for the duration of the survey. The questionnaire took approximately one hour to complete and consisted of demographic information, a set of questions related to technology and adolescence, and two measures relevant to the current the study. Finally, for each school participating in the study, public data with respect to its ethnic/linguistic composition was obtained from the B.C. Ministry of Education. This data included 2007/2008 school population sizes, broken down by grade and language spoken at home.

### Measures

#### Demographic information

As part of the questionnaire students were asked to provide demographic information related to their age, gender, school, grade, ethnicity, lone parenting status (used as a proxy for socioeconomic status, SES), and generational status (both 1.5, 2<sup>nd</sup> and 3<sup>rd</sup> or more generation status). The specific items that were used to determine these variables are located in the Appendix A.

*Ethnicity.* Participants were asked to choose their racial/ethnic background from a list of choices and examples to go along with each choice (see Appendix A for the full list of response options). Although it is recognized that *race* and *ethnicity* are generally distinguished between in the literature, it was not assumed that adolescents also make this distinction. The terms *race* and *ethnicity* were used in the questionnaire, but adolescents were never expected to make the distinction between the two labels. The two labels were simply used to ensure that participants were familiar with at least one of the labels so that they were able to answer the questions (See Appendix A, question 5 for an example). As the distinction was not made in the questionnaire, the terms are not distinguished in the study.

As can be seen in Table 1, the overwhelming majority of participants identified themselves as of Asian or European descent. All of the other racial/ethnic groupings were very small. Nevertheless, they were entered into the analysis as separate variables until it was clear that they had no impact on the outcome of the model. Finally, to preserve power, all of the ethnicities represented by small numbers of individuals were incorporated into the Other Ethnicity category. This group was composed of Aboriginal, African/Caribbean, South Asian, Latin American, Middle Eastern, and Mixed variables. The groups compiled in the Other Ethnicity category had group sizes that ranged from 6-55. Some participants (3%) chose 'I Don't Know' in response to this question and those responses were coded as missing. Dummy variables were created for those of European descent and of Other descent and in all analyses, the reference group was Asian because it represented the largest racial/ethnic group in the sample.

**Lone Parenting Status.** A Lone Parenting variable was created to represent socioeconomic status. Several variables that may potentially represent socioeconomic status were considered. Maternal education and paternal education were considered first, however, approximately half of the sample reported I Don't Know for each of these variables, which in turn would need to be coded as missing. The data for the Lone Parenting variable was much more complete and, in order to maintain power, it was decided upon as the variable to represent socioeconomic status. Question 13 from Appendix A, pertaining to whom participants live with, was used to create the Lone Parenting variable. The data were recoded by assigning participants to two groups: Participants from a lone parent family and those not from a lone parent family.

**Generational Status.** A Generational Status variable was created based on questions about birth country and parental birth country (See Appendix A for the specific questions). Rumbaut's (2008) classification scheme was used to categorize participants as 1.5, 2<sup>nd</sup>, or 3<sup>rd</sup> generation



Canadian. A 1.5 generational status refers to a person who is foreign born, but arrived as a child. A person labeled as a 2<sup>nd</sup> generation Canadian was born in Canada, but both parents are foreign born. Finally, 3<sup>rd</sup> generation Canadian refers to any person who was born in Canada and has at least one parent born in Canada. It should be noted that this 1.5, 2<sup>nd</sup> and 3<sup>rd</sup> are not evenly distributed and were therefore recoded for analysis to 0, 1, 2. The 1.5, 2, and 3<sup>rd</sup> generation labels are to be thought of as labels, not numeric quantities.

It was decided that the term *generational status* was more appropriate than *immigration status*. There are inconsistencies in the literature as to the usage of these two labels. Immigration status, however, is sometimes used to distinguish the type of transition an individual underwent (For example, Refugee or Immigrant) and sometimes used to dichotomize people who have immigrated with those who have not. The present study uses the term *generational status* to refer to the extent to which a person is new to Canada, a continuous label. The term *immigration status* is used here to distinguish between people who have undergone the immigration experience and those who have not, a dichotomous label. It should be noted that the demographic questionnaire did include a question to distinguish between participants who were refugees and international students, as opposed to immigrants. Unfortunately, many of the participants in the field were unaware of their status and as a result, a high proportion of the participants answered ‘I Don’t Know’ to this question and it therefore was of limited use in the study.

Years in Canada. In order to account for the length of time an adolescent has lived in Canada, a ‘Years in Canada’ variable was created. This variable was created to capture the subtle differences in the length of time adolescents who are of similar generational status have been in Canada (and in particular those with a 1.5 Generation Status). Students were simply asked how long they have been in Canada (See Appendix A for the exact question). In order to account for

students who were born in Canada, age was used to represent their Years in Canada. For example, if a participant was 15 and born in Canada, then 15 would be their Years in Canada.

#### Sense of school belonging

The Psychological Sense of School Membership scale (PSSM; Goodenow, 1993) was chosen to determine adolescents' sense of school belonging in the current study. This scale was particularly appropriate with the current diverse sample because it used simple, plain language and was developed and validated with multi-ethnic, suburban and rural, middle and junior high school students (Goodenow, 1993).

The 18-item self-report Psychological Sense of School Membership scale (PSSM; Goodenow, 1993) uses a 5-point Likert scale, ranging from (1) '*not at all true*' to (5) '*completely true*.' The internal consistency score for suburban (a relatively homogenous group) and urban students (a relatively heterogeneous group) was found to be .88 and .80, respectively. For a variety of other samples, the internal consistency reliability ranged from .77 to .88 (Goodenow, 1993). A comparable internal consistency score was obtained in this study, with a Cronbach alpha coefficient of .89. Goodenow (1993) used contrasted groups validation procedures in order to establish good construct validity for this measure of perceived school belonging.

A composite School Belonging variable was created by calculating the mean scores based on the 18 original items. Descriptive analyses revealed the means and standard deviations for the school belonging score on the PSSM were:  $M = 3.76$ ,  $SD = 0.63$ . That is, participants indicated on average, that they '*somewhat*' to '*mostly*' felt that they belonged to their school. See Appendix B for the scale items.

## School social context

Prior to this study, there was no existing scale to assess the specific dimensions of school context as defined in this study. More specifically, no self-report measure was found that distinguished between functions of social support at school. Furthermore, no scale regarding school social context was found that captured the perceived ethnic/racial and linguistic similarity dimensions of a student's social support network. Therefore, a new questionnaire, the School Social Context Questionnaire (SSCQ) was developed for the purposes of this study, in order to capture this information and to assess adolescents' school social context. See Appendix C for the full questionnaire.

The items on the SSCQ were designed to capture two major aspects of school social context: (1) students' perceived social support and (2) students' perception of how similar schools' racial/ethnic and linguistic composition felt to them. Students' perceived social support was assessed on five levels to capture both the types and functions of support: Adult Support for School Help, Adult Support for Personal Help, Peer Support for School Help, Peer Support for Personal Help, and Peer Support for 'Hanging out'. School help refers to academic support students may get at school (For example, for help with homework and projects). Personal help refers to emotional support at school (For example, for help when feeling mad, sad, or stressed). 'Hanging out' refers to companionship at school (For example, to hang out with at lunch breaks).

Social support. In creating the variables for perceived social support, as can be seen in Appendix C, participants were asked to report the number of people they turn to for different kinds of social support, in an open-ended manner. Not unexpectedly, this created a set of data with several outliers. According to Tabachnick and Fidell (2001), extreme values have a disproportionate effect on regression analyses and one of the ways to resolve this is to rescore

them. As such, the social support variables were rescored so that the high numbers were collapsed into the last highest number before a natural break. For example, in the case of the Adult Support for School Help variable, numbers 0-10 were counted as separate categories and the final category, 11, included anyone who reported 11 individuals or more.

Descriptive analyses showed that students reported a median of 4 adults they could go to for school help ( $M = 4.95$ ,  $SD = 3.46$ ), a median of 1 adult they could go to for personal help ( $M = 1.91$ ,  $SD = 2.00$ ), a median of 9 peers they could go to for school help ( $M = 7.98$ ,  $SD = 4.56$ ), a median of 4 peers they could go to for personal help ( $M = 5.02$ ,  $SD = 4.13$ ), and a median of 11 peers they could hang out with ( $M = 9.33$ ,  $SD = 4.25$ ).

School similarity. Students' perceptions of how similar their peers at school are to themselves was assessed on a Likert scale. One indicated '*none of them*', two '*mostly none*', three '*half of them*', four '*most of them*' and five '*all of them*'. A sixth point was reserved for an '*I don't know*' response. Part way through data collection, the question was raised as to whether the above Likert scale was acceptable given that the scale points were not consistent. In an attempt to rectify this issue, the Likert scale was adjusted so that 1 indicated '*none of them*', two '*some of them*', three '*half of them*', four '*most of them*' and five '*all of them*'. Twenty students were given questionnaires with the adjusted scale in order to decide whether the scale created a significant measurement difference. These twenty samples were compared twice: First, with twenty participants from the same school who had been tested using the original scale and then again at the end of the study using the entire sample as a comparison. Independent-samples t-tests were conducted to examine whether the groups of students differed on their responses using these two different scales. The findings indicated that there were 11 non-significant differences and one significant difference between the two groups and this result held when

using both the small sample and the entire sample as the comparison (See Table 2 for t-test results for the entire sample). In the one case where the Levene's Test was found to be significant (Table 2, Peers for School Help-Ethnicity), equal variances were not assumed and the values in that row reflect that. Although the different format did seem to have a significant effect on the response choices for one of the items, it was decided that the differences were minimal in light of the fact that it was the only significant difference from a total of 12 items.

Table 2. Summary of T Tests Used to Compare the Original School Social Context Questionnaire Likert scale with the Improved Scale.

	t	df	<i>M</i>		<i>SD</i>	
			Original	Improved	Original	Improved
Adult School Help-language	0.57	574	3.68	3.12	4.03	2.03
Adult School Help-ethnicity	0.83	612	3.37	2.61	3.88	1.58
Adult Personal Help-language	0.03	620	4.83	4.80	4.07	2.35
Adult Personal Help-ethnicity	0.59	616	4.57	4.00	4.15	2.79
Peer School Help-language	0.94	606	3.64	3.37	1.25	1.21
Peer School Help-ethnicity	-0.59	21	3.47	3.58	1.19	0.77
Peer Personal Help-language	-0.77	559	3.74	4.00	1.36	1.17
Peer Personal Help-ethnicity	-1.08	550	3.59	3.94	1.34	1.14
Peers to 'Hanging Out'-language	-0.54	599	3.66	3.82	1.25	1.07
Peers to 'Hanging Out'-ethnicity	-1.49	596	3.59	4.00	1.13	1.06
Student Composition-language	0.48	637	3.34	3.25	0.85	0.91
Student Composition-ethnicity	-3.11	644	3.22	3.85	0.89	0.99

\*  $p < .05$

A composite variable was created to capture each student's overall perception of similarity with the other students at their school by calculating the mean scores of both ethnic and linguistic similarity variables. Items which asked how similar students feel to the peers they go to for school help, personal help, and hanging out, as well as their perceptions of similarity to their student body as a whole, were included in this variable. The mean and standard deviation for the Perceived Similarity composite variable was  $M = 3.51$  and  $SD = 0.85$ . This indicates that the majority of students felt that just over half of their peers at school were similar to them ethnically and linguistically.

## Diversity index

In addition to assessing students' perceptions of how similar they were to their peers at school, it was of interest to take into account how diverse the schools were. Data from the British Columbia Ministry of Education was used to identify the diversity of each school population. Although specific ethnicity information was not available, information regarding language spoken at home was available, and thus, used to create one diversity index for each school. The Simpson's Diversity Index (Simpson, 1949) was used to calculate a School Diversity variable, such that a high D value indicates low levels of diversity and a low D value indicates a high level of diversity. Using this formula, a school that is relatively homogenous would have a lower score and a school that is more heterogeneous would have a higher score. The formula also takes into account proportions so that a school that is mostly comprised of Cantonese and English speakers would score lower on diversity than a school that was comprised of a larger, more even distribution of languages (For example, Cantonese, English, Spanish, Tagalog, Korean):

$$D = \frac{\sum n(n-1)}{N(N-1)}$$

Where n = the total number of students who speak a particular language at home and N = the total number of students at the school

## Translation

Questionnaire translations are often used in cross-cultural research of this nature. However, the methods of translating instruments and questionnaires for cross-cultural use is being seriously questioned as of late. It is argued that the currently accepted techniques are not sufficient for attaining equivalence that is valid on multiple levels (Pena, 2007). Translating the

questionnaire and measure with any degree of equivalence was decidedly beyond the scope of this study. All concentration and efforts were placed on assuring that the questionnaire used clear and plain language and that sufficient support was available for individual participants during the data collection process.

### Overview of Data Analysis

Seven hierarchical multiple regression models were used to answer the research questions. Hierarchical multiple regression was chosen because the regression model has several DV's that can be grouped theoretically. This type of analysis is appropriate in cases such as this, in which there is theoretical reasoning for dividing variables and taking into account the separate impact they have in predicting the IV (Tabachnick & Fidell, 2001). Research question 1 looked at the factors influencing perceived social support in school. This research question was answered by way of five regression models (Tables 4-8) with all five types of social support (Adult Support for School Help, Adult Support for Personal Help, Peer Support for School Help, Peer Support for Personal Help, Peer Support for 'Hanging out') as the dependant variables, respectively. The independent variables in all five models included Gender, Grade Level, Lone Parenting, Ethnicity, Generational Status and Years in Canada. Research questions 2 and 3 which examined the factors impacting School Belonging, were answered using one regression model, hereinafter referred to as the 'School Belonging Regression model' (Table 9). The dependant variable in this case was School Belonging and the independent variables were the same as in the above regression models, with the addition of Perceived Similarity, School Diversity, and the five types of social support (Adult Support for School Help, Adult Support for Personal Help, Peer Support for School Help, Peer Support for Personal Help, Peer Support for 'Hanging out'). Finally,



research question 4 uses the School Belonging regression model with the addition of the interaction of the five social support variables with generational status for a moderator analysis (Table 10).

The independent variables were added as follows for the models in Tables 4 to 9: In Block 1, Gender, Grade, and Lone Parenting variables were added as control variables. The Ethnicity variables were then added in Block 2 (European and Other, with Asian as the reference group). In Block 3, Generational Status and Years in Canada variables were entered. For the School Belonging model, there were additional blocks: Perceived Similarity and School Diversity were added in Block 4 and the five social support variables were entered in Block 5: Adult Support for School Help, Adult Support for Personal Help, Peer Support for School Help, Peer Support for Personal Help, Peer Support for 'Hanging out'.

Finally, moderator analyses were used in order to answer question 4 that examined the interaction of the school social context variables with Generational Status. In order to do this, the variable scores from the previous School Belonging model were standardized (Aiken & West, 1991). Block 1 included Grade, Gender, Lone Parenting, Ethnicity variables, Generational Status, Years in Canada, Perceived Similarity, School Diversity, and the five types of social support. In Block 2, variables that represented the interaction of Generation Status and all types of social support, respectively were added to assess the interaction between these variables on School Belonging.

The School Belonging moderator analysis regression model was the largest, as it included 19 independent variables. A correlation matrix was created in order to establish the relationships amongst the variables (see Table 11, Appendix D). It was also imperative to determine whether the sample size was large enough to conduct such an analysis. Using a formula provided by

Tachnick and Fidell (2004) which requires that  $N$  is greater than  $50 + 8m$  ( $m$  = number of independent variables), it was calculated that the model with the most variables requires 202 participants. Considering that the current study has 733 participants, it was decided that we had ample sample size to analyze this model.

## Chapter 4 - Results

Normality was assessed following the methods suggested by Tabachnick & Fidell (2001). It was found that for the social support variables, Kolmogorov-Smirnov tests of normality were significant in all cases, suggesting a departure from a normal distribution. As detailed previously, in the case of the social support variables, a few outliers (between 6 and 10 cases for each social support variable) had considerably high scores. In an attempt to rectify the distribution's departure from normal, the social support variables were recoded in a manner that eliminated the outliers. After recoding the social support variables, skewness and kurtosis values were close to zero for all variables and were not found to be statistically significant, suggesting a normal distribution. The descriptive statistics for the social support variables before and after the recoding are presented in Table 3. Furthermore, given an N of 733 for this study, normality was declared sufficient in light of Tabachnick & Fidell (2001) who suggest that when N is sufficiently large ( $N > 200$ ), non-normality should not substantially impact the analysis.

Table 3. Descriptive Statistics for Social Support Variables Before and After Recoding.

	Mean	Median	Skewness	Kurtosis
<i>Before Recoding Variables</i>				
Adult Support for School Help	5.76	4	8.67	106.16
Adult Support for Personal Help	2.60	1	10.32	123.25
Peer Support for School Help	17.48	8	7.94	94.78
Peer Support for Personal Help	6.53	4	7.94	94.78
Peer Support for Hanging Out	25.08	10	14.43	255.29

table continues

Table 3 (continued).

	Mean	Median	Skewness	Kurtosis
<i>After Recoding Variables</i>				
Adult Support for School Help	4.95	4	0.48	-1.03
Adult Support for Personal Help	1.91	1	0.92	-0.38
Peer Support for School Help	7.98	9	-0.21	-1.32
Peer Support for Personal Help	5.02	4	0.52	-1.12
Peer Support for Hanging Out	9.33	11	-0.79	-0.56

Research Question 1: Do adolescents who are newer to Canada report fewer perceived people they can go to for social support (after controlling for demographic variables)?

As noted above each of the five social support variables were used as dependent variables in separate hierarchical regressions. That is, five different regression models were used to answer this question. To reiterate, in Block 1 of each of the five regression models, the demographic variables were entered. In Block 2, the Ethnicity variables were included, and finally in Block 3, to answer the research question, the Generational Status and Years in Canada variables were entered to examine whether less time in Canada was associated with fewer perceived people that adolescents could go to for social support. See Tables 4-8 for the results from each social support regression model, including betas, standardized betas, R squares, and R Square change values.

Grade did significantly predict Adult Support for Personal Help (Table 5) and Peer Support for School Help (Table 6), and this relationship held to the final model. Participants in higher grades reported that they had more peers they could go to for school help as can be seen by the positive beta values in Table 6 compared with their peers. However, participants in higher grades reported that they had fewer adults they could go to for personal help at school as can be seen by the negative beta values in Table 5.

Gender was not found to significantly predict any type of social support (See Tables 4–8). Lone Parenting was found to significantly predict Peer Support for School Help (See Block 1 of Table 6) such that being from a lone parent family was related to reporting fewer peers they could go to for support for school help.

Individuals of European descent tended to report more people they could go to for Adult Support for School Help (See Table 4, Block 3), Peer Support for Personal Help (See Table 7, Block 2), and Peer Support for ‘Hanging out’ (See Table 8, Block 3) than their Asian counterparts (which, as noted above is the reference group for these analyses). In addition, participants who are in the ‘Other’ background category of Ethnicity (e.g. Aboriginal, Latin American, Middle Eastern, etc.) reported a higher number of people they could go to for Adult Support for Personal Help compared to participants from the Asian background group (See Table 5, Block 2).

Generational Status and Years in Canada were differently associated with Peer Support for ‘Hanging out’ (See Table 8, Block 3). Specifically, individuals who have spent more years in Canada tended to report more people they could go to for Peer Support for ‘Hanging out’, [ $b = .18$ ,  $SE_b = .06$ ,  $\beta = .18$ ,  $p < .01$ ]. In contrast, higher Generation Status was associated with reports of fewer people that adolescents can go to for Peer Support for ‘Hanging out’, [ $b = -.77$ ,  $SE_b = .35$ ,  $\beta = -.14$ ,  $p < .05$ ]. In the presence of Grade, Gender, Lone Parenting and Ethnicity, adolescents who represent newer generation Canadian students (i.e., participants who had immigrated more recently) perceived having more peers to ‘hang out’ with at school; while adolescents who have spent fewer years in Canada were more likely to perceive fewer peers to ‘hang out’ with.

Table 4. Summary of the Hierarchical Regression Model representing Adult Support for School Help as Predicted by Generational Status and Years in Canada (N = 733).

	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	$\Delta R^2$
Block 1				.01	.01
Grade	.11	.07	.06		
Gender	-.38	.27	-.05		
Lone Parent	-.29	.29	-.04		
Block 2				.02	.01*
Grade	.03	.07	.02		
Gender	-.44	.27	-.06		
Lone Parent	-.26	.29	-.03		
Ethnicity- European descent	.81	.32	.11**		
Ethnicity- Other	.17	.37	.02		
Block 3				.02	.00
Grade	.01	.08	.00		
Gender	-.42	.27	-.06		
Lone Parent	-.25	.29	-.03		
Ethnicity- European descent	1.21	.41	.17**		
Ethnicity- Other	.40	.41	.04		
Years in Canada	.04	.05	.05		
Generation Status	-.44	.30	-.10		

Note. \*p < 0.05. \*\*p < 0.01 \*\*\*p < 0.001.

Table 5. Summary of the Hierarchical Regression Model representing Adult Support for Personal Help as predicted by Generational Status and Years in Canada (N = 733).

	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	$\Delta R^2$
Block 1				.01	.01*
Grade	-.10	.04	-.10**		
Gender	-.22	.16	-.06		
Lone Parent	-.04	.17	.01		
Block 2				.02	.01*
Grade	-.13	.04	-.13**		
Gender	-.26	.16	-.07		
Lone Parent	-.06	.17	-.01		
Ethnicity- European descent	.38	.18	.09*		
Ethnicity- Other	.43	.21	.08*		
Block 3				.03	.01
Grade	-.10	.05	-.10*		
Gender	-.29	.16	-.07		
Lone Parent	-.10	.17	-.02		
Ethnicity- European descent	.41	.24	.10		
Ethnicity- Other	.47	.23	.09*		
Years in Canada	-.05	.03	-.11		
Generation Status	.07	.17	.03		

Note. \*p < 0.05. \*\*p < 0.01 \*\*\*p < 0.001.

Table 6. Summary of the Hierarchical Regression Model representing Peer Support for School Help as Predicted by Generational Status and Years in Canada (N = 733).

	<i>B</i>	<i>SE</i>	$\beta$	$R^2$	$\Delta R^2$
Block 1				.03	.02***
Grade	.33	.09	.15***		
Gender	.30	.35	.03		
Lone Parent	-.81	.38	-.08*		
Block 2				.03	.00
Grade	.34	.09	.15***		
Gender	.33	.36	.04		
Lone Parent	-.77	.38	-.08*		
Ethnicity- European descent	-.10	.42	-.01		
Ethnicity- Other	-.47	.49	-.04		
Block 3				.03	.00
Grade	.30	.10	.13**		
Gender	.36	.36	.04		
Lone Parent	-.74	.38	-.08		
Ethnicity- European descent	.24	.54	.03		
Ethnicity- Other	-.27	.53	-.02		
Years in Canada	.06	.06	.06		
Generation Status	-.44	.39	-.07		

Note. \*p < 0.05. \*\*p < 0.01 \*\*\*p < 0.001.



Table 7. Summary of the Hierarchical Regression Model representing Peer Support for Personal Help as Predicted by Generational Status and Years in Canada (N = 733).

	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	$\Delta R^2$
Block 1				.02	.02*
Grade	.13	.08	.06		
Gender	.63	.32	.08		
Lone Parent	-.69	.34	-.08*		
Block 2				.03	.01*
Grade	.03	.09	.01		
Gender	.55	.32	.07		
Lone Parent	-.67	.35	-.08		
Ethnicity- European descent	1.12	.38	.13**		
Ethnicity- Other	.42	.45	.04		
Block 3				.03	.00
Grade	-.01	.09	-.01		
Gender	.57	.32	.07		
Lone Parent	-.67	.35	-.07		
Ethnicity- European descent	1.62	.49	.19**		
Ethnicity- Other	.72	.48	.07		
Years in Canada	.05	.06	.05		
Generation Status	-.56	.35	-.10		

Note. \*p < 0.05. \*\*p < 0.01 \*\*\*p < 0.001.

Table 8. Summary of the Hierarchical Regression Model representing Peer Support for ‘Hanging out’ as Predicted by Generational Status and Years in Canada (N = 733).

	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	$\Delta R^2$
Block 1				.05	.05***
Grade	.42	.08	.20***		
Gender	-.53	.33	-.06		
Lone Parent	-.55	.35	-.06		
Block 2				.08	.03***
Grade	.26	.09	.12**		
Gender	-.65	.32	-.08*		
Lone Parent	-.50	.34	-.05		
Ethnicity- European descent	1.83	.38	.21***		
Ethnicity- Other	.38	.44	.03		
Block 3				.09	.02**
Grade	.13	.09	.06		
Gender	-.56	.32	-.06		
Lone Parent	-.39	.34	-.04		
Ethnicity- European descent	2.25	.49	.26***		
Ethnicity- Other	.60	.48	.05		
Years in Canada	.18	.06	.18**		
Generation Status	-.77	.35	-.14*		

Note. \*p < 0.05. \*\*p < 0.01 \*\*\*p < 0.001.

### The School Belonging Regression Model

The School Belonging regression model was used to answer research questions two and three (See Table 9). To reiterate, the variables in Table 9 were entered in five blocks. In Block 1, the effects of Gender, Grade, and Lone Parenting were controlled for. In Block 2, dummy coded Ethnicity variables were added. In Block 3, Generational Status and Years in Canada were entered. In Block 4, Perceived Similarity and School Diversity were entered and finally, Adult Support for School Help, Adult Support for Personal Help, Peer support for School Help, Peer support for Personal Help, Peer Support for ‘Hanging out’ were all added in Block 5.

Grade and Lone Parenting were significantly associated with School Belonging, such that adolescents who were in lower grades and did not have lone parent status tended to report higher scores on the School Belonging scale (See Table 9, Block 5). It should be noted that Grade was not significantly associated with School Belonging in Block 1 (See Table 9) however in the final model, it significantly predicted School Belonging.

With the addition of Ethnicity variables in Block 2, participants of European descent as well as Other descent reported higher scores on the School Belonging scale compared to participants of Asian descent (the reference group) and this relationship held even after controlling for all of the other variables (See Table 9, Block 5).

Research Question 2: Do adolescents who are newer to Canada feel a lower sense of School Belonging, in the presence of demographic variables?

Years in Canada and Generational Status did not significantly predict School Belonging in Block 3 of Table 9. However, in Block 4, after the entry of Perceived Similarity and School Diversity variables, Generational Status was found to significantly predict School Belonging [b =

-.14,  $SE_b = .06$ ,  $\beta = -.16$ ,  $p < .05$ ]. These results indicate that, although Years in Canada did not significantly predict School Belonging, higher Generational Status was negatively associated with higher scores on the School Belonging scale, in the presence of the social context variables Perceived Similarity and School Diversity. It should also be noted however, that Generational Status loses significance in Block 5 with the addition of the social support variables (See Table 9).

Research Question 3: In what ways does school social context impact School Belonging after controlling for demographic variables?

Perceived Similarity significantly predicted School Belonging [ $b = .09$ ,  $SE_b = .03$ ,  $\beta = .13$ ,  $p = < .01$ ] such that feeling more similar, both ethnically and linguistically to one's peers was positively associated with School Belonging. It should be noted that the R Square Change value for Block 4 was modest but significant (See Table 9, Block 4) and Perceived Similarity maintained its significant contribution in the final model (See Table 9, Block 5).

After adding the five types of social support variables in Block 5, Adult Support for School Help, Adult Support for Personal Help, and Peer Support for 'Hanging out' (See Table 9) were positively associated with School Belonging. These findings suggest that the more adult support for school help and personal help that participants perceived, the higher School Belonging scores they reported. Similarly, the more peers that participants perceived they could hang out with, the higher School Belonging scores they had.

Table 9. A Hierarchical Regression Model Summary representing Sense of School Belonging as Predicted by Social Context variables at school (N = 733).

	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	$\Delta R^2$
Block 1				.02	.02*
Grade	.01	.01	.02		
Gender	.00	.05	.00		
Lone Parent	-.17	.05	-.12**		
Block 2				.05	.03***
Grade	-.02	.01	-.05		
Gender	-.02	.05	-.02		
Lone Parent	-.18	.05	-.13**		
Ethnicity-European descent	.26	.06	.19***		
Ethnicity-Other	.22	.07	.13**		
Block 3				.05	.00
Grade	-.02	.02	-.07		
Gender	-.02	.05	-.02		
Lone Parent	-.18	.05	-.13**		
Ethnicity-European descent	.34	.08	.26***		
Ethnicity-Other	.27	.08	.16***		
Years in Canada	.01	.01	.05		
Generation Status	-.09	.05	-.11		
Block 4				.06	.01*
Grade	-.03	.02	-.09		
Gender	-.03	.05	-.02		
Lone Parent	-.17	.05	-.13***		
Ethnicity- European descent	.37	.08	.28***		
Ethnicity- Other	.35	.08	.21***		
Years in Canada	.01	.01	.06		
Generation Status	-.14	.06	-.16*		
Perceived Similarity	.09	.03	.13**		
School Diversity Index	-.01	.13	-.01		

table continues

Table 9 (continued).

	<i>B</i>	<i>SE</i>	$\beta$	$R^2$	$\Delta R^2$
Block 5				.21	.15***
Grade	-.03	.02	-.10*		
Gender	.00	.05	.00		
Lone Parent	-.14	.05	-.10**		
Ethnicity- European descent	.22	.08	.17**		
Ethnicity- Other	.27	.08	.16**		
Years in Canada	.01	.01	.04		
Generation Status	-.09	.05	-.11		
Similarity Composite	.08	.03	.10**		
School Diversity Index	.06	.12	.02		
Adult Support-School Help	.03	.01	.14**		
Adult Support-Personal Help	.05	.01	.14**		
Peer Support-School Help	.01	.01	.06		
Peer Support-Personal Help	.01	.01	.08		
Peer Support-Hanging Out	.02	.01	.15**		

Note. \*p < 0.05. \*\*p < 0.01 \*\*\*p < 0.001.

Research Question 4: Are adolescents who are newer differently impacted by school social support than those who have been here longer?

The School Belonging Model, with the addition of the interaction terms between the social support variables and Generational Status, was used to answer research question four. The interaction terms between Adult Support for School Help and Generational Status, as well as between Peer Support for Personal Help and Generational Status were significantly associated with School Belonging (See Table 10, Block 2). These interactions were plotted for further analysis using Aiken & West's (1991) recommendations. The interactions were clearest when the variables Adult Support for School Help and Peer Support for Personal Help were split into three groups, thereby creating low, medium, and high levels of social support groups based on the distribution of the scores, as can be seen in Figures 1 and 2.

Participants of each Generational Status had a positive relationship between Adult Support for School Help and School Belonging. That is, the more Adult Support for School Help they reported, the higher they scored on the School Belonging scale. However, the difference lies in the slopes of the lines. Adolescents who had newly immigrated (1.5 generation Canadians) displayed a stronger relationship between Adult Support for School Help and School Belonging. More specifically, this group displayed the lowest scores on School Belonging at lower levels of Adult Support for School Help and the highest scores on School Belonging at higher levels of Adult Support for School Help (See Figure 1).

Regarding Peer Support for Personal Help, as can be seen in Figure 2, at high levels of Peer Support for Personal Help, the 1.5 generation group displayed higher scores on School Belonging than both 2nd and 3rd generation Canadians. The 3rd generation Canadians displayed higher scores of School Belonging, even when they reported low levels of Peer Support for

Personal Help. In contrast, the 2nd generation Canadians displayed the lowest scores of School Belonging even when they reported high levels of social support.

Table 10. Hierarchical Regression Moderator Analysis where Sense of School Belonging is Predicted by the Interaction Between Generation Status and Social Support Variables at School (N = 733).

	<i>B</i>	<i>SE</i>	$\beta$	$R^2$	$\Delta R^2$
Block 1				.21	.21***
Gender	.00	.02	.00		
Grade	-.07	.03	-.10*		
Lone Parenting	-.06	.02	-.09**		
Ethnicity-European descent	.1	.04	.17**		
Ethnicity-Other	.1	.03	.16**		
Years in Canada	.02	.03	.04		
Generation Status	-.68	.04	-.11		
Perceived Similarity	.07	.03	.10**		
Diversity Index	.01	.03	.02		
Adult support-School help	.1	.03	.14**		
Adult support-Personal Help	.1	.03	.14**		
Peer support-School Help	.04	.03	.06		
Peer Support-Personal Help	.05	.03	.08		
Peer Support-'Hanging out'	.1	.03	.15**		
Block 2				.23	.01*
Gender	.00	.04	.00		
Grade	-.09	.05	-.09		
Lone Parenting	-.10	.04	-.10**		
Ethnicity-European descent	.17	.05	.17**		
Ethnicity-Other	.16	.05	.16**		
Years in Canada	.01	.05	.01		
Generation Status	-.03	.12	-.03		
Perceived Similarity	.10	.04	.10		
Diversity Index	.02	.05	.02		
Adult support-School help	.40	.14	.40**		
Adult support-Personal Help	.10	.14	.10		

table continues



Table 10 (continued).

	<i>B</i>	<i>SE</i>	$\beta$	$R^2$	$\Delta R^2$
Peer support-School Help	.05	.17	.05		
Peer Support-Personal Help	-.30	.16	-.30		
Peer Support-'Hanging out'	.31	.15	.30*		
Adult Support for School X Generation Status	-.03	.02	-.30*		
Adult Support for Personal X Generation Status	.01	.03	.07		
Peer Support for School X Generation Status	.00	.02	.01		
Peer Support for Personal X Generation Status	.04	.02	.41*		
Peer Support for 'Hanging out' X Generation Status	-.02	.01	-.20		

*Note.* \* $p < 0.05$ . \*\* $p < 0.01$  \*\*\* $p < 0.001$ .

Figure 1. The Interaction Between Generational Status and Adult Support for School Help on Sense of School Belonging.

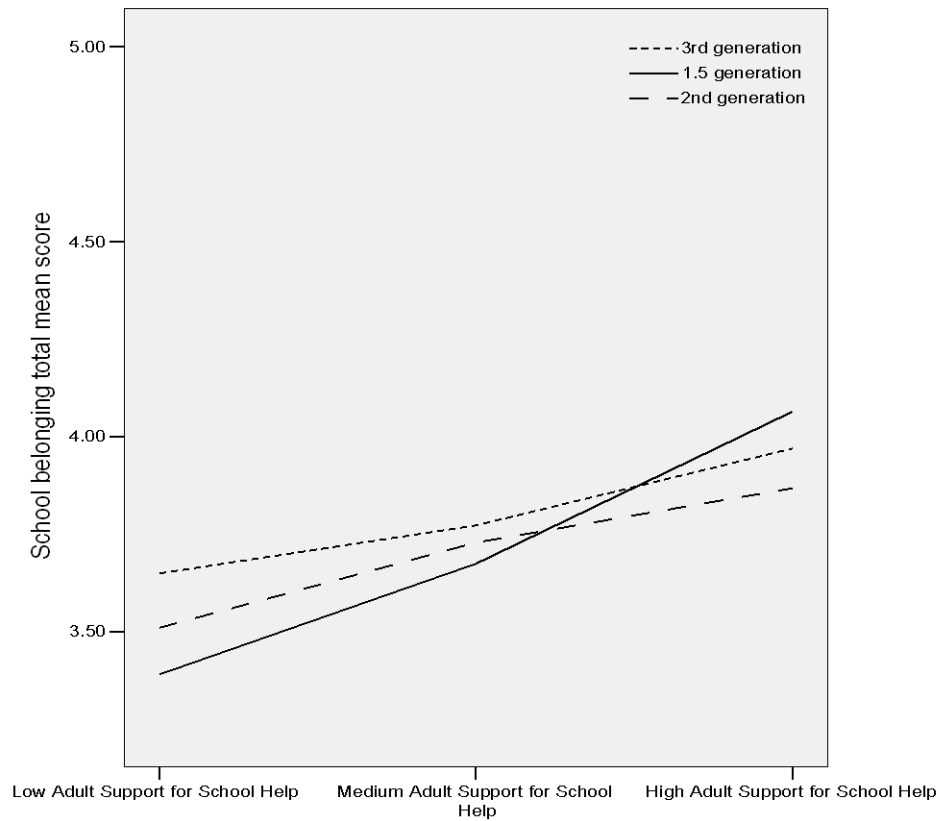
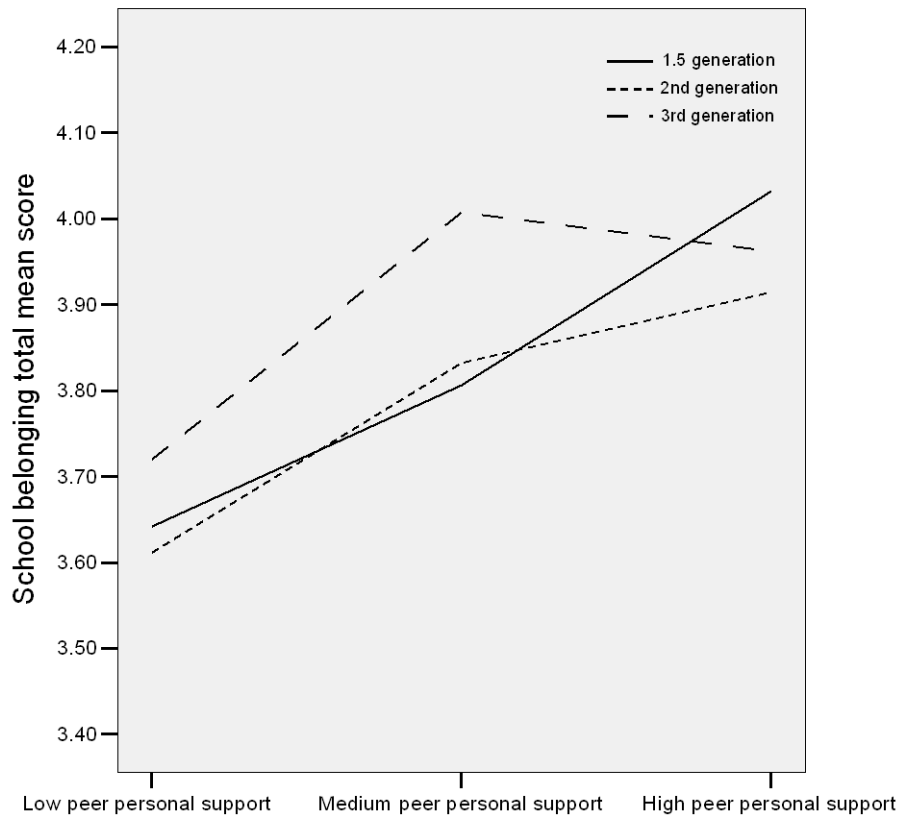


Figure 2. The Interaction Between Generational Status and Peer Support for Personal Help on School Belonging.



## Chapter 5 - Discussion

The purpose of this study was to determine the ways in which school social context impacted sense of school belonging for adolescents who are newer to Canada, in relation to those who are not new. Adolescents who were newer to Canada reported different levels of social support and furthermore, were found to be impacted by this social support differently than those who were less new. In addition, it was found that certain aspects of students' school social context affected their sense of school belonging more than other aspects.

### Social Support at School

Adolescents who have spent less time in Canada tended to report having fewer peers to 'hang out' with in comparison to adolescents who have spent more time in Canada. 'Hanging out' in this study was one of the weaker peer ties at school, representing people who could be companions at school, yet perhaps not people who a person would feel comfortable going to for personal help or school help. It seems logical to assume that the more years an adolescent has spent in Canada, the more time that a person has had to make connections at school with their peers, resulting in higher reports of social support for 'hanging out'. One study found that children who immigrated tended to choose friends who speak the same native language as them (Tatum, 1999). The new Canadians in the current study may not have reported an extensive social network, that is Peer Support for 'Hanging out', because they are restricted to the portion of the student body that speak the same language as them.

What was not expected was the finding that Generational Status was negatively associated with reports of Peer Support for 'Hanging out' at school. That is, Canadians who are part of families who have been in the country longer, reported lower levels of Peer Support for 'Hanging out'. This may be explained by the fact that 41.6 % of the adolescents in the current

study were 3rd generation or more, which means that the majority of adolescents or their families were relatively new to Canada. Students from an Asian background were also the numerical majority in the current study (See Table 1). This is mirrored by the knowledge that a large proportion of the general population are new and the majority of adolescents who are new to Canada are of Asian descent (CIC, 2005). Developmentally, adolescents tend to make connections with peers who are similar to them (Bernt, 1981). A possible explanation for why adolescents who are newer to Canada, as per their Generational Status, tended to report having more peers they could go to for 'Hanging out', is that they are quite possibly the majority in their school in terms of how new they are to Canada as well as in terms of their racial/ethnic background. Participants may have reported higher levels of social support for the simple reason that the majority of the students at school are similar to them and as such, they might have more opportunities to make connections.

### School Belonging

Grade was one of the main predictors of School Belonging in the overall model, with younger students reporting higher scores of School Belonging. Not only is this finding consistent with other research looking at this question (Anderman, 2003), but there are also two reasons specific to the current sample which may have influenced this outcome. First, this study included students from both elementary schools and secondary schools. There is a substantial amount of evidence indicating that elementary schools are more supportive than secondary schools, due to the school and classroom structures which affords more opportunity for peer and adult social interactions (Osterman, 2000). Second, the youngest participants in the present study are 10 years of age. The fact that younger students were significantly more likely to feel a higher sense of school belonging could also be explained in terms of the developmental literature. More

specifically, adolescents are developmentally more vulnerable to feeling as if they do not belong than children (Osterman, 2000).

Lone Parenting was included as a covariate in the model, primarily to tap into aspects of SES (Simpson, Janssen, Craig & Pickett, 2005). It was a significant predictor of School Belonging in the overall model. Socioeconomic status is thought to be related to a plethora of negative outcomes in the literature, including academic and social-emotional outcomes (Duncan & Brooks-Gunn, 2003). More specifically, there is research to suggest that students tend to choose peers at school based on status indicators, such as SES. That is, they prefer to form relationships with peers who have equal or higher SES status than them (Jules, 1991). Adolescents who are from lower SES families may not be as socially accepted as their higher SES counterparts. Considering the direct positive relationship established between social support and school belonging (Jules, 1991), this potential lack of social support for students with a lower SES might certainly contribute to a lower sense of school belonging.

Participants of Asian descent reported significantly lower feelings of School Belonging than their counterparts of any other descent (European or Other). This is despite the fact that students of Asian descent represented the largest proportion of participants and the largest proportion of students in the majority of the schools sampled. This is particularly interesting in light of the finding from this study that perceptions of racial/ethnic and linguistic similarity are related to school belonging. It is therefore of interest to know why students of Asian descent reported lower levels of School Belonging, while students in the European descent and Other racial/ethnic background groups tended to report higher levels of School Belonging.

These relationships may be explained by looking at the differential levels of social support reported according to Ethnicity. For example, students who were of European descent

reported significantly higher levels of Adult Support for School Help, Peer Support for Personal Help and Peer Support for ‘Hanging out’ than students who were of Asian descent. These higher levels of social support may in turn promote higher levels of School Belonging for adolescents who are of European descent. Indeed, the current study found that a significant portion of School Belonging was predicted by social support at school (Refer back to Table 9, Block 5).

The question remains as to why adolescents who are of European descent in the present study seem to report more people they can go to for social support, even if they are not part of the numerical majority. Jackson et al. (2006) found that in a study looking at African American and White children, the White children had higher sociometric status, even when they were not the numerical racial majority in the class. Being of European descent has a long-standing association with social privilege, and as such, it may be that the positive relationship between being of European descent and School Belonging in the current study is a reflection over this overarching societal trend. Racial privilege has been linked to a variety of positive factors, such as social status and academic performance (Quintana et al., 2006). With respect to Adult Support for School Help, it may also be the case that the adults at school in the current sample were also of European descent, and therefore these students felt comfortable approaching them for school help.

Interestingly, adolescents who were in the Other Ethnicity category reported significantly higher levels of Adult Support for Personal Help than participants of Asian descent. This was a very diverse group, with none of the members of this group belonging to a racial/ethnic numerical majority at school. Given this, the reasons for their higher reported levels of Adult Support for Personal Help are unclear. Whatever the reasons may be, it is likely that their

elevated reports of Adult Support for Personal Help are contributing to their higher levels of School Belonging.

Generational Status was also significantly associated with participants' sense of School Belonging and the negative direction of this relationship was not entirely expected. Newer generation Canadians reported higher levels of School Belonging. This finding rejects the notion of an assimilationist model of belonging, which assumes the longer a person spends in a country, the better they are, psychologically (Harker, 2001). In actuality, extant research in the area is beginning to find that adolescents who immigrate have better academic and social outcomes *initially* and then these seem to decline over time, in the new country (Harker, 2001; Rumbaut, 1997; Rumbaut, 2008). Testament to this comes from research in the Canadian context finding that adolescents who are new to Canada are just as likely, or in some cases, more likely to academically succeed than their peers who did not immigrate (Beiser, Hou, Hyman & Tousignant, 1998). The current study suggests that the same pattern for academic success may hold for adolescents who are new in terms of their levels of school belonging.

In considering the influence of Ethnicity and Generational Status on adolescents' sense of School Belonging, the current study provides evidence that Generational Status helps to predict students' School Belonging, over and above the effects of Ethnicity. This is clear from the School Belonging model in that even after Ethnicity is controlled for, Generational Status appears as significant (Refer Back to Table 9, Block 4). Generational status and minority status are factors that have traditionally been confounded in the literature (Quintana et al., 2006). The current study provides evidence to indicate that ethnicity and generational status should not be confounded as they impacted School Belonging in entirely different ways. For example, being of Asian descent was associated with a lower School Belonging, while being new to Canada is



associated with higher School Belonging. This research indicates that there is something inherent in being new that is not inherent in being a certain ethnicity that works to affect a students' sense of belonging at school.

As noted above, researchers have begun to find evidence that there may be a developmental advantage to being an immigrant for some individuals (Quintana et al., 2006). Although much empirical work needs to be done to locate the specific reasons for this advantage, a few researchers have put forth their suggestions. One of the most cited theories is Ogbu's notion of the *voluntary minority* (Ogbu, 1994). This theory suggests that people who immigrate have voluntarily chosen to become a minority, which means they may hold a more positive outlook on being of minority status (Ogbu, 1994). Another potential is that people who immigrate may naturally create a strong familial network in response to the transition. The idea being that these individuals then receive the positive benefits typically associated with strong family ties (Tseng, 2004). Others focus on the potential for opportunity that moving to a new country brings. Specifically, these researchers argue that people who immigrate are a self-selected group of individuals who are motivated to give their children a brighter future (Leventhal, Xue, & Brooks-Gunn, 2006). Even Erikson (1964) paid heed to the potential growth that may evolve from the difficulties of a cross-cultural transition and yet, very few studies of this nature are aimed at explicating the positive outcomes.

This finding may also be seen through a contextualized lens. With the trend towards globalization, there is the very real possibility that adolescents are already comfortable with North American ideals and culture, by way of television, the Internet and other mediums, before setting foot in the country. Because of this ability to begin the transition process prior to arriving, their already developed cultural competencies may allow them to transition with an ease that

would not have been possible a decade ago. Globalization works in the opposite direction as well. That is to say, adolescents who are new are possibly arriving in a country that is culturally more similar to their native country than it has ever before been. Rising rates of immigration mean that adolescents who immigrate arrive to find many ethnically-similar newcomers. New Canadians may be readily accepted by their peers who have undergone a similar transition which again, eases the transition process. All of the aforementioned theories may be at play in this study, and only further research will truly unpack this finding.

Despite these positive findings, it is important to keep in mind the fact that not all studies report positive outcomes for adolescents who have immigrated to a new country. There are certainly young immigrants who experience a whole host of adjustment difficulties such as, loneliness, self-doubt, and interpersonal struggles (Ishiyama, 1989). For example, Rich et al. (1996) in a study of adolescents who immigrated, found that although academically newcomers were on par with those who were not new, their feelings of belonging were not on par. This may be explained by taking into account the school context within which adolescents find themselves after immigrating. The Rich et al. (1996) study was conducted in Israel and, while it is a country with high levels of immigration like Canada, the social context may be entirely different. It is argued that outcomes for adolescents who immigrate are likely highly context specific and for this reason, the results in the present study can only be interpreted in tandem with context.

Taking all of the potential contextual vulnerabilities into account such as environment, culture, and language differences, the question remains: How were these adolescents able to essentially ‘not skip a beat’ in their transition to a new country? It does appear from the results of this study that school social context variables are substantial contributors in predicting School Belonging. Adolescents who felt more racial/ethnically and linguistically similar to their peers at

school reported higher levels of School Belonging. Also, reporting higher levels of Adult Support for School Help, Adult Support for Personal Help, Peer Support for Personal Help and Peer Support for 'Hanging out' all significantly contributed to sense of School Belonging.

The fact that Perceived Similarity positively impacted students' sense of School Belonging was expected. Evidence suggests that adolescents are particularly sensitive to similarity (Bernt, 1981; Phan, 2003; Quillian & Campbell, 2003). This may impact belonging for a few reasons: The importance of peer social relationships is characteristic of the developmental period of adolescence (Anderman, 2003) and attention to social similarity such as ethnicity and language fluency is thought to be heightened at this stage (Bellmore et al., 2007; Bernt, 1981; Tsai, 2006). For these reasons, adolescents may be particularly reactive to their school social context. If this is the case, then it could be argued that perceived similarity to others at school may well affect adolescents' sense of school belonging. In fact, Benner & Graham (2007) found that ethnic incongruence was associated with lower feelings of school belonging. Additionally, research in the Canadian context has found evidence to indicate that adolescents who are new to Canada gained security and identity from networking with students who were culturally and linguistically similar to them (Hebert, 2005).

Interaction effects examined in this study showed that adolescents who were 1.5 generation Canadian had a more tight-knit relationship between adult support (for school help) and school belonging. That is, the 1.5 generation adolescents displayed lower levels of School Belonging when they indicated lower levels of Adult Support for School Help, than the 2nd and 3rd generation Canadian groups. However, these same adolescents reported the highest levels of School Belonging when they reported higher levels of Adult Support for School Help.

These results reveal the importance of ensuring that 1.5 generation Canadians have access to this kind of support. This is consistent with work done by Vedder, Boekart & Seegers (2005), who found that adolescents who immigrated placed a larger emphasis on teacher support than their counterparts. Moreover, adolescents who immigrate have been found to rely on teacher support at school even more so than peer support for help (Morrison, Laughlin, San Miguel, Smith & Widaman, 1996).

In general though, Adult Support for Personal Help was positively correlated with School Belonging for the sample as a whole. This is not surprising in light of the large body of evidence citing teachers and other adults at school as unequivocally influential in students' perceptions of belonging at school (Furman & Buhrmester, 1992; Osterman, 2000 for a review). The fact that Adult Support for Personal Help and School Help contributed significantly to School Belonging provides strong evidence in favor of knowledge translation: It would be of interest to know how many adults who work in schools understand how immensely influential they are in developing their students' sense of school belonging. School counselors, as well as other adults at school should be made aware of their potential role in school belonging. Furthermore, it is essential for helping professionals at school to keep in mind the notion that it is not simply the new students who are in need of support. The results of this study indicate that adolescents who are less new may be vulnerable to feeling as if they do not belong. An important future inquiry that would benefit counseling psychologists and other helping professionals would be to investigate what factors are associated with seeking Adult Support for adolescents who have newly immigrated and of course for those who have not. Undoubtedly, common language abilities and cultural competencies become important when dealing with adolescents in different phases of transition.

In looking at peer support, the 1.5 generation Canadian group seemed to be more sensitive to access to Peer Support for Personal Help as revealed by the second significant interaction (Refer back to Figure 2). When low levels of peer support (for personal help) were reported, 1.5 and 2nd generation Canadians showed comparably lower levels of School Belonging than 3rd generation Canadians. However, at high levels of Peer Support for Personal Help, the 1.5 generation group showed higher levels of School Belonging than both 2nd and 3rd generation Canadians. Also of interest (highlighted in Figure 2) is the fact that while 1.5 generation Canadian students seem to be sensitive to Peer Support for Personal Help, 3rd generation Canadians do not seem to be as sensitive to it. The 3rd generation Canadian group showed high levels of School Belonging, even in the presence of low reports of Peer Support for Personal Help.

Indeed, social support has been found to be positively correlated with psychological well-being for newcomers (Ward & Searle, 1991). Also, there is evidence to suggest that having host friends is negatively correlated with estrangement (Horenczyk & Tatar, 1998). These study findings are most certainly in line with the current study, with the added insight that the relationship between school belonging and peer social support is even stronger for those who are newer to Canada.

It is interesting to note that Peer Support for School Help, unlike Peer Support for Personal Help, was not found to significantly impact School Belonging. This suggests that students seek out different types of support from adults and peers at school. Adult Support for School Help was found to be a significant predictor of School Belonging, and perhaps school help from adults at school is a stronger need than school help from peers. This fits with research that shows that adolescents who immigrate rely on teacher support at school even more so than

peer support for help (Morrison, Laughlin, San Miguel, Smith, & Widaman, 1996). It also may be the case that peer support related to getting help with school work can be sourced from places other than school. For example, it may be the case that students receive their school help from peers outside of school, in the community, or from family members (Faircloth & Hamm, 2005).

The fact that Peer Support for ‘Hanging out’ was found to significantly predict School Belonging also fits with this line of reasoning. ‘Hanging out’ is perhaps the role of peers at school and if this role is not satisfied, then adolescents may not be having their peer needs met at school and consequently, may be more likely to report lower levels of School Belonging. This also fits with school belonging research that suggests peer relationships are key to developing a sense of school belonging (Ryan, 2001). Peer Support for ‘Hanging out’ may be a type of relationship that students see as particularly important at school.

Another proposed aspect of school social context was the level of diversity present in a school. School diversity is the probability that a student at school would be ethnically different from the next student. School Diversity did not seem to impact students’ School Belonging. This finding is difficult to interpret in light of the methodological limitations of the variable that emerged. For example, the schools in the study did not vary greatly in their levels of diversity. Also, the diversity index was calculated at the school level which is problematic on two levels: 1) The data were taken from the Ministry of Education data set which contained limited indicators of ethnicity. For this reason, language spoken at home had to be used as a proxy for ethnic background, 2) The diversity index did not inform the study on an individual level. For example, is each participant part of a numerical majority ethnic group or a numerical minority? This is a variable that requires further attention in the future.

### Strengths and Limitations

There are a few cultural limitations that apply to the present study. The first is that translations were not available for participants and, although we never had any requests for translations and no issues surfaced related to language difficulties, the study would certainly be stronger if an option for translation had been available. Second, based on the data collected, it was not possible to distinguish between ethnic and racial difference. These are acknowledged to be distinct and although this study was not able to tap into those differences, future research that is able to look into this distinction will surely contribute a meaningful dimension of knowledge to racial and ethnic outcomes for adolescents and their conceptualizations of race and ethnicity. A third cultural limitation of this study was that the smaller racial/ethnic background groupings were not analyzed as individual groups because of their small numbers and as a result, were compiled into an Other Ethnicity category. In the future, a larger sample that will enable distinctions to be examined for these groups will be ideal. Small groups, such as Middle Eastern and African/Caribbean descent, are underrepresented in the schools and therefore in the current sample as well. Unfortunately, it is likely that these students are the ones who feel the least similar to their peers and as such, may be the most vulnerable to feeling as if they do not belong at school. It is worth noting that this trend was evident in the current data set, albeit insignificant with such small group sizes.

Although there were several ages represented, this was cross-sectional data and the usual limitations of cross-sectional research apply. Immigration research may be especially vulnerable to cohort effects. Immigration patterns are likely linked to political climates in both the host country and the countries of birth. In addition to this, such a design does not allow for causal

statements. Future research needs to use a longitudinal model in order to account for these methodological limitations.

It is argued that one of the strengths of the current study is the implication that some types and functions of social ties at school seem to be more salient in school belonging than others. In light of the dearth of research that focuses on the nature and quality of friendships at school (Osterman, 2000; Chen, 2001), these findings contribute to the notion that, indeed, it is important to conduct research that takes into account specific aspects of social ties at school. However, it is important to keep in mind that there is more to school belonging than simply social support and other contextual factors according to this study: Social support and Perceived Similarity only accounted for a fraction of the variance predicting School Belonging. It is of interest to know what other factors account for adolescents' sense of belonging at school. It would be particularly useful to continue to unpack the differential needs that adolescents who are new to Canada may have in relation to those who are not new. For example, the present study did not take into account all of the individual factors that may be pertinent to feeling a sense of belonging at school, such as academic success, English language mastery, and perceptions of discrimination.

Aside from the limitations, there are certainly unique contributions to highlight. The study did address many previous critiques found in the literature surrounding studies of this nature. For example, as noted above, social support was divided into types. This was helpful as it allowed specific types of social support to emerge as important to belonging at school while making it clear that other types were not. The study also distinguished between ethnicity, years in Canada, and generation status. It was clear from the results that these were distinct variables,



contributing to the argument that research should always separate them. A large sample size that included students from a variety of schools is also a strength of this study.

#### Future Directions and Conclusion

By considering all of the factors that impacted School Belonging in the present study, it is possible to create a profile of a student who would be most vulnerable to not feeling as they belonged at school. A student fitting this profile would be older, lone parented, of Asian descent, not entirely new to Canada, but also not feeling similar to the other students in his or her school. One group that has not yet received much attention in the literature is the group of adolescents who fall into the 2<sup>nd</sup> and even the 3<sup>rd</sup> generation Canadian category. The trends in the current study as well as in extant research seem to suggest that the gains made by the first generation may be lost by the second generation (for example, Harker, 2001). Future research needs to focus specifically on needs of further generations of newcomers (ie. 2<sup>nd</sup> and 3<sup>rd</sup> generation Canadians), and the factors that lead to their documented declines in achievement and perhaps social-emotional functioning at school. In tangent with this and, in light of the findings in the current study and past research that suggest immigration status is associated with positive outcomes and perhaps even a developmental advantage, future research needs to focus on disentangling the specific protective and resiliency factors that seem to be associated with this emerging pattern.

We know that overall the adolescents in the present study did generally feel as if they belonged at school, regardless of how new they were to Canada. However, from the moderation analysis it is clear that each generation has a different relationship between social support and school belonging. From this, I would argue for three main considerations, each of which will be important to researchers, practitioners, and policy-makers alike. First, the current study showed that it is not only peers who define adolescents' school belonging experience, but adults at school

as well. This is especially marked if adolescents are newer to Canada. It is important to keep in mind the substantial role that adults at school play in shaping the experiences and outcomes of students. For example, school psychologists and counselors need to be aware of the positive impact they may have on the lives of new young Canadians. A finding that is perhaps not as intuitive is that students who are born in Canada do not necessarily feel as if they belong and this may be an important insight for helping professionals in schools. Second, it is imperative to note the fact that although most students in the current study do seem to feel a sense of school belonging, there are certainly the adolescents who do not. It is essential to pay attention to these cases and consider why it is that these individuals are not having their needs met. Finally, we cannot assume that all adolescents need the same things from their school. Social contextual factors at school are evidently a substantial part of all adolescents' experience of school belonging. It is essential to keep in mind that some adolescents, such as those who are newer to Canada, have different social needs and, if we are to create exceptional schools that cater to the needs of individual students in a manner that will allow them to reach their full potential, then these findings must be considered.

## References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. London: Sage Publications.
- Anderman, L. H. (2003). Academic and social perceptions as predictors of change in middle school students' sense of belonging. *The Journal of Experimental Education, 72*, 5-22.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.
- Bellmore, A.D., Nishina, A., Witkow, M. R., Graham, S., & Juvonen, J. (2007). The influence of classroom ethnic composition on same- and other-ethnicity peer nominations in middle school. *Social Development, 16*, 720-740.
- Benner, A. D., & Graham, S. (2007). Navigating the transition to multi-ethnic urban high schools: Changing ethnic congruence and adolescents' school-related affect. *Journal of Research on Adolescence, 17*, 207-220.
- Bernt, T. J. (1981). Age changes and changes over time in prosocial intentions and behavior between friends. *Developmental Psychology, 17*, 408-416.
- Berry, J. W. (2003). Conceptual approaches to acculturation. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 17-37). Washington, DC: American Psychological Association.
- Berry, J. W., Poortinga, Y. H., Segall, M. H., & Dasen, P. R. (1992). *Cross-cultural psychology: Research and applications*. New York: Cambridge University Press.

- Beiser, M., Hou, F., Hyman, I., & Tousignant, M. (1998). *Growing Up Canadian: A study of immigrant children*. Applied Resource Branch, Strategic Policy: Human Resources Development Canada.
- Birman, D. (1994). Acculturation and human diversity in a multicultural society. In E. J. Trickett, R.J. Watts, & D. Birman (Eds.), *Human diversity: Perspectives on people in contexts* (pp. 261-284). San Francisco: Jossey-Bass.
- Certo, J. L., Cauley, K. M., & Chafin, C. (2003). Students' perspectives on their high school experience. *Adolescence*, 38, 705-724.
- Chen, X. (2001). Group social functioning and individual socioemotional and school adjustment in Chinese children. *Merrill-Palmer Quarterly*, 47(2), 264-299.
- Chiu, M. L., Feldman, S. S., & Rosenthal, D. A. (1992). The influence of immigration on parental behaviour and adolescent distress in Chinese families residing in two Western nations. *Journal of Research on Adolescence*, 2, 205-239.
- Chiu, Y.-W., & Ring, J.M. (1998). Chinese and Vietnamese immigrant adolescents under pressure: Identifying stressors and interventions. *Professional Psychology: Research and Practice*, 29, 444-449.
- Choi, G. (1997). Acculturative stress, social support, and depression in Korean American families. *Journal of Family Social Work*, 2, 81-97.
- Citizenship and Immigration Canada (2005). *Facts and figures: Immigrant overview, permanent and temporary residents*. Ottawa, ON: Citizenship and Immigration Canada, Research and Evaluation Branch.

- Citizenship and Immigration Canada (2006). *Final report: G8 experts roundtable on diversity and intergration*. The metropolis secretariat, Citizenship and Immigration Canada. Retrived on Sept. 31, 2007, from [http://canada.metropolis.net/publications/G8\\_Report\\_Eng.pdf](http://canada.metropolis.net/publications/G8_Report_Eng.pdf).
- Cohen, E. G. (1982). Expectation states and interracial interaction in school settings. *Annual Review of Sociology*, 8, 209-235.
- Coleman, J. (1961). *The adolescent society*. Glencoe, New York.
- Dion, K. L., & Dion, K. K. (1996) Chinese adaptation to foreign cultures. In M. H. Bond (Ed.). *The handbook of Chinese psychology* (pp. 457-478). New York: Oxford University.
- Duncan G. J., & Brooks-Gunn, J. (2003). Family poverty, welfare reform, and child development. *Child Development*, 71, 188-196.
- Eccles, J., & Midgley, C. (1989). Stage/environment fit: Developmentally appropriate classrooms for early adolescents. In R. Ames & C. Ames (Eds.), *Research on motivation in education (Vol 3)*, 139-186. NY: Academic Press.
- Edmonston, B., & Passel, J. S. (1994). Ethnic demography: U.S. immigration and ethnic variations. B. Edmonston & J. S. Passel (Eds.), *Immigration and ethnicity*. Urban Institute Press.
- Elias, M.J. (2006). The connection between academic and social-emotional learning. In M. J. Elias, & H. Arnold (Eds.), *The Educator's Guide to Emotional Intelligence and Academic Achievement*. Thousand Oaks, CA: Corwin Press.
- Erikson, E. H. (1964). *Insight and responsibility*. New York: Norton.

- Faircloth, B. S., & Hamm, J. V. (2005). Sense of belonging among high school students representing 4 ethnic groups. *Journal of Youth and Adolescence, 34*, 293-309.
- Finn, J. (1989). Withdrawing from school. *Review of Educational Research, 59*, 117-142.
- Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the burden of "acting white." *Urban Review, 18*, 176-206.
- Fuligni, A. J. (1997). The academic achievement of adolescents from immigrant families: The roles of family background, attitudes, and behavior. *Child Development, 68*, 351-363.
- Fuligni, A. J. (2001). A comparative longitudinal approach to acculturation among children from immigrant families. *Harvard Educational Review, 71*, 66-78.
- Furman, W., & Buhrmester, D (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103-115.
- Gallander Wintre, M. G., Sugar, L. A., Yaffe, M., & Costin, D. (2000). Generational status: A Canadian response to the editors' consortium statement with regards to race/ethnicity. *Canadian Psychology, 41*, 244-256.
- Georgiades, K., Boyle, M.H., Duku, E. (2007). Contextual influences on children's mental health and school performance: The moderating effects of family immigrant status. *Child Development, 78*, 1572-1591.
- Goleman, D. (2006). *Social intelligence*. New York: Bantam.
- Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools, 30*, 79-90.
- Hagan, J.M. (1998). Social networks, gender, and immigrant incorporation: Resources and restraints. *American Sociological Review, 63*, 55-67.

- Harker, K. (2001). Immigrant generation, assimilation, and adolescent psychological well-being. *Social Forces*, 79, 969-1004.
- Hartup, W. W. (1992). Social relationships and their developmental significance. *American Psychologist*, 44, 120-126.
- Horenczyk, G., & Tata, M. (1998). Friendship expectations among immigrant adolescents and their host peers. *Journal of Adolescence*, 21, 69-82.
- Hymel, S., Schonert-Reichl, K., & Miller, L. (2006). Reading, 'riting, 'rithmetic and relationships: Considering the social side of education. *Exceptionality Education Canada*, 16(2-3), 149-192.
- Ishiyama, F. I. (1989). Understanding foreign adolescents' difficulties in cross-cultural adjustment: A self-validation model. *Canadian Journal of School Psychology*, 5, 41-56.
- Jackson, M., Barth, J. M., Powell, N., & Lochman, J. E. (2006). Classroom contextual effects of race on children's peer nominations. *Child Development*, 77, 1325-1337.
- Jules, V. (1991). Interaction dynamics of cooperative learning groups in Trinidad's secondary schools. *Adolescence*, 26, 931-949.
- Kao, G., & Joyner, K. (2006). Do Hispanic and Asian adolescents practice panethnicity in friendship choices? *Social Science Quarterly*, 87, 972-993.
- Kinderman, T. A. (1993). Natural peer groups as contexts for individual development: The case for children's motivation in school. *Developmental Psychology*, 29, 970-977.
- Kinderman, T. A. (1996). Strategies for the study of individual development within naturally-existing peer groups. *Social Development*, 5, 158-173.

- Krishnan, A., & Berry, J.W. (1992). Acculturative stress and acculturation attitudes among Indian immigrants to the United States. *Psychology and Developing Societies, 4*, 187-212.
- Kuo, B. C. H., & Roysircar, G. (2004). Predictors of acculturation for Chinese adolescents in Canada: Age of arrival, length of stay, social class, and English reading ability. *Journal of Multicultural Counselling and Development, 32*, 143-154.
- Ladd, G. W. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: Predictors of children's early school adjustment? *Child Development, 61*, 1081-1100.
- Liebkind, K., & Jasinskaja-Lahti, I. (2000). Acculturation and psychological well-being among immigrant adolescents in Finland: A comparative study of adolescents from different cultural backgrounds. *Journal of Adolescent Research, 15*, 446-469.
- Liedloff, J. (1986). *The continuum concept*. Penguin, London.
- Lee, S. J. (2001). More than "model minorities" or "delinquents": A look at Hmong American high school students. *Harvard Educational Review, 71*, 505-528.
- Leventhal, T., Xue, Y., & Brooks-Gunn, J. (2006). Immigrant differences in school-age children's verbal trajectories: A look at four racial/ethnic groups. *Child Development, 77*, 1359-1374.
- Madhavappallil, T. & Choi, J. B. (2006). Acculturative stress and social support among Korean and Indian immigrant adolescents in the United States. *Journal of Sociology & Social Welfare, 33*, 123-143.



- Maehr, M. L., & Midgley, C. (1996). *Transforming school cultures*. Boulder, CO: Westview Press.
- Masten, A. S., & Coastworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lesson from research on successful children. *American Psychologist, 53*, 205-220.
- McDougall, P., Hymel, S., Vaillancourt, T., & Mercer, L. (2001). The consequences of childhood peer rejection. In M. Leary (Ed.), *Interpersonal rejection* (pp. 213-247). NY: Oxford University Press.
- McKay, A. (1999). *Healthy connections: Listening to BC youth, highlights from the adolescent health survey II*. Burnaby, BC: The McCreary Centre Society.
- Midgley, C., Feldlaufer, H., & Eccles, J. (1989). Student/teacher relations and attitudes toward mathematics before and after the transition to junior high school. *Child Development, 60*, 981-992.
- Morrison, G. M., Laughlin, J., San Miguel, S. S., Smith, D. C., & Widaman, K. (1996). Sources of support for school-related issues: Choices of Hispanic adolescents varying in Migrant status. *Journal of Youth and Adolescence, 26*, 233-252.
- National Research Council. (2007). *Understanding interventions that encourage minorities to pursue research careers: Summary of a workshop*. Retrieved October 10, 2008, from [http://dels.nas.edu/dels/rpt\\_briefs/MORE\\_workshop\\_final.pdf](http://dels.nas.edu/dels/rpt_briefs/MORE_workshop_final.pdf)
- Ogbu, J. U. (1994). From cultural difference to differences in cultural frame of reference. In P.M. Greenfield & R.R. Cocking (Eds.), *Cross-cultural roots of minority child development* (pp. 365-392). Hillsdale, NJ: Erlbaum.

- Onyekwuluje, A. B. (1998). Multiculturalism, diversity, and the impact parents and schools have on societal race relations. *The School Community Journal*, 8, 55-71.
- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, 70, 323-367.
- Pena, E.D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child Development*, 78, 1255-1264.
- Phan, T. (2003). Life in school: Narratives of resiliency among Vietnamese Canadian youths. *Adolescence*, 38, 555-566.
- Phelan, P., Yu, H.C., & Davidson, A. (1994). Navigating the psychosocial pressure of adolescence: The voices and experiences of high school youth. *American Educational Research Journal*, 31, 415-447.
- Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues*, 57, 493-510.
- Pile, S., & Thrift, N. (1995). *Mapping the subject: Geographies of cultural transformation*. London: Routledge.
- Piaget, J. (1932). *The moral judgment of the child*. Glencoe, IL: Free Press.
- Quillan, L., & Campbell, M.E. (2003). Beyond black and white: The present and future of multiracial friendship segregation. *American Sociological Review*, 68, 540-556.
- Quintana, S. M., Aboud, F. E., Chao, R. K., Contreras-Grau, J., Cross Jr., W. E., Hudley, C., et al., (2006). Race, ethnicity, and culture in child development: Contemporary research and future directions. *Child Development*, 77, 1129-1141.

- Raffo, C., & Reeves, M. (2000). Youth transitions and social exclusion: Developments in social capital theory. *Journal of Youth Studies*, 3, 147-166.
- Rich, Y., Ari, R. B., Amir, Y., & Eliassy, L. (1996). Effectiveness of schools with a mixed student body of natives and immigrants. *International Journal of Intercultural Relations*, 20, 323-339.
- Rotheram, M. J., & Phinney, J. (1987). Introduction: Definitions and perspectives in the study of children's ethnic socialization. J. Phinney & M.J. Rotheram. (Eds.), *Children's ethnic socialization: Pluralism and Development* (pp. 10-28). Beverley Hills, CA: Sage.
- Rubin, K.H., Bukowski, W., & Parker, J.G. (1998). Peer interactions, relationships, and groups. In N. Eisenberg (Ed.), *Handbook of child psychology: Volume 3. Social, emotional, and personality development* (pp. 619-700). New York: Wiley.
- Rumbaut, R. G. (1996).
- Rumbaut, R. G. (1997). The crucible within: Ethnic identity, self-esteem, and segmented Assimilation among children of immigrants. In A. Portes (Ed.), *The new second generation* (pp. 119-170). Russel Sage Foundation.
- Rumbaut, R. G. (2008, April). *Divergent destinies: Acculturation, social mobility, and adult transitions among Latin American and Asian immigrants*. Invited address at the meeting of the Society for Research on Adolescence, Chicago, USA.
- Rumberger, R.W. (1995). Dropping out of middle school: A multi-level analysis of students and schools. *American Educational Research Journal*, 32, 583-625.
- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, 63, 397-427.

- Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development, 72*, 1135-1150.
- Sam, D. I., & Berry, J. W. (1995). Acculturative stress among young immigrants in Norway. *Scandinavian Journal of Psychology, 36*, 10-24.
- Schneider, B. H., Dixon, K., & Udvari, S. (2007). Closeness and competition in the inter-ethnic and co-ethnic friendships of early adolescents in Toronto and Montreal. *Journal of Early Adolescence, 27*, 115-138.
- Sebald, H. (1989). Adolescents' peer orientation: Changes in the support system during the past three decades. *Adolescence, 96*, 937-946.
- Segal, U. A. (1991). Cultural variables in Asian Indian families. *Families in Society: The Journal of Contemporary Human Services, 72*, 233-240.
- Simpson, E. (1949). Measurement of diversity. *Nature, 163*, 688.
- Simpson, K., Janssen, I., Craig, W. M., Pickett, W. (2005). Multi-level analysis of associations between socio-economic status and injury among Canadian adolescents. *Journal of Epidemiology and Community Health, 59*, 1072-1077.
- Sonderegger, R., Barrett, P. M., & Creed, P.A. (2004). Models of cultural adjustment for child and adolescent migrants to Australia: Internal process and situational factors. *Journal of Child and Family Studies, 13*, 357-371.
- Sullivan, H.S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Chicago: Allyn and Bacon.
- Tatum, B.D. (1999). *Why are all the Black kids sitting together in the cafeteria? and other conversations about race*. New York: Basic Books.

- Tsai, H-S., J. (2006). Xenophobia, ethnic community, and immigrant youths' friendship network formation. *Adolescence*, 41, 285-298.
- Tseng V. (2004). Family interdependence and academic adjustment in college: Youth from immigrant and U.S.-born families. *Child Development*, 75, 966-983.
- Van der Zee, K., Buunk, B., & Sanderman, R. (1997). Social support, locus of control, and psychological well-being. *Journal of Applied Social Psychology*, 27, 842-1859.
- Vedder, P., Boekarts, M., & Seegers, G. (2005). Perceived social support and well-being in school: The role of students' ethnicity. *Journal of Youth and Adolescence*, 34, 269-278.
- Venger, A., & Kozulin, A. (1993). Educational and psychological problems of children who recently immigrated to Israel from the USSR. *The International Center for the Advancement of Learning Potential*, 1, 6-7.
- Ward, C., & Searle, W. (1991). The impact of value discrepancies and cultural identity on psychological and sociocultural adjustment of sojourners. *International Journal of Intercultural Relations*, 15, 209-225.
- Watson, M., Battistich, V., & Solomon, D. (1997). Enhancing students' social and ethical development in school: An intervention program and its effects. *International Journal of Educational Research*, 27, 571-586.
- Wenz-Gross, M., Siperstein, G. M., Untch, A. S., & Widaman, K. F. (1997). Stress, social support, and the adjustment of adolescents in middle school. *Journal of Early Adolescence*, 17, 129-151.

- Yeh, C. J., Ma, P-W., Maden-Bahel, A., Hunter, C. D., Jung, S., Kim, A. B., Akiyata, K., & Sasaki, K. (2005). The cultural negotiations of Korean immigrant youth. *Journal of Counseling & Development, 83*, 172-182.
- Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H.J. (2004). The scientific base linking social and emotional learning to school success. In J.E. Zins, R.P. Weissberg, M.C. Wang, H.J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.

## Appendix A. Demographic information

1. What is the name of your school? \_\_\_\_\_

2. What grade are you in?  5  6  7  8  9  10  11  12

3. What is your birthday? Day\_\_\_\_Month\_\_\_\_Year\_\_\_\_\_

4. Are you a boy or a girl?  Boy  Girl

5. What is your racial/ethnic background? Choose one.

My racial/ethnic background is:

- Aboriginal (e.g. First Nations, Non-Status Indian, Inuit, Métis)
- African/Caribbean (e.g. Black)
- Asian (e.g. Cambodian, Chinese, Japanese, Korean, Taiwanese, Thai, Vietnamese, Filipino)
- South Asian (e.g. East-Indian, Pakistani)
- Caucasian (e.g. White, European, Russian)
- Latin American (e.g. Mexican, Portuguese, South American)
- Middle Eastern (e.g. Arabic, Iranian, Kuwaiti, Persian, Turkish, Israeli,

Palestinian)

- My racial/ethnic background is mixed. Please describe.

\_\_\_\_\_

- I don't know.

6. What country were you born in? \_\_\_\_\_

7. What country were your parents born in? \_\_\_\_\_

**\*If you were born in Canada, skip to question 10.**

8. If you were NOT born in Canada, how long have you lived here?

I have lived in Canada for \_\_\_\_\_ years.

9. If you were born in another country, did you come to Canada as a (please check one):

- Immigrant (chose to come to Canada)
- Refugee (could not stay in your native country)
- International Student (studying in Canada)
- I don't know

10. What language(s) are spoken at home? \_\_\_\_\_

11. What are the *first 3 digits* of your postal code at your home? \_\_\_\_\_

12. What is the highest level of education that *you would like* to complete? Choose one.

- Not finish high school
- High school graduation
- Training/apprenticeship program (like carpentry, computer training, legal assistant)
- Some college/university classes
- College diploma
- University/bachelor degree (undergraduate)
- Masters degree
- Professional degree (like lawyer, nurse, architect)
- Doctoral degree

13. Which of these adults do you live with MOST OF THE TIME? (**Check all the adults you live with**).

- |   |                                      |   |
|---|--------------------------------------|---|
| <input type="checkbox"/> Mother                                   | <input type="checkbox"/> Grandmother | <input type="checkbox"/> ½ Mom, ½ Dad     |
| <input type="checkbox"/> Father                                   | <input type="checkbox"/> Grandfather | <input type="checkbox"/> Foster parent(s) |
| <input type="checkbox"/> Stepfather                               | <input type="checkbox"/> Stepmother  |   |
| <input type="checkbox"/> Other adults (please tell us who): _____ |                                      |   |



14. What level of education do your parents have?

<b>Mom (or female caregiver)</b>	<b>Dad (or male caregiver)</b>
<input type="checkbox"/> <b>I don't have a mom or female caregiver</b>	<input type="checkbox"/> <b>I don't have a dad or male caregiver</b>
<input type="checkbox"/> Not finished high school	<input type="checkbox"/> Not finished high school
<input type="checkbox"/> High school graduation	<input type="checkbox"/> High school graduation
<input type="checkbox"/> Training/apprenticeship program (like carpentry, computer training)	<input type="checkbox"/> Training/apprenticeship program (like carpentry, computer training)
<input type="checkbox"/> Some college/university classes	<input type="checkbox"/> Some college/university classes
<input type="checkbox"/> College diploma	<input type="checkbox"/> College diploma
<input type="checkbox"/> University/bachelor degree (undergraduate)	<input type="checkbox"/> University/bachelor degree (undergraduate)
<input type="checkbox"/> Masters degree	<input type="checkbox"/> Masters degree
<input type="checkbox"/> Professional degree (like lawyer, nurse, architect)	<input type="checkbox"/> Professional degree (like lawyer, nurse, architect)
<input type="checkbox"/> Doctoral degree	<input type="checkbox"/> Doctoral degree
<input type="checkbox"/> I don't know	<input type="checkbox"/> I don't know

15. What job(s) do your parents have?

<b>Mom (or female caregiver)</b>	<b>Dad (or male caregiver)</b>

## Appendix B. School Social Context Questionnaire (SSCQ)

The following questions will ask about the types of support you feel you get from adults, your peers, and your school

Adult

34. In the box, tell us how many *adults at school* are you comfortable going to for help with *school work*? (For example, help with homework or projects):

35. Of the <i>ADULTS</i> at school you feel comfortable going to for help with <i>SCHOOL WORK</i> , how many of them:		None of them	Mostly none	Half of Them	Most of them	All of them	I don't know
a	Were born in another country? For example, they were immigrants or refugees.						
b	Speak the same language at home as you?						
c	Are the same ethnicity as you? For example Asian or Caucasian.						
d	Were born in the same country as you?						

36. In the box tell us how many *adults at school* are you comfortable going to for *personal* help? (For example, when you need someone to talk to when you are mad, sad, or stressed):

37. Of the <i>ADULTS AT SCHOOL</i> you feel comfortable going to for <i>PERSONAL</i> help, how many of them:		None of them	Mostly none	Half of Them	Most of them	All of them	I don't know
a	Were born in another country? For example, they were immigrants or refugees.						
b	Speak the same language at home as you?						
c	Are the same ethnicity as you? For example Asian or Caucasian.						
d	Were born in the same country as you?						

<b>38.</b> Are the <b>adults</b> you would go to for <i>school work</i> help and <i>personal</i> help the same people? (Circle One)	No, not at all	Mostly no	Half of Them	Mostl y yes	Yes, all of the them	Not applica ble
--	----------------------	--------------	--------------------	----------------	----------------------------	-----------------------

**Peer-At School**

**39.** In the box, tell us how many *peers at school* are you comfortable going to for *school-related* help (For example, help with homework or projects):

<b>40. Of the PEERS AT SCHOOL you feel comfortable going to for SCHOOL RELATED help, how many of them:</b>		Non e of them	Mostl y none	Half of Them	Most of them	All of them	I don't know
A	Were born in another country? For example, they were immigrants or refugees.						
B	Speak the same language at home as you?						
C	Are the same ethnicity as you? For example Asian or Caucasian.						
D	Were born in the same country as you?						

**41.** How many *peers at school* are you comfortable going to for *personal* help? (For example, when you need to talk to someone when you are mad, sad, or stressed).

<b>42. Of the PEERS AT SCHOOL you feel comfortable going to for PERSONAL HELP, how many of them:</b>		Non e of them	Mostl y none	Half of Them	Most of them	All of them	I don't know
A	Were born in another country? For example, they were immigrants or refugees.						
B	Speak the same language at home as you?						
C	Are the same ethnicity as you? For example Asian or Caucasian.						
D	Were born in the same country as you?						

43. How many *peers* are you comfortable *hanging out with at school?* (For example, at lunch breaks):

44. Of the PEERS AT SCHOOL do you feel comfortable <i>HANGING OUT WITH</i> , how many of them:		None of them	Mostly none	Half of Them	Most of them	All of them	I don't know
A	Were born in another country? For example, they were immigrants or refugees.						
B	Speak the same language at home as you?						
C	Are the same ethnicity as you? For example Asian or Caucasian.						
D	Were born in the same country as you?						

45. Are the peers you would go to for school help, personal help, or to hang out with, at school, the same people? (Circle One)	No, not at all	Mostly no	Half of Them	Mostly yes	Yes, all of the them	Not applicable

### School composition

46. Thinking about the STUDENTS in your ENTIRE SCHOOL, how many people would you say:		None of them	Mostly none	Half of Them	Most of them	All of them	I don't know
A	Were born in another country? For example, they were immigrants or refugees.						
B	Speak the same language at home as you?						
C	Are the same ethnicity as you? For example Asian or Caucasian.						
D	Were born in the same country as you?						
47. Thinking about all of the ADULTS in your school, how many of the ADULTS would you say:		None of them	Mostly none	Half of Them	Most of them	All of them	I don't know

A	Were born in another country? For example, they were immigrants or refugees.						
B	Speak the same language at home as you?						
C	Are the same ethnicity as you? For example Asian or Caucasian.						
D	Were born in the same country as you?						

## Appendix C. The Psychological Sense of School Membership Scale (PSSM)

48.		Not at all true (1)	(2)	Somewhat true (3)	(4)	Complete ly true (5)
A	I feel like a real part of my school.					
B	People here notice when I am good at something.					
C	It is hard for people like me to be accepted here.					
D	Other students in this school take my opinions seriously.					
E	Most teachers at my school are interested in me.					
F	Sometimes I feel as if I don't belong here.					
G	There's at least one teacher or adult in this school I can talk to if I have a problem.					
H	People in this school are friendly to me.					
I	Teachers here are not interested in people like me.					
J	I am included in lots of activities at my school.					
K	I feel very different from most other students here.					
L	I can really be myself at this school.					
M	I am treated with as much respect as the other students.					
N	The teachers here respect me.					
O	People here know I can do good work.					
P	I wish I were in a different school.					
Q	I feel proud of belonging to my school.					
R	Other students here like me the way I am.					

## Appendix D

Table 11

*Correlation Matrix for all variables in the regression models*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Grade		.03	.01	-.32**	.42**	.21**	.46**	.18**	.05	-.12**	.15**	.08*	.20**	-.01
2. Lone Parent			.15**	-.07	-.07	-.02	.00	-.06	.00	.01	-.07*	-.07	-.03	-.10**
3. Other-Ethnicity				-.40**	.03	.11**	.06	-.23**	-.04	.03	-.10**	-.03	-.07*	.02
4. Asian Ethnicity					-.32**	-.63**	-.58**	-.12**	-.09*	-.05	.01	-.11**	-.18**	-.12**
5. Years in Canada						.66**	.32**	.23**	.04	-.10*	.08*	.05	.21**	.04
6. Generation Status							.49**	.31**	.04	.01	.01	.05	.15**	.06
7. School Diversity								.30**	.05	-.02	.02	.07	.13**	.07
8. Perceived Similarity									.01	-.07	.10*	.04	.13**	.09*
9. Adult-School Help										.54**	.41**	.31**	.28**	.29**
10. Adult-Personal Help											.26**	.33**	.10**	.30**
11. Peer-School Help												.60**	.55**	.27**
12. Peer-Personal Help													.46**	.26**
13. Peer-Hanging Out														.27**
14. School Belonging														

\*p&lt;.05, \*\*p&lt;.01



The University of British Columbia  
Office of Research Services  
**Behavioural Research Ethics Board**  
Suite 102, 6190 Agronomy Road, Vancouver, B.C. V6T 1Z3

## CERTIFICATE OF APPROVAL - FULL BOARD

<b>PRINCIPAL INVESTIGATOR:</b> Jennifer Shapka	<b>INSTITUTION / DEPARTMENT:</b> UBC/Education/Educational & Counselling Psychology, and Special Education	<b>UBC BREB NUMBER:</b> H07-01219
<b>INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:</b>		
<b>Institution</b>		<b>Site</b>
UBC		Vancouver (excludes UBC Hospital)
Other locations where the research will be conducted: N/A		
<b>CO-INVESTIGATOR(S):</b> Danielle M. Law		
<b>SPONSORING AGENCIES:</b> Social Sciences and Humanities Research Council of Canada (SSHRC) - "The Unsupervised Playground: An Empirical Study of Cyberbullying"		
<b>PROJECT TITLE:</b> Social Responsibility on the Internet		
<b>REB MEETING DATE:</b> November 8, 2007	<b>CERTIFICATE EXPIRY DATE:</b> November 8, 2008	
<b>DOCUMENTS INCLUDED IN THIS APPROVAL:</b>		<b>DATE APPROVED:</b> December 3, 2007
<b>Document Name</b>	<b>Version</b>	<b>Date</b>
<b>Consent Forms:</b>		
Parental Consent	N/A	November 10, 2007
<b>Assent Forms:</b>		
Student Assent Form	N/A	November 10, 2007
<b>Questionnaire, Questionnaire Cover Letter, Tests:</b>		
Secondary Safe School and Social Responsibility Survey 2006	N/A	January 1, 2006
Interview questions	N/A	September 1, 2007
Social Responsibility on the Internet	N/A	October 17, 2007
<b>Letter of Initial Contact:</b>		
Letter for secondary use of data	N/A	September 1, 2007
Letter seeking VSB approval	N/A	September 1, 2007
The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.		
Approval is issued on behalf of the Behavioural Research Ethics Board and signed electronically by one of the following:		



<https://rise.ubc.ca/rise/Doc/0/BD08KJNMKRCKJ7JQ8AER7J8V58/...>

Dr. M. Judith Lynam, Chair  
Dr. Jim Rupert, Associate Chair  
Dr. Laurie Ford, Associate Chair