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Parental attachment, caretaking responsibilities and self-efficacy
in the adjustment of Canadian immigrants

by

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Abstract

As immigrant families move to a new country, immigrant youth become integral to the well-being of their family. The myriad of responsibilities they undertake places them in empowering yet overwhelming positions within their families. The present study assessed the retrospective effects of adolescent responsibilities and parent-adolescent attachment on first-year university academic and social adjustment among immigrant youth who grew up in Canada. Secondly, the study examined whether adolescent responsibilities and parent-adolescent attachment had an effect on general, academic and social self-efficacy beliefs. Group differences on gender, generation and, birth order were investigated on all measures. Results indicated that different groups of family responsibilities were related to some dependent measures. Secondly, results showed that first-generation compared to second-generation immigrants differed on parent attachment, general and academic self-efficacy, academic adjustment and being a translator aide to their family. Findings are discussed and related to existing research pertaining to parentification. Implications of the study are discussed.

Table of Contents

List of Tables

List of Figures

CHAPTER I

Introduction

Background

As immigrant families move to a different country, many must deal with a myriad of factors tied to settlement. The integration into the new culture includes learning its values, beliefs and customs (Morales & Hanson, 2005) while overcoming obstacles such as language barriers, lack of a social network, and an inability to secure employment in the new country. This process is referred to as acculturation (Berry, 1999). Due to the stress and culture shock involved in acculturation, families may experience depression, anxiety, alienation, identity confusion and marginalization (Williams & Berry, 1991).

Often, it becomes difficult for parents to negotiate among the social, personal and financial caretaking responsibilities needed to maintain the positive well-being of a family. The multitude of responsibilities due to the migratory and settlement process can be cumbersome and overwhelming for parents. As a result, role reversals often occur within the family whereby youth must undertake parental roles to alleviate the caretaking stressors experienced by their parents (Janzen & Ochocka, 2003). The additional aid provided by immigrant youth can help ease the strains for parents accompanied by the transitory process of adapting to the new country. However, aiding their parents may be taxing for immigrant youth who must overcome personal difficulties such as language barriers and identity issues.

The present study examines the roles of past adolescent responsibilities and parent-adolescent attachment on first-year university adjustment for immigrant youth who grew up in Canada. As well, this study investigates the role of self-efficacy beliefs

in explaining the relationship between these three variables. First, the study examines the effects of adolescent responsibilities in the context of strong parent-adolescent bonds on three self-efficacy beliefs: general, academic and social. Second, the study investigates the association between these three self-efficacy beliefs on two indices of university adjustment: social and academic adjustment. Lastly, the study investigates the relationship between past parent-adolescent attachment and present social and academic adjustment.

Immigrant youth as assets

In immigrant households, often parents rely on their children to fulfill roles such as taking care of siblings, aiding with reading and speaking tasks that require translation, completing chores around the house, and working with their parents (Fuligni, Yip, & Tseng, 2002; Valenzuela, 1999; Walsh, Shulman, Shmuel, Bar-On, Tsur, 2006). Older and first-generation immigrant youth are frequently entrusted to caretaking responsibilities in the household (Fuligni et al, 1999; Tseng, 2004; Valenzuela, 1999). Parents' dependence on children is often due to a lack of English proficiency skills and difficulty in acclimatizing to the new culture (Janzen & Ochocka, 2003; Tseng, 2004). As a result, immigrant youth, particularly the eldest children are often forced to grow up faster in order to take care of the well-being of the family and to have an adult-like relationship with their parents (Janzen & Ochocka, 2003).

Responsibilities and outcomes

The implications of caretaking responsibilities have been linked to various indices of educational and psychological outcomes in immigrant children, youth, and young adults. In studies investigating the role of adolescents' attitudes towards family

responsibilities, Fuligni and his colleagues (Fuligni et al. 1999; Fuligni & Pederson, 2002) found that high family values and strong expectations of helping out one's family are associated with low grades in school. Tseng (2004) suggests that spending time fulfilling family obligations can detract young adults from their school achievement. Likewise, studies by Morse, Stockwell, Canedy, Espiritu, Lee, Ginorio and, Huston found that excessive duties were perceived by immigrant girls as burdensome and as a hindrance to their educational achievement (cited in Suarez-Orozco & Qin, 2006).

However, there have been positive effects for children who are translators and interpreters for their families. These benefits include perceiving social self-efficacy, feeling independent, and feeling motivated to learn English (Buriel, Perez, DeMent, Chavez & Morgan, 1998; Morales & Hanson, 2005; Weisskirch, 2005). As well, Walsh et al (2006) found that immigrant adolescents who reported a high level of acting like a spouse or confidante to their parents was related to using more positive coping strategies to deal with stressful events. Further steps in research must be taken to identify variables that can help to explain and differentiate between the positive and negative outcomes associated with caretaking responsibilities.

Responsibilities and family environment

Several authors indicate the significant role of a healthy family environment in the relationship between caretaking responsibilities and positive outcomes for immigrant youth (Kaur & Mills, 1993; Weisskirch, 2005; Walsh et al, 2006). In particular, Walsh et al (2006) found that immigrant youth tended to be responsible adults in family environments characterized as being cohesive and supporting individual independence. Further, they found that the combination of partaking in responsible adult-like roles while

having a close relationship with parents is related to higher functioning among immigrant adolescents.

Adolescent attachment

Research has shown that parent-adolescent attachment is usually associated with general adolescent adjustment (Rice, 1990). In a meta-analysis, Rice (1990) found consistent relationships across a sample of studies between healthy parent-adolescent attachment and measures of interpersonal functioning, general life satisfaction and social competence among late adolescents. Attachment theorists argue that quality attachment relations promote adaptive functioning in different contexts (Bowlby, 1982; Sroufe, 1979). The ability to be confident, explore one's environment, and become independent stems from parents or caregivers who are sources of nurturance and affection: a secure base (Hetherington & Parke, 1999). Attachment security provides the resource for mastery so that children are less likely to respond to challenges with disappointment and helplessness (cited from Armsden & Greenberg, 1987). Parent-adolescent attachment relationships can serve the adaptive function of providing a secure base from which adolescents can explore their environment and adapt to college (Hombreck & Wandrei, 1993; Papini & Roggman, 1992). Several studies have found associations between healthy parent-adolescent attachment and college adjustment (Kenny & Donaldson, 1991, 1992; Hombreck & Wandrei, 1993).

Self-efficacy

Early efficacious experiences begin in the home where parents respond to their children's needs. Home environments that provide activities to stimulate children's curiosity are opportunities for mastery experience, in turn promoting the development of

strong self-efficacy beliefs – the belief in one's capabilities to perform at a certain level (Bandura, 1997). It is through exploratory experiences in varied environments that children develop a sense of self-efficacy through the recognition that their actions can produce a result. Parents who ensure that their children experience success in controlling their environment and can produce their effects through their actions become more competent in learning successful responses (Bandura, 1997).

Research has shown that self-efficacy beliefs are associated with positive success in the social and academic domains (Bandura, 1997; Mak & Tran, 2001; Robbins, Lauver, Le, Davis, Langley, & Carlstrom, 2004; Wei, Russell, & Zakalik, 2005). In stressful life transitions, self-efficacy can serve as a protective resource against deleterious experiences, health impairment and negative emotions (Jerusalem & Mittag, 1995).

University adjustment

University is a stressful transition period that has been considered by most first-year students as a dramatic change in their lives (Shaver, Furman, Buhrmester, 1982). Many changes in this period include the creation of new social networks, attending large lecture classes, and moving into a dormitory. University adjustment for immigrants, particularly those who are visible minorities can be a difficult process. They may face pressures that include discrimination and suffer from low self- esteem and stress compared to their native counterparts (Grayson, 1997; Wintre et al, 2000). Immigrants may be likely to engage in diverse college student settings and they often perceive the environment as less supportive (Pike & Kuh, 2005). While grade point averages (GPA)

may be high, social involvement in campus and cultural activities can be minimal as social activities are perceived to be distractors (Grayson, 1997).

Statement of the problem

Research suggests that positive outcomes from partaking in adult-like responsibilities as an adolescent are associated with a healthy family environment and strong parent-child attachment bonds (Kaur & Mills, 1993; Weisskirch, 2005; Walsh et al, 2006). Social self-efficacy beliefs are associated with carrying out these adult-like responsibilities (Buriel et al, 1998). At this point, no research has assessed whether strong parent-child attachment bonds are related to self-efficacy beliefs. Many studies include samples that range from early to late adolescents (Buriel et al, 1998; Kaur & Mills, 1993; Walsh et al, 2006; Valenzuela, 1999). The few studies that involve young adults in university settings assess their attitudes towards fulfilling caretaking responsibilities and their feelings towards their family members. As well, most of the existing research assesses the contemporaneous effects of immigrant youth partaking in adult responsibilities. Those that are retrospective are qualitative and limited to American samples from certain ethnicities such as Latinos (McQuillan & Tse, 1995; Valenzuela, 1999).

The present study will investigate the effects of adolescent responsibilities and parent-adolescent attachment on first-year university adjustment via self-efficacy beliefs among immigrant youth who grew up in Canada. This is a retrospective study designed to assess the implications of past adolescent responsibilities on present young adult adjustment. First, the study examines whether the effects of adolescent responsibilities in the context of strong parent-adolescent bonds is related to self-efficacy beliefs in three

areas: general, academic and social. Second, the study investigates whether self-efficacy beliefs are associated with better university adjustment in two domains: social and academic. Third, the study will assess whether past healthy parent-adolescent attachment is related to better social and academic adjustment. Lastly, this study will test whether these three relationships differ depending on background characteristics such as birth order, gender, and generational status.

CHAPTER II

Review of the Literature

In the settlement of immigrant families, children are usually seen as assets who are integral to the well-being of families (Orellana, Dorner & Pulido, 2003; Orellana, 2003; Valenzuela, 1999). Children's value to parents varies from being an interpreter of the language and culture, taking care of siblings to working in the family business. The range and nature of these roles vary as they are contingent on factors such as the social capital available to the family, financial stability of the family, and the English fluency of parents. This chapter examines the literature on the diverse roles that immigrant youth partake in as their families integrate into a new culture, risks and benefits, and the protective factors that promote healthy development on immigrant youth. The roles of attachment and efficacy beliefs will be discussed in the context of adaptive adjustment.

Aides in the adjustment process for families

Immigration in Canada

According to the most recent 2006 Canadian census, 1,109, 980 immigrants came to Canada from 2001 to 2006. Of this population, 103,685 immigrants came to reside in Alberta. The three major ethnic groups came from the following countries: China, India and the Philippines. In total, of the 3 million residents in Alberta 527,030 are foreign-born. Amongst the immigrant population in Alberta, 208,650 reported that their first language spoken at home is neither English nor French.

As there are many immigrant groups that migrate to Canada, individuals can be categorized under two main headings: immigrant or refugee. An immigrant is defined as an individual who is born outside of Canada and has migrated for the purpose of

settlement. There are different categories that apply to individuals who enter Canada and are the following: a) skilled workers and professionals, b) investors, entrepreneurs and self-employed persons, c) family, d) provincial nominees and, e) Quebec-selected skilled workers. A refugee refers to an individual who is unable or, unwilling to return to his/her native country because of feelings of persecution or is at risk of torture or cruel punishment. Such an individual is sponsored by the U.N. or the Canadian government but can be sponsored by groups or individuals. There are also international students who belong to a class of individuals called temporary residents. Other individuals in this group include foreign workers, individuals in the humanitarian group and other cases for those individuals who do fall in any of the three preceding categories. Foreign workers and students arrive in Canada for the purposes of working or studying respectively. Individuals in the humanitarian group include those who are refugee claimants and those who have not claimed they are refugees but can be classified under this category due to their personal circumstances.

The importance of social networks

As immigrant families arrive in a new country, social support helps to ease the stress of the transition. If extended members accompany the family to the new country, they often become valuable assets to the family who can aid in the upbringing of children (Man, 1996). For immigrant families, the availability of a social network specific to their culture provides an invaluable resource and can be comprised of relatives, neighbours, or community members. Social networks are deemed essential because they facilitate the integration process through a number of roles such as providing access to information and being cultural interpreters for the family. Unfortunately, it is not a guarantee for

newcomer families to locate a social network easily particularly in the initial years of living in the new country. Importantly, those who are linguistically and culturally isolated have more difficulty as they cannot access basic information essential for their family such as resources on education, health, family law and welfare (Kamateros, 1998).

Resources within the family

As parents struggle to adapt to the new society financially and culturally, new expectations are placed on their children effectively changing their roles within the family structure. Such roles are not always expected of children and are contingent on the circumstances faced by the family. In particular, the dire reality of financial responsibilities in the new country leaves little time for parents to properly guide their children. Often, immigrant youth are given tasks that span from simple housework to being a surrogate parent as they take care of their younger siblings in the family (Janzen & Ochoka, 2003; Valenzuela, 1999). For instance, the eldest child is often responsible for cooking, bathing, babysitting and transporting younger siblings to school. In some cases, they may even be consulted by their parents in disciplining their younger siblings. As surrogate parents, children learn to grow up faster, partaking in roles that are usually reserved for their parents if they were living in their native country (Janzen & Ochoka, 2003).

Roles of immigrant youth within their families

Immigrant youth as language brokers

Role reversal is most prominent when children must learn to serve as translators, interpreters, and advocates for families whose lack of English proficiency makes it difficult to carry on a conversation with other people (Kamateros, 1998; Orellana et al,

2003; Tse, 1995; Valenzuela, 1999). Unlike their parents, children can bypass language barriers rapidly because of their increased exposure to the new culture as they immerse themselves into the school environment (Tyyska, 2006). As a result, children are perceived by their parents to be knowledgeable in the language and the social customs of the new culture (Janzen & Ochoka, 2003). In her work with Greek immigrant families, Gavakis (Kamateros, 1998) stresses that most parents depend on their children as their sole link to the outside world, a role that may prove detrimental to parents if their children move away from home.

There are different responsibilities entailed in being a translator or an interpreter (Weisskirch, 2005). As a translator, one must learn to transfer between one language form to another. As an interpreter, one must communicate the language that is embedded with cultural and contextual factors. For immigrant children, the roles of being an interpreter and translator require them to have more influence and control in mediating situations. Children must use their knowledge of the English language and the new cultural traditions to speak for others and to accomplish social goals (Orellana, 2003). Due to the responsibilities entailed in these roles, research has referred to such children as language brokers, cultural interpreters, social interpreters, or para-phrasers (Jones & Trickett, 2005; Kamateros, 1998; Morales & Hanson, 2005). The role of a language broker comes as a result of acculturating to the new environment (Weisskirch, 2005). This study will use the term language brokering to denote interpreting and translating duties.

Canadian research is limited in its scope on the characteristics of immigrant youth and the extensive and complex nature of being a language broker in the family. It is best

to examine the literature in the United States as it provides a greater breadth on language brokering in immigrant children. In a review of studies on language brokering, Morales and Hanson (2005) reported that children begin brokering within 1-5 years of their arrival and are between the ages of 8 – 12 years old. Other characteristics include being the eldest, fluent in two languages, most likely to be female, detail-oriented, sociable, extroverted, friendly and good listeners. Often, children broker mainly to their parents but this may extend outside the circle of their immediate family and include friends and teachers (Morales & Hanson, 2005; Orellana et al., 2003; Tse, 1995). The tasks entailed in brokering vary and range between simple and complex tasks (Tse, 1995; Orellana et al., 2005; Weisskirch, 2005; Weisskirch & Alva, 2002). Children may need to act as a translator and interpreter in conversations, translate bank and bill payments that come in the mail, translate school notes and report cards, translate job applications and translate media. The duties are not limited to the home as children may broker on the streets, and in different institutions such as the school, immigration office or the doctor's office.

Often the complexity of the task lies in the nature of the interaction between the individuals in a particular situation. For instance, the task of translating and interpreting the doctor's diagnosis and prognosis to a parent is stressful, dehumanizing, and embarrassing for young brokers (Valenzuela, 1999). Such intimate encounters can be discomforting to children who must confront terms they are unable to comprehend and discover their parent's health condition, privy information that would normally be hidden from them. There are times when immigrant youth may witness their parents' feelings of being humiliated and mistreated due to the lack of English skills (Orellana et al., 2003). Still, children often must act in capacities where they have no formal preparation and in

which their roles are questioned because of their limited or lack of qualifications (Orellana, 2003). Often, the young broker must learn a great deal of knowledge that is not usually learned at such a young age. For instance, many must learn the financial system of a bank in the new country in order to interpret bank statements for their parents. As a result of their salience as a mediator in vast areas of family functioning, those youth that act as language brokers are often considered to be decision-makers in the family (McQuillan & Tse, 1995; Tyyska. 2006; Valenzuela, 1999).

Financial contributors to the family

As mentioned, the duties of being a language broker intertwine with responsibilities of providing assistance on financial matters pertaining to the family. Other diverse financial supportive roles where immigrant youth operate include assisting parents in their job, working in the family business or collaborating with the family on how to spend their earnings. Often, the pressures of financial uncertainty in the family lie at the core of a youth's decision to provide assistance. Koc and Nunes (2001) found Canadian immigrant youth aged 16-25 felt compelled or pressured to contribute to their family financially because government assistance was not adequate. Likewise, immigrant youth in Canadian and American households report being a secondary financial contributor to their family, working and divesting their earnings to their parents (Tyyska, 2006; Valenzuela, 1999). The roles of being a financial aide may instill compassion for their parents in immigrant youth (Tyyska, 2006) but it can be burdensome as they face dual pressures of helping out and excelling at school (Koc & Nunes, 2001).

Confidantes to parents

Whether immigrant youth function as secondary financial providers or as language brokers to their parents, they become entwined in the intimate aspects of their parents' lives. As a result, they can become emotional confidantes to their parents. In his study on Tamil youth, Tyyska (2006) reported youth listened to their parents' problems and imparted advice on financial issues, adaptation to Canada and in-house issues. As children grow to understand the pressures faced by their parents, their relationship with their parents changes as they refrain from discussing their own personal problems (Janzen & Ochoka, 2003). However, families can become closer if members work as a cohesive unit to resolve intrapersonal and interpersonal issues within the family. As shown in Tyyska's focus group study on Tamil youth (2006), several individuals reported their family members sitting down and discussing their problems. Others reported that their parents provided them help with their own problems. Yet, Tyyska (2006) did not report if the youth who work together with their parents to resolve problems are the same as those youth whose parents offer support to their children.

Research illustrates how immigrant youth are indispensable to their families particularly to their parents as they are the most easily accessible resources in the new country. From simple to extensive caretaking duties, these youth are involved in a wide range of domains because many of these duties are intertwined to each other. Further, as youth navigate their parents through the language and cultural barriers of the new country, they become more integral and immersed in the intimate aspects of their parents' lives. However, not all youth have an extensive list of responsibilities within their families. Research on language brokering suggests that females, the eldest child or first-

generation immigrants have more responsibilities within the family. Since other caretaking duties are intertwined with language brokering tasks, it is plausible that these specific groups may be more likely to act as a financial aide or emotional confidante in their families.

Consequences of adult responsibilities in youth

The range of roles that immigrant youth operate within their families has many outcomes but research is limited to American samples and has mainly concentrated on the effects of language brokering. Studies that report positive outcomes assessed the value systems of immigrant youth. For instance, Fuligni and his colleagues (Fuligni et al. 1999; Fuligni & Pederson, 2002) assessed family value systems and expectations of immigrant youth and found that those who felt strongly that they should assist and support their families reported emotional well-being and academic success. However, Fuligni et al. (1999) cautioned that academic success occurs if these are moderate feelings of family obligation and support. Those that who felt strongly to aid and support their families reported no change or lower school grades. The few Canadian studies that discuss the adjustment of immigrant youth are narrative studies with a small sample size making it difficult to compare to American research on the impact of youth assuming parent roles in the family (Janzen & Ochoka, 2003; Koc & Nunes, 2001; Tyyska, 2006). A general overview of the consequences of assuming adult-like roles for immigrant youth is given followed by a review of the effects of language brokering.

Parentification

Several studies have shown that the benefits of doing household chores include enhancement of social responsibility (Bowes, Flanagan, & Taylor, 2001; Grusec,

Goodnow, & Cohen, 1996), self-efficacy, self-esteem, and competence (Call, Mortimer, & Shanahan, 1995; McHale, Bartko, Crouter, & Perry-Jenkins, 1990; Russell, Brewer, & Hogben, 1997). However, in the parentification literature, there has been considerable debate about whether assuming adult roles leads youth to destructive developmental outcomes. Destructive outcomes include an inability to have a secure attachment with parents, an inability to explore one's environment, and identity problems. Jurkovic (1997) identified two types of roles that can be given to children in their families: instrumental and expressive. The former consists of behavioral roles to support and maintain the family such as cooking, cleaning, child care and, earning income for the family. Expressive tasks require the child to minister to the family's socioemotional needs such as being a confidant, mediating family conflicts and, protecting family members. Responsibilities that involve a child assuming the role of a parent's spouse has been termed spousification in the family systems literature (Sroufe and Ward, 1980). In this capacity, children provide emotional support to one or both parents. Spousification has been associated with a pathological family structure in which the child comes in-between the parents and becomes a partner to one parent, weakening the relationship between two parents. Further, Mika, Bergner, and Baum (1987) suggests that undertaking the role of a spouse is detrimental to a child as it places demands beyond one's developmental capacities and becomes a burden for children.

As the roles of immigrant youth change, the balance of power shifts from a parent to a child; this is termed role reversal (Janzen & Ochoka, 2003; Kaur & Mills, 1993). As parents become dependent on their children particularly in language brokering transactions, children learn to become more responsible for their family and parents

become insecure as their parental authority is lessened in the dyad (Janzen & Ochoka, 2003). This can create conflict within the family as rifts may occur between parents and children who are more knowledgeable about the Canadian system. In some cases, parents may feel that children are withholding pertinent information from them because of their ability to translate between two languages.

Historically, research has shown that the effects of parentification have been mixed (Jurkovic, 1997) and primarily focused in research realms that deal with divorce or abuse. Among immigrant families, Walsh et al (2006) suggest that being a spouse to a parent for immigrant youth does not necessarily mean that the child will interfere in the relationship between two parents but, instead, will help one parent aid the other. As well, the authors point out that difficulties experienced by immigrant parents are not always personal; instead they are problems stemming from the adjustment process. A child is the purveyor of resources in the new country by which parents can use to increase their knowledge base to aid in the well-being of their family. Once information is obtained, parents discuss and debate how to use this knowledge to take care of the family. Children may be aides but not always the prominent decision-makers in the family.

The line that demarcates between destructive or formative tasks for children is not always clear. It has been proposed that the earlier and the more age-inappropriate the child is when partaking in caretaking responsibilities, the greater the consequences on the child's development (Jurkovic, 1997). Due to the stressors experienced in language brokering and caretaking, it is believed that adolescents compared to children may be more suited to handling the task because of their expansive cognitive and linguistic skills (Jurkovic, 1997; Weisskirch, 2005). As adolescents, they have greater coping skills and

are more culturally competent in both cultures. Other aspects used to determine the destructiveness of parentification include the overexertion of oneself as a caregiver to one or more family members and the duration of undertaking these caretaking responsibilities (Jurkovic, 1997). For instance, care-taking responsibilities that extend past a situational adaptation period into a chronic process can emotionally and physically drain children.

More importantly, adult-like responsibilities may be adaptive if youth are not entrenched in their roles, are supported and given fair treatment from their families and their larger sociocultural community (Jurkovic, 1997). Among Canadian Tamil families, parents and youth who worked together and shared responsibilities reported being closer to each other (Tyyska, 2006). Further, assuming parental roles may be adaptive if there are positive relations between parents and the child. Walsh et al (2006) reported immigrant compared to non-immigrant youth had a positive relationship with both parents. Further, the nature of the parent-adolescent bond was more relevant to several areas of adolescent functioning for immigrant youth compared to nonimmigrant youth. For instance, immigrant youth who reported positive relations with both parents were associated with reports of having less difficulty in experiencing stressful events and using better coping methods to deal with their dilemmas. Conversely, immigrant youth who reported negative relations with both parents had greater difficulty coping with stressful events. Lastly, immigrant youth whose parents placed limits in their daily lives also reported more difficulty with stressful events.

While immigrant youth may be essential aides to their families, the literature emphasizes the adverse impact on a youth's developmental outcomes and the relationship with one's parents. Such consequences are contingent on the amount, nature of the

responsibilities and the dynamics of the parent-child relationship. For instance, roles that require youth to administer to the emotional needs of their parents may be more taxing for the child and detrimental to the relationship between both parents and their child. The literature suggests that older children may be more capable of coping with the stress embedded within language brokering and other caretaking duties. Further, studies suggest a strong relationship between parents and their child is essential for any positive outcomes to occur. If immigrant youth assume responsibilities befitting for adults, it is important to examine the effects of these responsibilities within the context of a strong parent-child relationship.

Outcomes of language brokering

Early research on language brokering showed distressing results. As well as feeling humiliation and discomfort, research has found that the broker felt burdened; furthermore, they were compelled to persist because their expertise was needed for their families' health, survival, and social advancement (Orellana et al., 2003). It has been shown that language brokering can be detrimental to the academic performance of young and older adolescents as the demand for interpreting and translating for families detracts from time spent on studies (Morales & Hanson, 2005; Sy, 2006).

Despite the stress emanating from these tasks, there are benefits to being a language broker. First, by taking on responsibilities, the young broker becomes an advocate for his/her family. Language brokering has been associated with a higher sense of ethnic identity, greater belongingness in one's own ethnic group, academic self-efficacy, maturity, independence, and an increase in language proficiency (Morales & Hanson, 2005; Weisskirch, 2005). Buriel et al (1998) suggested that the cognitively

demanding tasks of acquiring and understanding vocabulary and concepts to perform well as a language broker may lead to high academic performance and give rise to perceptions of academic self-efficacy. These authors also argued that social self-efficacy may result from the numerous transactions with different adults.

It has been found that individuals who feel initially burdened by their brokering tasks have used these experiences as tools for self-reliance (Morales & Hanson, 2005). In fact, Valenzuela (1999) found that those who persisted in college took on roles of student leaders and advocates in their university settings. Parents of young brokers believe that these tasks help to facilitate their children's bilingual and bicultural development. Buriel, Perez, De Ment, Chavez and Moran (1998) found a positive relationship between language brokering, biculturalism, and social self-efficacy suggesting that the experience of communicating in two languages may result in self-confidence. Some researchers have suggested that adaptive outcomes result in immigrant youth because they feel empowered from their duties, their duties bring them closer to their family, or they receive parental praise for their responsibilities (Kaur & Mills, 1993; Weisskirch, 2005).

Research illustrates a mixed perspective on the outcomes of immigrant youth who are language brokers in their families. While some contemporary studies report language brokering duties are taxing and interfere with academia, retrospective research argues that these experiences, though initially burdening, are used as tools for self-reliance and personal development in later functioning. Consistent with the theory outlined in the parentification literature, a nurturing parent-child relationship that praises a child's contribution to the family is associated with positive outcomes for immigrant youth who

have language brokering duties. In general, research has identified that good parent-child relationships are important for the well-being of immigrant youth (Kilbride, 2000). Given that research illustrates that such duties are intertwined with other caretaking duties, it is plausible positive outcomes may result if immigrants operate in the context of a strong parent-child relationship. Further, it is pertinent to determine if a variety or a group of these responsibilities are associated with positive outcomes for immigrant youth.

Theoretical considerations

Attachment theory

Research has shown that the parent-child relationship remains an instrumental and effective source of support for adolescents (Allen & Land, 1999). It is necessary to examine the theoretical background to understand how children benefit from their relationships with their parents. It has been hypothesized by Bowlby that early parent-child relationships provide the basis for later adjustment in relationships and in psychosocial areas of functioning. In his *ethiological theory of attachment,* Bowlby proposed that the desired goal of a child is to maintain a close distance with the mother to achieve comfort and security (Cassidy, 1999). This is attained through a variety of attachment behaviors that include crying, clinging and smiling. Such behaviours are organized into an attachment behavioral system within the individual designed to respond to internal and external cues. As a child grows, the array of behaviors expands as a child learns new behaviors to attain the goal of close proximity to the mother. The attachment system is activated when the child exceeds this distance from the mother or experiences distress and is deactivated when the child attains the goal.

Based on early parent-child interactions, infants develop mental representations or expectations of the attachment figure based on their caregivers' responses to distress signals or other signs of the desire for contact. These mental representations termed internal working models are defined as expectations of the self, the attachment figure and the relationship existing between the two (Pietromonaco & Feldman Barrett, 2000). They contain specific content about the attachment figures, the self, knowledge of the interpersonal experiences and the affect contained within these experiences. Internal working models provide the foundation for expectations of the self, expectations of future relationships with caregivers and noncaregivers.

A secure attachment results when a child has a mental representation that a caregiver is consistently available and responsive to the needs of the child and is supportive of exploratory behavior (Bretherton & Munhollland, 1999; Pietromonaco & Feldman Barrett, 2000). In turn, a complementary model to the parent develops for the child, one that presents the child as being acceptable and worthwhile in the world. Conversely, an insecure attachment results when a caregiver is inconsistent in response to the needs of the child. In this case, the child perceives oneself as being devalued and incompetent.

Empirical work by Ainsworth and her colleagues (1978) expanded on Bowlby's conceptualization theory on attachment by investigating mother-child interactions in the setting known as the "Strange Situation". Here, the mother leaves the infant with a stranger for a short period and is then reunited with her child. The central focus of Ainsworth's work was to investigate how infants balance the ability to explore a new environment with a need for reassurance from the caregiver. Securely attached infants

approached their mothers willingly and were easily comforted by them following separation. Insecure-ambivalent or insecure-resistant infants showed distress during the separation and had a mixture of anger and relief upon reuniting with their mother. Finally, insecure-avoidant infants did not cry during the separation and avoided or ignored their mothers upon return. Based on experience, if exploration is unsettling for infants, they can rely on their caregivers to alleviate these fears, in turn feeling confident in exploring their world and expanding their mastery on the environment (Weinfeld, Sroufe, Egeland, & Carlson, 1999).

Because attachment relationships are internalized by infants, Bowlby argued that early experiences and the resultant expectations are a platform for future behavioral and emotional adaptation. Internal working models become a foundation for expectations of the self and for later relationships with caregivers and non-caregivers. However, this does not suggest that early parent-child relationships are solely and directly responsible for later developmental outcomes. Attachment does contribute to explaining individual differences in adaptation particularly when other assessments are used to measure later or concurrent functioning (Weinfeld et al, 1999). Early attachment experiences work together with current circumstances to predict development, an idea that coincides with Bowlby's (1973, 1980) concept that adaptation stems from a combination of early experience, subsequent experience and current circumstances. Bowlby's theory suggests the influence of early parent-child experiences would be seen in diverse domains of adjustment that include self-reliance, efficacy, dependency, anxiety, empathy, anger and interpersonal competence because they are linked to the affect regulation, behavioral

reciprocity, and beliefs and expectations of the self and others that emerge from early attachment relationships (Weinfeld et al, 1999).

Attachment theorists suggest that the parent-child attachment bond extends past infancy (Rice, 1990). Beyond infancy, attachment relations are governed by their internal working models that young individuals construct from the experienced interactional patterns with their principal attachment figures (Pietromonaco & Feldman Barrett, 2000). Some researchers suggest it is the perceived security and quality of the parent-child relationship and the family environment that is associated with the ability of adolescents to adapt to a new social context such as making new friends (Wentzel & Feldman, 1996) or being successful in school transitions (Matheson, Kelly, Cole, Tannenbaum, Dodd, & Anisman, 2005). However, the relationship between adolescents and their parents is different from their earlier periods when they were infants. It has been suggested by researchers that adolescents benefit from parental support that encourages autonomy development yet ensures emotional connectedness and continued monitoring (Allen, Moore, Kuperminc, & Bell, 1998). In particular, there are a variety of specific parenting skills that foster the goals of attachment security and autonomy development include psychological availability, warmth, limit setting, acceptance of individuality, and negotiation of rules and responsibility.

The importance of attachment theory lies in the subsequent internal working models formed through early parent-child experiences. These experiences enable a child to learn how to interact with the world: what to expect of oneself and of others, which help children learn their strengths and their limits as they interact with the world. Such early experiences are provided by their caregivers, whom if children believe their needs

are being met learn they have the ability to influence the world. In turn, children believe they have the confidence to function autonomously in the world (Ainsworth & Bell, 1974; Sroufe, Fox & Pancake, 1983). A secure attachment to a parent fosters an image within the child that one is acceptable, worthwhile and able to interact with the world to attain one's goals. These early positive concepts of the self are influential in the development of personal competence. While attachment theorists warn that the influence of early parent-child relationships is not always the sole factor in predicting later functioning, its presence is still a necessary component for positive outcomes.

Self-efficacy theory

Bandura (1997) has argued that early experiences at home with one's parents are important in the development of early personal efficacy or self-efficacy beliefs. The construct, self-efficacy emerged from his *social cognitive theory* that postulated individuals as their own personal agents of change (Bandura, 1986). At the core of this theory are personal efficacy beliefs, defined as the judgments of one's capabilities to organize and execute courses of action to a level of performance (Bandura, 1986; 1997). In general, if one does not believe one can produce the desired effect through his/her actions, there is little incentive to act or to persist in difficult situations (Bandura, 2006).

Self-efficacy beliefs operate through their impact on affective, cognitive, motivational and decisional processes (Bandura, 2005). Self-efficacy beliefs determine whether individuals will operate pessimistically or optimistically, influence level of motivation, shape expectations, perceptions of obstacles, opportunities, outcomes and the course of actions they choose in life. As well, self-efficacy beliefs affect emotional life and vulnerability to depression and stress.

Bandura (1986) proposed four sources of self-efficacy information a) mastery experiences, b) modeling or vicarious experience c) verbal or social persuasion, and d) physiological states. Mastery experiences are comprised of an individual's efforts. As one's proficiency increases at a given task, one's self-efficacy increases. Successful experiences build a stronger sense of one's efficacy while failures undermine its development. Self-efficacy information can also be obtained through the observation of an individual who is similar to oneself and is successful at attaining the desired outcome. These comparisons provide the basis for one's judgment of one's self-efficacy at a task. Individuals who are older and more experienced would be an irrelevant source of one's self-efficacy at a given task. Verbal persuasion is another method to strengthen one's belief in achieving success by informing one of his/her capabilities to master a task. Lastly, the physiological state of an individual provides a bio-feedback about one's capabilities at a task. For instance, one can interpret their shaky knees, sweaty brows and palms during an examination as signals of being susceptible to performing poorly at the test. From these four sources, mastery experiences are the strongest source of personal efficacy beliefs and the development of mastery begins at the home with one's parents.

Bandura (1997) suggested that the development of one's self knowledge and capabilities in vast areas of functioning result from transactions with the environment, a process mainly mediated by adults. In the beginning, infants rely on their caregivers to attain their own needs of feeding, comforting, and entertaining them. As infants grow and learn to interact with the world via adults, they learn about proxy control; through their actions, infants can get adults to produce the desired outcomes they cannot attain for themselves. The exercise of personal control in their efficacy experiences becomes

central to the early development of social and cognitive competence. The platform for competence begins at home when parents provide environments that are challenging, encouraging, have high but attainable goals, contain positive role models, provide and support mastery experiences, and teach children to deal with difficulties (Schunk & Meece, 2005). While the development of self-efficacy primarily relies on the parent (Bandura, 1997), it is a bi-directional process; children who partake in these novel experiences promote parental responsiveness.

Parenting and self-efficacy beliefs

The influence of the parenting quality in the development of self-efficacy beliefs is essential in the early years particularly as children begin to understand speech (Bandura, 1997). At this point, parents can express their judgments of their children's capabilities, appraisals that will guide them in future situations when parents are not present effectively influencing them on how and whether they approach a new task. For instance, Levy suggested that overprotective parents who are too anxious and concerned and dwell on potential dangers constrain development of their children's capabilities compared to secure parents who acknowledge and encourage their children's growing capacities (cited in Bandura, 1997). Extensive research has been found on the relationship between parenting styles and self-efficacy beliefs. The literature has shown a relationship between children who had secure histories with their caregiver and measures of personal efficacy including confidence in one's ability, beliefs that one can succeed and persist on tasks. (see Weinfeld et al, 1999 for review).

Self-efficacy in adolescence

As children enter adolescence, they face a series of psychological, biological, educational and social changes. The successful task of negotiating these risks and challenges in this transitional period depends on the strength of perceived self-efficacy built through prior mastery experiences (Bandura, 1997). Youngsters who enter adolescence beset by personal beliefs of inefficacy are vulnerable to stressful experiences in new environments. If individuals receive positive feedback from those close to them, and are generally well-regarded by others, they are likely to believe they are competent in activities important to them (Saarni, 1999).

Role of attachment and self-efficacy in aversive experiences

Transitions to a new country can be stressful for immigrant families especially in the initial years. Given that immigrant youth are likely to assume adult-like roles that are not normally in their province, it is plausible that these youth operate under stressful conditions. It is essential to explore how attachment and self-efficacy play independent roles in adjusting to stressful and aversive experiences. In the literature on resiliency, Masten (1997) stressed the importance of a strong relationship with a caring, competent, and prosocial adult among children and adolescents. Bandura (1997) elaborated that such caregivers are essential in managing risk and adversity because they provide emotional support and guidance, model constructive styles of coping, promote meaningful values and standards, and provide diverse and multiple opportunities for mastery experience. This type of caretaking as defined by Bandura is enabling and builds trust, competencies, and personal efficacy.

While there are different indices of parenting quality related to self-efficacy beliefs, research has shown the importance of secure histories in being resilient to stressful experiences (Egeland, Carlson, & Sroufe, 1993; Gribble, Cowen, Wyman, Work, Wannon, & Raoff, 1993). Cowen, Work, Hightower, Wyman, Parker and Lotyczewski (1991) reported that individuals who were stress-resilient compared to those who were affected by stress reported stronger self-efficacy beliefs. In a study on Vietnam refugee youth, household wealth and perceived self-efficacy was negatively associated with problem behaviors but predicted positive functioning (Loughry & Flouri, 2001). Among immigrant populations, secure attachment has been essential in providing an adaptive environment for immigrant youth who assume adult roles in their families (Walsh et al, 2006).

As a complement to Bowlby's theory, Bandura stresses the important interaction between early parenting and the home environment in the development of self-efficacy beliefs. Positive early parent-child relationships operating in environments that acknowledge, support and encourage their children's skills are more likely to foster efficacy beliefs in children. Such beliefs of competence are necessary as children transition to different stages of development and learn to cope with the stress entailed in these stages. Theoretical research suggests the role of self-efficacy becomes more substantial when it operates in aversive environments in the context of a strong parent-child relationship. For newcomer immigrants, assuming adult-like responsibilities can be taxing and overwhelming but may prove to be future tools of self-efficacy if there is the presence of a strong parent-child relationship operating in the background.

Adaptation in university settings

Difficulties faced by immigrants

The transition to university can be a difficult adaptation period for immigrant youth. Research has shown that immigrant youth in Canadian universities report performing at a high academic rate (Grayson, 1997) but they are not necessarily adapting psychologically (Wintre, Sugar, Yaffe, & Costin; 2000) or engaging in the vast social university experiences (Grayson, 1997; Pike & Kuh, 2005). The difficulties faced by immigrants in university may be related to not knowing the significance of participating in the vast university experiences (Pike & Kuh, 2005), having familial responsibilities (Wintre et al, 2000) or coping with discrimination (Smedley, Myers, & Harrell, 1993).

There are specific stressors that are unique to immigrants' status and to the ongoing acculturation process that they experience. Some of the primary stressors that immigrants face in the university environment are discrimination experiences and feeling like an outsider. In study of Vietnamese immigrant university students, Lay and Nguyen (1998) found that recent Vietnamese immigrants compared to those who resided in Canada for a longer period reported having more stressors with the non-Asian community and experiencing higher depression levels. As well, among Lebanese-Canadians, Gaudet, Clement and Deuzeman (2005) found a positive relationship between feelings of discrimination and experiencing more stressors with the non-Lebanese community. In turn, experiencing more stressors with the non-Lebanese community was associated with higher levels of depression and lower levels of self-esteem. Further, research has found that second-generation South Asian immigrants in Canada experience stressors dealing with their own ethnic community (Abouguendia & Noels; 2001). Clearly, the literature

suggests that the ability to interact with and outside one's own ethnic group contributes to better psychological adjustment. Since research suggests immigrants may face a difficult transition to university particularly in the social domain, it is important to examine how attachment and efficacy beliefs can aid in the adjustment to university.

Role of attachment in adjustment to university

Research has shown that secure attachment is related to academic, social and emotional adjustment in college (Holmbeck & Wandrei, 1993; Kenny & Donaldson, 1991, 1992; Kenny & Rice, 1995; Mattanah, Hancock, & Brand, 2004; Vivona, 2000). Among first-year female students, Vivona (2000) found that individuals who had a secure attachment compared to those who had an insecure attachment with their parents had significantly higher scores on academic, social and personal-emotional adjustment scales on the Student Adaptation to College Questionnaire (SACQ). Likewise, Mattanah et al (2004) found positive relationships between attachment to each parent and adjustment in the academic, social, and emotional realms. Further, the authors found that attachment to both parents led to less anxiety about the separation process, in turn this led to greater academic, social and personal-emotional adjustment.

In the social realm, secure attachment has been found to be positively related to social skill levels (DiTommaso, E., Brannen-McNulty, C., Ross, L., & Burgess, M; 2003; Deniz & Hamarta, 2005). In a Canadian study, DiTommaso et al, 2003 found that students who had a secure attachment style had strong emotional skills (emotion expressivity, emotion sensitivity) and social skills (social expressivity, social sensitivity and social control). Among women, attachment to both parents was an important

predictor in social competence in university settings (Rice, Cunningham, & Young, 1997).

Secure attachment has been related to different indices of emotional adjustment in university. Among Greek university students, secure attachment has been related to higher levels of self-esteem, lower levels of anxiety and lower levels of loneliness (Leondari & Kiosseoglou, 2000). In a sample of Australian first-year university students, securely attached individuals used more problem-focused coping strategies and social support compared to insecurely attached individuals who relied on emotion focused coping strategies (Podbury & Stewart, 2003).

Retrospective accounts of early parental care were positively related to a secure attachment style and negatively related to ambivalence, self-criticism and loneliness among first-year university students (Wiseman, Mayseless, Sharabany, 2006). Likewise, in a study among university students in America, Lopez (1997) found that students who had secure relationship with their professors reported having warmer and more supportive bonds with their mother compared to students who had an insecure relationship with their professors. Further, unlike their insecure peers, these secure students reported having stronger mastery learning attitudes and feelings of connectedness to the university. Bernier, Larose, Boivin, and Soucy (2004) found that a preoccupied attachment, an insecure attachment style, fostered from childhood was related to a general decrease in adjustment and in grades during the freshman year in a Canadian university.

Clearly, studies have shown secure attachment as an influential component in the adjustment to university. Secure attachment has been associated with numerous positive

outcomes in the personal, social and academic realms of university. Retrospective accounts and contemporaneous studies attest to the strong influence of secure attachment in university adjustment. In the present study, secure attachment will be assessed to determine its relationship to academic and social adjustment among immigrant youth.

Role of self-efficacy in adjustment to university settings

Historically, research has shown that efficacy beliefs play a role in educational settings. In a meta-analysis, Multon, Brown, and Lent (1991) found that self-efficacy was related to academic performance and to persistence. Self-efficacy operates on a broader level via the use of effective meta-cognitive strategies that consist of planning and self-regulation skills (Chemers, Hu, & Garcia, 2001). Such skills are important when individuals enter environments that are less ordered and constrained such as university.

In the educational realm, students who have high academic self-efficacy beliefs manage their time and learning environments effectively, make greater use of effective cognitive strategies in learning, and are better at monitoring and regulating their own effort. As well, self-efficacy beliefs are related to an enhanced ability to use effective problem-solving and decision-making strategies, to plan and manage one's personal resources more efficiently, to entertain more positive expectations, and to set higher goals (Chemers et al, 2001). In demanding situations, self-efficacy beliefs help people to manage the stressors by using an analysis of extant resources and available coping resources resulting in a tendency to perceive demanding situations as challenges rather than threats. Among university students, highly self-efficacious students who perceived academic work to be challenging instead of a threat, had greater academic expectations and better academic performance (Chemers et al, 2001). These individuals perceived

academic work to be a challenge, they reported fewer health problems and better adjustment in university. Likewise, among ethnic minority first-year students, self-efficacy was related to coping successfully with stress (Phinney & Haas, 2003).

Self-efficacy is a multi-faceted construct that varies according to the domain of the demands and hence must be evaluated at a level that is specific to the outcome domain (Bandura, 1986). The predictive value of self-efficacy in an area is best when it is assessed with measures specific to a particular situation instead of a global assessment (Bandura, 1997). For instance, an academic self-efficacy instead of general self-efficacy measure would be the best tool to gauge an individual's academic adjustment. While some researchers suggest general self-efficacy measures are not predictive of college outcomes (Ferrari & Parker, 1992; Lindley & Borgen, 2002), others have suggested that general self-efficacy indices are associated with general affect, life satisfaction, and subjective well-being in college (Tong & Song, 2004). Still, general self-efficacy can broadly assess how one would deal with a variety of stressful situations (Schwarzer & Jerusalem, 1995).

Academic self-efficacy is defined as an individual's confidence in one's ability to perform at an academic task successfully at a designated level (Schunk, 1991). Research has shown that academic self-efficacy is an important factor in academic performance among immigrant and non-immigrant populations (Multon et al, 1991; Zajacova, Lynch, & Espenshade, 2005). Further, academic self-efficacy beliefs are shown to be strong predictors of academic persistence and grades even when measured at the end of the year (Gore, 2006). As well, its strength in predicting grades persists even after controlling for high school grades (Zajacova et al, 2005)

In the social realm, Fan and Mak (1998) define social self-efficacy as students'
expectancy that they can perform or complete a designated behavior successfully in an
academic or daily situation involving social interaction. Among a sample of
undergraduate students in Australia, Fan and Mak's study showed that non-English
speaking immigrants compared to non-English speaking native residents reported a lower
sense of social self-efficacy: non-English speaking immigrants had more social
difficulties and did not have any shared interests with local people. Outside the social
realm, self-efficacy has been positively related to academic satisfaction among students
who consisted of first-generation, second-generation, and international students in
Australia (Leung, 2001). Further, social self-efficacy has been linked to attachment
styles and depression. In a longitudinal study with freshmen college students, social self-
efficacy explained the relationship between attachment anxiety and loneliness and
subsequent depression (Wei, Russell, & Zakalik, 2005). Students who had high
attachment anxiety were less competent in their social self-efficacy beliefs. In turn,
lower social self-efficacy beliefs were related to higher levels of loneliness, which in turn
was related to higher levels of depression.

Efficacy beliefs play an influential role in the adjustment to the academic and
social environment of university. Whether measures focus on the academic, social or
coping self-beliefs of an individual, the literature suggests higher self-efficacy beliefs in
these areas are associated with positive outcomes. Such positive beliefs are essential in
learning to perceive stressful situations as being challenging, having the ability to
overcome them and using effective problem-solving skills: strategies that are necessary in
adjusting to the university environment as a first-year student. The present study assesses

self-efficacy beliefs in three ways: general, academic and social to provide a better gauge of an immigrant youth's competence in dealing with diverse settings in the university environment.

The present study

A review of the literature shows that immigrant youth operate in a variety of roles in their families as they help out in the transitory process of adjusting to the new culture. As immigrant youth partake in adult-like roles that are normally reserved for their parents, there is a concern about whether these responsibilities are adaptive or detrimental to present and future development. Roles such as being a translator or an emotional confidante can be stressful for immigrant youth particularly if they undertake such roles at a young age and without a strong relationship with their parents. Studies that assessed the contemporary effects of immigrant youth partaking in adult responsibilities have shown adaptive outcomes. The present research is designed to determine if partaking in adult responsibilities can contribute to future adjustment n the university environment.

Research highlights the importance of the family environment, particularly the relationship quality between the parent and the child as being key to the well-being of immigrant youth. Further, in the context of a strong parent-child bond, self-efficacy beliefs can emerge as children learn to master tasks primarily at home. Immigrant youth assuming adult-like roles may have learned to deal with cognitively demanding tasks and different social situations in the context of a strong parent-child attachment. In turn, self-efficacy beliefs may have emerged from this learning process. Research has shown that self-efficacy beliefs can be related to better adjustment in university. Studies on the

university experience have shown that immigrants may do well academically but they still face barriers in the social and emotional realms.

Based on the review of studies, the following hypotheses will be tested:

1. Girls compared to boys will report higher amounts of family responsibilities. Research has shown that girls usually assume the bulk of language brokering duties within their families (Morales & Hanson, 2005; Valenzuela, 1999). Since language brokering duties are intertwined with other duties such as being a financial aide or an emotional confidante, it is hypothesized that girls will report higher amounts of family responsibilities.

2. The eldest sibling compared to the middle or the youngest child will report higher amounts of family responsibilities. Research has shown that the eldest usually has many family responsibilities within their families (Morales & Hanson, 2005; Valenzuela, 1999). As aforementioned above, language brokering duties entwine with other caretaking duties, this study suggests that the eldest sibling may report higher amounts of family responsibilities.

3. First-generation compared to second-generation students will report higher amounts of family responsibilities. Based on early research that has shown first-generation compared to second-generation immigrants report higher amounts of language brokering and caretaking responsibilities (Tseng, 2004; Morales & Hanson, 2005; Walsh et al, 2006), it is plausible that first-generation immigrant youth in this study may report higher amounts of family responsibilities.

4. High levels of family responsibilities and low levels of secure attachment will be associated with low levels of general, academic, and social self-efficacy. In turn,

low levels of general, academic and social self-efficacy will be associated with low levels of academic and social adjustment. The literature on parentification suggests children may be overwhelmed with their responsibilities particularly in the context of a poor relationship with their parents. Thus it is hypothesized that a high level of family responsibilities in the context of a poor attachment with parents will be associated with negative outcomes for immigrant youth.

5. High levels of secure attachment will be associated with high levels of general, academic, and social self-efficacy. In turn, high levels of general, academic and social self-efficacy will be related to high levels of academic and social adjustment. Theoretical research has suggested the importance of a strong relationship in the development of self-efficacy beliefs (Bandura, 1997) and empirical research has illustrated the association between secure attachment and self-efficacy beliefs. As well, literature has demonstrated the links between efficacy measures and adjusting to the university across diverse domains. These results suggest that immigrant youth who have a secure attachment with their parents will have higher levels of self-efficacy beliefs and subsequent high levels of adjustment in university.

CHAPTER III

Method

Overview of the current study

The present study aims to assess the retrospective effects of adolescent

responsibilities and parent-adolescent attachment on first-year university adjustment

among immigrant youth who grew up in Canada. First, the study examines whether more

adolescent responsibilities are given to immigrant youth because of their birth order,

gender or generational status. Second, the study examines whether adolescent

responsibilities in the context of strong parent-adolescent bonds are related to three self-

efficacy beliefs: general, academic and social. Is there a variety or a cluster of

responsibilities operating in the context of strong parent parent-adolescent bonds that are

related to these three self-efficacy beliefs? Third, the study investigates the relationship

between strong self-efficacy beliefs and university adjustment in two domains: social and

academic. Lastly, the study will evaluate whether past healthy parent-adolescent bonds

has an effect on better adjustment in the social and academic realms.

Participants

The sample for this study consisted of students from a large Western Canadian

university with the following criteria: first-year undergraduate students, 18 years or older,

students whose parents first language was not English and who immigrated to Canada.

Initially, 112 first-year immigrant undergraduates signed up for the study, 73 students

filled out the survey but one participant was dropped from the study because he was not a

first-year student. The first-year undergraduate students were between the ages of 18 –

23 (mean age 18.4; SD = 0.98). In total, the sample consisted of 72 participants. This study did not differentiate between immigrant, refugee and international status.

Participants were recruited through various departments, student groups and, student residences. These departments included Anthropology, Biology, Chemistry, Classics, Earth and Atmospheric Science, Economics, History, Linguistics, Religion and Sociology first-year classes. The student groups consisted of the following: Undergraduate Psychology Association (UPA), Undergraduate Association of Computing Science, My Undergraduate Groups (MUGS), Engineering Students Society, Chinese Students Club, Nursing Undergraduate Association, and the Taiwanese Association.

Procedure

The researcher attended first-year undergraduate classes and student social meetings. An announcement was made about the research at each setting and a sign-up sheet was distributed for interested students. As well, email advertisements were posted on the student organizations' website or forums and sent through the listserv of the student residences. Participants interested in the study contacted the researcher in-person or via email and an appropriate time was negotiated between the researcher and the participant. The questionnaires were completed in a student lounge or in a library. Participants were given a survey packet that included six questionnaires and a demographics form. A written debriefing form was attached to the end of the questionnaire. Written consent was obtained prior to the sessions. (All materials are included in Appendix A.) This study received ethical approval .

Measures

Family Behavioral Duties. This variable was measured using a 23-item scale created for this study. The purpose was to assess the different types of responsibilities an immigrant youth had in the past as an adolescent. Eleven items were obtained from a dissertation that expanded on a list of caretaking responsibilities that were collected from diaries of Chinese immigrants (Tseng, 2001). Eight items were taken from a literature review of the interpreting or translating duties performed by immigrant children such as interpreting or translating in English and completing documents in English for someone in the family (Orellana, Dorner, Pulido, 2003; Valenzuela, 1999). Because acculturation is a difficult transition period, adolescents may have been an emotional confidante for their parents and/or their siblings. In studies of divorce, children have acted as emotional confidantes to their parents often listening to stories of personal or financial distress (Arditti, 1999; Lehman & Koerner, 2002). As well, Walsh et al., (2006) have shown that adolescent immigrants have reported acting as a spouse to another parent. Hence, 4 items were taken from the spousification subscale of the Child Parentification (Mika, 1987) and reworded to reflect the role of an emotional confidante. Sample items included listening to parents' distress regarding financial problems and listening to a parent's problems as if the adolescent were an adult.

In this study, participants were requested to assess the degree to which they frequently performed a family duty when they were in high school (i.e. beginning at the age of 14) based on a 7-point Likert scale that ranged from 1 (*almost never*) to 7 (*almost always*). High scores indicate a high frequency of family behavioral duties. None of the items needed reverse scoring. A composite score of family behavioural duties was

calculated for each individual but summing the scores across all 23 items and obtaining

an average score. Reliability of the scale was Cronbach's alpha 0.85.

   Retrospective parent-adolescent attachment. This variable was measured using

the Parental Attachment Questionnaire (PAQ) (Kenny, 1987). This is a 55-item self-

report designed to assess the perceived quality of attachment relationships to parents

(Kenny, 1987). The PAQ is made up of three scales: Affective Quality of Attachment

with Parents, Parents as Facilitators of Independence and Parents as a Source of Support.

   These subscales were adapted from the attachment models proposed by

Ainsworth, Blehar, Waters, and Walls (1978) and Bowlby (1979) who have stated that

attachment is an enduring affective bond which serves as a secure base in providing

emotional support and in fostering autonomy and mastery of the environment (Kenny,

1990). This questionnaire has been used among a wide variety of ethnic populations

namely Asian, Hispanic, Blacks and Caucasians (Kalsner & Pistole, 2003). Kenny

(1987) reported test-retest reliabilities for a 2-week interval for separate scales ranging

from .82 to .91 and .92 for the whole scale. Other research (Holmbeck & Wandrei, 1993;

Kenny & Donaldson, 1991) has found that the PAQ is moderately correlated with the

Family Environment Scale (Moos & Moos, 1986) and the cohesion subscale of the

Family Adaptability and Cohesion Evaluation Scale (FACES III) (Olson, 1986).

   The PAQ was originally designed to test the present relationship reported by late

adolescents and young adults (Kenny, 1987). However, in this study it was used as a

retrospective measure to assess the parent-adolescent relationship. Gratz, Conrad and

Roemer (2002) used the PAQ as a retrospective measure to investigate the childhood

relationship with each parent. In the original PAQ, a single rating is given for both

parents and a recent version of the questionnaire asks participants to provide separate ratings for each parent (Lopez & Gover, 1993). As noted by Kenny (1987), overall family environment is more important than the specific relationship with each parent for the development of a late adolescent's social competence. Past research has shown that adaptive environments for children who act as a parent are characterized by a family that is cohesive, encourages expression of feelings, supports individual independence and values achievement (Walsh et al, 2006).Pilot studies conducted by Kenny (1987) indicate there were no significant differences between ratings given by late adolescent college students to each parent on this questionnaire.

In the present study, the PAQ was used to assess the parents as a unit in providing support, facilitating independence and, care to their children. Statements were recoded for participants to report their perceptions of their relationship to their parents during their high school period. The questionnaire was shortened to yield a 40-item scale. Items were removed based on a discussion with two individuals whose task was to identify redundant and ambiguous items. Eighteen items assessed the Affective Quality of Attachment (e.g. *In general my parents were persons who understood my problems and concerns*). Parents as Facilitators of Independence consisted of 11 items (e.g. *In general, my parents took my opinions seriously*). Parents as a Source of Support consisted of 13-items (e.g. *In general, my parents were available to give me advice when I wanted it*). Sixteen items required reverse scoring. High scores indicate high levels of perceiving parents as a secure base who encourage independence and provide emotional support. After recoding, scores were summed across each subscale and averaged to assess overall

parental attachment. In this study, a Cronbach's alpha of 0.94 was calculated for this scale.

Self-efficacy. Self-efficacy was measured using three scales. Perceived generalized self-efficacy was assessed using the Generalized Self-Efficacy (GSE) Scale (Jerusalem & Schwarzer, 1995). This is a 10 item scale that assesses a general sense of perceived self-efficacy; the intent is to predict how people cope with daily hassles as well as how they adapt after experiencing various types of stressful events. Participants rated the degree to which items on the test reflected their own experiences based on a 4-point scale that ranged from 1 (*not at all true of me*) to 4 (*exactly true*). Sample items on the questionnaire include "I can always manage to solve difficult problems if I try hard enough" and "If I am in trouble, I can think of a good solution". Scores were summed across all ten items and averaged to assess an overall general sense of general perceived self-efficacy. Originally developed in the German language, this questionnaire was revised and translated into 26 other languages. Scholz, Dona, Sud, and Schwarzer (2002) confirmed that its construct was universal across 25 countries. The scale has been used internationally with success for two decades and has been used in a broad range of applications. In this study, a Cronbach's alpha of 0.85 was calculated for this scale.

Perceived academic self-efficacy was measured using the self-efficacy subscale of the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich & DeGroot, 1990). This is a 9-item self-report that measures people's perceived competence and confidence in the performance of their school work. Because the present study assessed students from various undergraduate majors, items were reworded to assess general performance in the academic university setting. Pintrich and De Groot (1990) used the

MSLQ as a scale to assess generalized academic beliefs (Gore, 2006). Participants rated the degree to which items on the test reflected their lives based on a 7-point scale that ranged from 1 (*not at all true of me*) to 7 (*very true of me*). Sample items include "I expect to do well in my courses" and "My study skills are excellent compared with others in my year". Scores were summed across all nine items and averaged to assess an overall level of perceived academic self-efficacy. High scores indicate high academic self-efficacy. In this study, a Cronbach's alpha of 0.93 was calculated for this scale.

Social self-efficacy was measured using the Social Self-Efficacy scale (Fan & Mak, 1998). This is a 20-item self-report measure assessing a student's confidence in coping with various social and academic situations. Participants indicate the degree to which they agree that each item is a reflection of them based on a 7-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items on the test include "I feel confident asking a lecturer a question" and "I feel confident of my language skills". Nine items on the test were scored in a reverse direction. Total scores were summed across all items and averaged with high scores indicating high social self-efficacy. Test-retest reliability for the whole scale over a 5-week period is 0.85 among a culturally diverse university sample. Fan and Mak (1998) reported that this scale has four dimensions: Absence of Social Difficulties, Social Confidence, Sharing Interests and Friendship Initiatives. The authors stated that this scale can be used as a 20-item scale or as four scales. In the present study, the test was used as a 20-item test. In this study, a Cronbach's alpha of 0.91 was calculated for this scale.

Adjustment to university. This variable was measured using two scales. The first was the academic adjustment subscale from the Student Adaptation to College

Questionnaire (SACQ) (Baker & Siryuk, 1984). This is a 24-item self-report that assesses a student's success in coping with various educational demands in the college environment. Sample items on the test include "my academic goals and purposes are well-defined" and "I'm not working as hard as I should at my course work". Participants rate the extent to which a particular statement applies to them based on a 9-point scale that ranges from 1 (*doesn't apply to me at all*) to 9 (*applies very close to me*). Total scores were summed across all items and averaged with high scores indicating better adjustment to the academic environment. SACQ has been used with various samples of different ethnicities in Canadian research (Wintre & Yaffe, 2000). In this study, a Cronbach's alpha of 0.85 was calculated for this scale.

The second was a social adjustment scale that was created for this study. Items were adapted from the social adjustment subscale from the Student Adaptation to College Questionnaire (Baker & Siryuk, 1984), the Hassles Inventory (Lay & Nguyen, 1998) and the Cultural Congruity Scale (Gloria & Kurpius, 1996). This is an 18-item self-report that assesses a student's success in coping with different interpersonal situations encountered as an immigrant. Sample items on the test include "I have several close social ties at the University of Alberta with students of my ethnic group", "I feel comfortable in participating in class discussions" and "I feel comfortable talking in English with students from different ethnic groups". Students rate the extent to which a particular statement applies to them at the present time based on a 7-point scale that ranges from 1 (*almost never*) to 7 (*almost always*). Four items required reverse scoring. Total scores were summed across all items and averaged with high scores indicating better adjustment to the university social environment. In this study, a Cronbach's alpha

of 0.80 was calculated for this scale. As well, a factor analysis of FBD was performed to determine if different factors were related to efficacy and adjustment measures in the context of secure attachment.

Data analysis

A number of statistical analyses on the data collected were employed in this study. Descriptive statistics examined the demographics of this sample of immigrant youth. t-tests and ANOVA were performed to determine if there were any differences in reporting of family duties between the following groups: girls compared to boys, the eldest compared to the middle or youngest sibling and first generation compared to second generation immigrants. Correlational analyses were then conducted to determine the relationship between past adolescent responsibilities, secure attachment, efficacy measures and university adjustment.

Model of predicted relationships

Prior to conducting correlations among measures, a model of the predicted relationships was constructed. A model of the predicted relationships among each of the questionnaire measures is presented in Figure 3.1. As shown in Figure 3.1, it is expected that FBD will show different relationships with the attachment, efficacy and adjustment measures. Based on the mixed results in the literature, the relationship between FBD and parent attachment will be exploratory. Secondly, FBD will be positively related to all efficacy indices: general, academic and social. As well, it is anticipated that parent attachment will be positively related to all efficacy (general, academic and social) and adjustment (social and academic) measures. Lastly, it is expected that there will be positive relationships between efficacy and adjustment measures. First, general self-

efficacy will be positively related to social and academic adjustment. Secondly,

academic self-efficacy will be positively related to social and academic adjustment.

Lastly, social self-efficacy will be positively related to social and academic adjustment.

Figure 3.1. Expected relationships between responsibilities, parent-adolescent attachment, self-efficacy and adjustment measures
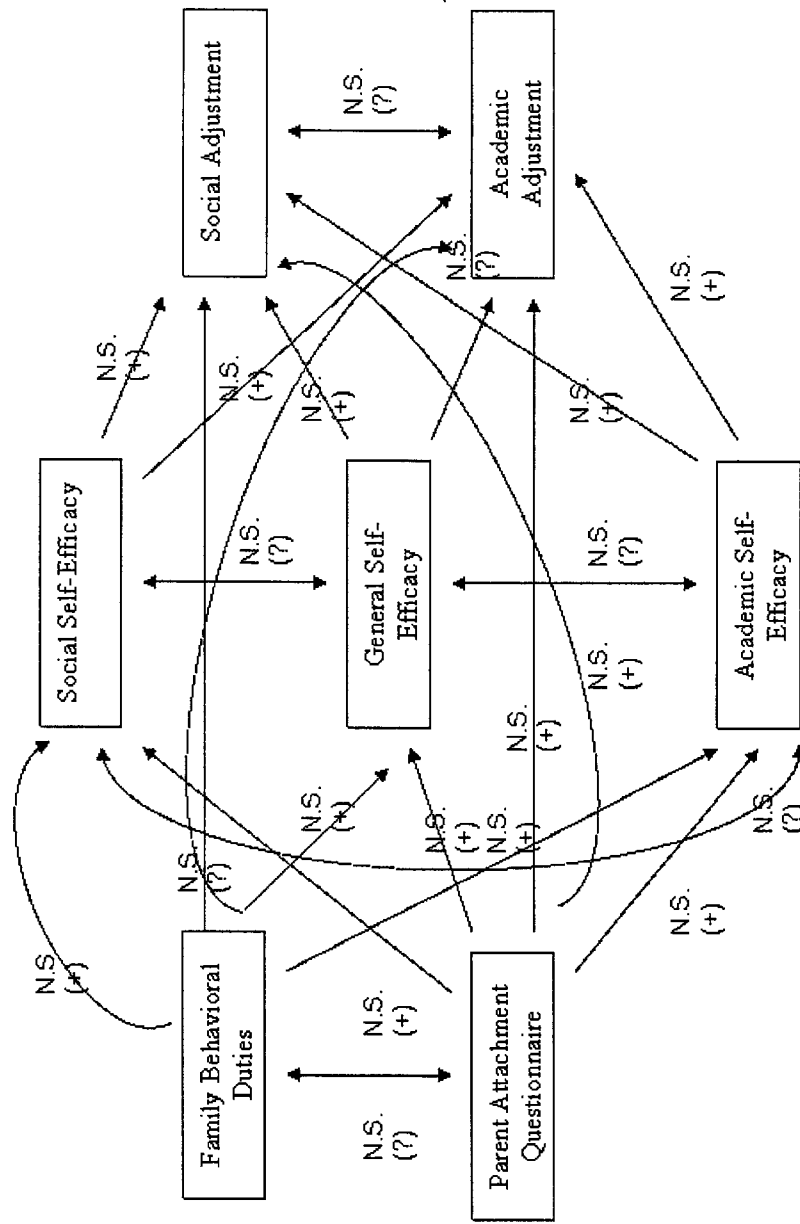
Chapter IV

Results

Introduction

The overall purpose of the analyses was to examine the relationships among the variables, family behavioral duties, parent attachment, self-efficacy and adjustment indices. The first aim was to determine if gender, citizenship or birth order differences exist in reporting family behavioral duties (FBD). A second aim was to investigate if there were any relationships between FBD and the following measures: parent attachment (PAQ), general self-efficacy (GSE), academic self-efficacy (ASE), social self-efficacy (SSE), academic adjustment (AA) and social adjustment (SA). In the second set of analyses a factor analysis of family responsibilities was conducted on the 23 items from the FBD. The purpose was to assess whether different aspects of family responsibilities were associated with the attachment, efficacy and adjustment indices.

Prior to analyses, data cleaning consisted of rechecking data entry and computing skewness and kurtosis values to verify that distributions were normal for the following variables: FBD, PAQ, GSE, ASE, SSE, AA and SA. This was done in order to ensure that independent t-tests and correlational analyses could be conducted (see Stevens, 1992). Table 4.1 shows a summary of the skewness and kurtosis values that were used to determine whether the distributions are normal (Stevens, 1992). Skewness is a measure of the symmetry of the distribution (Tabachnick & Fidell, 1989). A skewed variable refers to a distribution where the mean is not at the centre. Kurtosis is an index of the peakedness or flatness of the distribution (Tabachnick & Fidell, 1989). A positive kurtosis value indicates that the distribution is more flat than usual whereas a negative

kurtosis value reflects a distribution that is more peaked compared to the normal distribution. A normal distribution would have skewness and kurtosis values that are near zero. Kurtosis and skewness values that fall within the range of $\pm$ 2.0 are considered acceptable (Cutting, no date). Based on these criteria, the values listed in Table 4.1 are considered to be acceptable as having normal distributions.

Not all participants answered every question. Therefore, missing data were replaced with values using the mean substitution rule, a process involving the substitution of a missing value of a variable with a mean score computed from all participants that answered the variable (Gyimah, 2001). In total, one value was missing for each of the following three scales: social self-efficacy, parent attachment and social adjustment.

Demographic Analyses

There were 41 females and 31 males who responded to the questionnaires. Thirty-four participants were born in Canada and 38 were born outside Canada. Those who were born outside of Canada had spent an average of 9 ½ years (N = 70) in Canada. Two did not report the length of their stay in Canada. Participants came from a variety of different ethnicities that included European, East or Southeast Asian and Arabic. In this sample, there were 23 different languages spoken by participants and their parents; these include: Cantonese, Mandarin, Urdu, Arabic, Polish and English. The most frequent first language spoken by participants who were born in Canada was English. Fifty-five participants reported that they grew up with their immediate family and 13 indicated that they grew up with their immediate and extended family. One participant reported that he or she grew up with his/her immediate family and hired help. Three individuals did not indicate who they lived with as they grew up in Canada. In terms of birth order in the

family: 35 were the eldest, 7 were the middle child, 24 were the youngest child and 6 were the only child. The most common family size in this sample consisted of 2 siblings.

Fifty-six participants reported that they came from a two-parent income household, ten came from a one-parent income household and one participant indicated that his/her parents were presently unemployed. Four participants reported one parents' employment status and one participant did not respond to this question. Twelve reported that they lived on-campus, 6 reported that they lived off-campus without their parents, and 54 reported that they lived off-campus with their parents.

<div align="center">

First Set of Analyses

</div>

Independent t-tests on gender, citizenship and birth order

To test differences in gender, citizenship and birth order on all measures, t-tests were conducted. Table 4.2 shows a summary of the means and standard deviations for gender on all measures. Levene's test for equal variances was calculated for each comparison. There were no significant relationships indicating that the distributions had equal variances. Table 4.2 illustrates that there were no significant relationships between gender and the measured scales. In other words, there were no significant differences between males and females in their responses to the questionnaire items.

Means and standard deviations are summarized for each first and second generation immigrant on all variables in Table 4.3. Levene's tests indicated that the distribution for all but one variable (ASE) had equal variances. Thus for ASE, the t-test for unequal variances was reported. Table 4.3 shows that several t-tests resulted in significant relationships between first-generation and second generation immigrants (FBD, PAQ, GSE, ASE and AA measures). These results indicate that on average, first-

generation immigrants compared to the second-generation immigrants scored higher on the parent attachment, general self-efficacy, academic self-efficacy and academic adjustment scales. That is, first-generation compared to second-generation immigrants felt they had a strong attachment bond with their parents, felt more efficacious in dealing with problems in general and academic areas and felt they adjusted academically well to the university environment.

Means and standard deviations are summarized for each birth order group on all variables in Table 4.4. Levene's tests indicated equal variances for each measure. As shown in Table 4.4, analysis of variance (ANOVA) tests indicated no significant differences between the eldest, middle or youngest child on any measures. In other words, there were no statistically significant differences between the eldest, middle or youngest child in their responses to all questionnaires.

Correlational analyses

Despite finding significant differences among generational groups, all data were collapsed for the correlational analyses were not conducted within each group because of the small sample size for each demographic variable. For all participants, on each of the measure means and standard deviations are presented in Table 4.5. Correlations among all the variables were conducted. The results are presented in Table 4.6. The correlations show that there were no significant relationships between family behavioral duties (FBD) and any of the other measures.

All self-efficacy measures were significantly correlated with each other. General self-efficacy (GSE) was significantly related to social self-efficacy (SSE) and academic self-efficacy (ASE). That is, participants who reported high general self-efficacy were

also high on social self-efficacy and academic self-efficacy. SSE was significantly

positively related to ASE. In other words, participants who reported high social self-

efficacy scores were also high on academic self-efficacy. Likewise, adjustment

measures were significantly correlated. AA was significantly related to SA indicating

that people who reported high academic adjustment also reported high social adjustment.

Significant relationships were found between all self-efficacy measures and all

adjustment tests. GSE was significantly related to AA and SA indicating that participants

who reported high general self-efficacy also reported high academic and social

adjustment. SSE was significantly related to AA and SA. That is, participants who

reported high social self-efficacy also reported high academic and social adjustment. ASE

was significantly related to AA and SA illustrating that participants who reported high

academic self-efficacy also scored high academic and social adjustment. As well, there

were significant correlations between PAQ and ASE and AA. Specifically, participants

who reported high parent attachment scores also scored high on academic self-efficacy

and academic adjustment.

Figure 4.2 presents a model of the findings. Non-significant findings are

portrayed as broken lines, statistically significant relationships are represented as solid

lines. Figure 4.2 displays FBD having non-significant relationships with all measures,

indicating that FBD was not related to any measures. As well, Figure 4.2 shows that

parent attachment was positively related to academic self-efficacy and academic

adjustment. However, there were no significant relationships between PAQ and general

self-efficacy, social self-efficacy and social adjustment. General, social and academic

self-efficacy were all positively related to each other. Likewise, social and academic

adjustment showed positive relationships. Lastly, Figure 4.2 shows that each self-efficacy measure (general, academic and social) was related to each adjustment index (academic and social).

<center>*Second Set of Analyses*</center>

Factor analysis

Because there were no significant relationships between family behavioral duties (FBD) and other indices as expected, each question in the FBD was assessed to determine if there was any association with parent attachment, self-efficacy and adjustment measures. Then, the questions in the FBD were grouped into factors using factor analysis. Each question on the FBD was checked for normality using the skewness and kurtosis values as shown in Table 4.7.

Table 4.7 shows that 8 of 23 items on the FBD were skewed but considered acceptable for normality (Cutting, no date). Secondly, Kaiser-Meyer-Olkin test (KMO) had a value of 0.623 and Bartlett's Test of Sphericity was significant, indicating that the sample was adequate for factor analysis. A common rule of thumb suggests that a KMO value should be greater than 0.50 in order to proceed with a satisfactory factor analysis. The higher the KMO value, the higher the degree of common variance that is shared among the 23 variables.

A principal component analysis was used in order to reduce the large set of family responsibilities (FBD) into a small set of components. As well, the variables were rotated using a varimax approach to maximize the variance while minimizing the complexity of the factors. In this approach, variables are forced to be orthogonal to each other. Eigenvalues of 1 or greater and a Scree plot were used to determine the number of factors

that could be retained. Eigenvalues represent the variance of each factor that is extracted and is denoted by a value of 1. Values lower than 1 do not explain the variance. A 6 factor structure was extracted and accounted for 70% of the variance. Table 4.8 summarizes the factor loadings for each item on the FBD scale. Higher loadings are grouped together to represent a factor. Scree plots are eigenvalues plotted against each factor. These plots have been criticized for being subjective; however they can be appropriately used at initial and later points in factor analysis (Tabachnick & Fidell, 2007). As noted by Tabachinick and Fidell (2007), the number of factors that can be extracted from the Scree plot is determined by the point at which a fitted line along the curve makes a marked change in its slope or the point at which the curve starts to flatten. An investigation of the Scree plot in Figure 4.3 confirms that the slope of the line begins to change after the first six factors.

Of the 23 items, FBD01 (*i.e. did household chores*), FBD6 (*i.e. helped someone in your family take care of business with a school, doctor, employer, or other institution*) and FBD21 (*i.e. consulted by parents to deal with discipling your sibling(s)*) loaded higher than .40 on more than one factor and were therefore omitted from factor analyses. As illustrated in Table 4.8, Factor 1 titled, *Translator Aide*, was made up of 5 items (Items 8, 9, 10, 11, and 12) that consisted of translating responsibilities; these accounted for 28.9% of the variance. Factor 2 titled, *Family Aide,* was comprised of 3 items (Items 3, 4, and 5) that consisted of general responsibilities completed for the entire family and accounted for 11.4% of the variance. Factor 3 titled, *Parent Aide*, was made up of 4 items (Items 13, 14, 15, and 16) that consisted of responsibilities that were specific for parents and accounted for 9.61% of the variance. Factor 4 titled, *Sibling Aide*, comprised

of 3 items (Items 17, 18, and 19) that measured responsibilities that were specific for siblings and accounted for 8.51% of the variance. Factor 5 titled, *General Aide,* was made up of 3 items (Items 2, 7, and 20) that consisted of responsibilities that were specific for helping out family members in translating or in financial matters and accounted for 5.89% of the variance. Factor 6 titled, *Grandparent Aide*, was comprised of 2 items (Items 22 and 23) and consisted of responsibilities that were specific for grandparents; this accounted for 5.59% of the variance.

Independent t-tests on gender, citizenship and birth order

Table 4.9 shows a summary of the means and standard deviations for the factors from the family responsibilities questionnaire. To determine any differences between FBD factors and gender, citizenship and birth order, t-tests were conducted. Table 4.10 shows the means and standard deviations for factors of family responsibilities for each gender. Levene's test for equality of variance were calculated for each factor and resulted in non-significant relationships, indicating that the distributions had equal variances. As shown in Table 4.10, there was a significant relationship between gender and *General Aide*, showing that males compared to females reported a higher mean of responsibilities in this area. Specifically, on average, males compared to females reported a higher score for being a general aide to their families, a duty defined in this study that includes activities such as helping their parents with their job or working in the family business.

Table 4.11 shows the means and standard deviations for the factors of family responsibilities on first and second-generation immigrants. Table 4.11 illustrates that there was a significant relationship between generational status and *Translator Aide,*

showing that first-generation immigrants (non-Canadians) compared to second-generation immigrants (Canadian-born) had a higher mean in terms of rating responsibilities in this area. This indicates that on average, first-generation compared to second-generation immigrants reported higher scores for being an aide to their families in duties related to translating including translating or interpreting in English for their parents or completing documents or papers in English for someone in their family.

Means and standard deviations are summarized in Table 4.12 for each birth order group on each factor of family responsibilities. Levene's test for equality variance showed that there were some significant relationships, indicating that there were unequal variances among two clusters: translator aide and general aide. Independent t-tests for nonparametric cases were reported if there was a significant difference between each birth order group for these two factors. However, ANOVA tests only showed one significant relationship between birth order and sibling aide. Post-hoc tests indicated that there was a difference between elder and younger siblings on the factor, sibling aide, with the eldest siblings having a higher mean compared to the youngest siblings. This finding indicates that, on average, the eldest compared to the youngest siblings reported higher scores on being a sibling aide, a duty defined in this study as involving tasks such as acting as a confidante and helping their sibling(s) with their homework. Similarly, post-hoc tests indicated that there was a difference between middle and younger siblings on the Sibling Aide factor. This illustrates that, on average, the middle child compared to the youngest sibling reported higher scores on being an aide to their sibling.

Correlational analyses

Despite finding significant differences among some demographic variables, correlational analyses were not conducted within each group because of the small sample for each demographic variable. Instead, gender, generational and birth order data were collapsed. As shown in Table 4.13, there were significant relationships between some of the factors of family responsibilities and a few efficacy and adjustment measures. There are displayed in Figure 4.4. Specifically, Figure 4.4 shows that *Parent's Aide* was negatively correlated with PAQ, indicating that participants who scored high on being an aide to a parent scored low on parent attachment. *General aide* was significantly negatively correlated with PAQ, illustrating that participants who scored high on being a general aide also scored low on parent attachment. Figure 4.4 shows that *Grandparents' Aide* was significantly positively correlated with SA; this result indicates that participants who scored high on being an aide to their grandparents also scored high on social adjustment. *Family Aide* was significantly positively correlated with GSE, showing that participants who scored high on being an aide to their families also scored high on general self-efficacy.

What these relationships show is that although FBD as a composite measure was not related to other attachment, efficacy or adjustment measures, when separated into factors, there were several significant relationships. As well, some significant group differences existed among the different FBD factors on some demographic variables.

Table 4.1

Skewness and kurtosis values for measured variables

Measures	γ_1	β_2
Family Behavioral Duties (FBD)	.38	-.65
Parent Attachment (PAQ)	-.35	-.04
General Self-Efficacy (GSE)	-.21	-.63
Social Self-Efficacy (SSE)	-.12	-1.01
Academic Self-Efficacy (ASE)	-.92	1.46
Social Adjustment (SA)	-.29	.22
Academic Adjustment (AA)	.30	.07

Note. M = mean, SD = standard deviation, γ_1 = skewness, β_2 = kurtosis
N = 72 participants

Table 4.2

Analyses of gender differences on measures

	M(SD)	t(df = 70)	P
FBD			
Females	3.35(.99)	-1.29	.20
Males	3.65(.17)		
PAQ			
Females	3.43(.65)	-.43	.67
Males	3.49(.11)		
GSE			
Females	3.14(.48)	-.88	.38
Males	3.14(.07)		
ASE			
Females	5.38(.91)	.09	.93
Males	5.36(.14)		
SSE			
Females	4.84(1.1)	-1.82	.07
Males	5.28(.18)		
AA			
Females	6.02(.99)	-.40	.69
Males	6.12(.20)		
SA			
Females	4.86(.83)	-1.10	.27
Males	5.09(.16)		

Note. M = mean, SD = standard deviation, df = degrees of freedom, t = t value, p = significance level
N = 41 females, N = 31 males.

Table 4.3

Analyses of generational differences on measures

	M(SD)	t(df = 70)	P
FBD			
1st generation immigrants	3.69(.98)	-1.98	.05
2nd generation immigrants	3.24(.94)		
PAQ			
1st generation immigrants	3.66(.53)	-3.13**	<.01
2nd generation immigrants	3.22(.65)		
GSE			
1st generation immigrants	3.30(.46)	-2.18*	.03
2nd generation immigrants	3.05(.50)		
ASE[a]			
1st generation immigrants	5.74(.71)	-3.39**	<.01
2nd generation immigrants	4.96(1.2)		
	T		
SSE			
1st generation immigrants	5.16(1.0)	-1.16	.25
2nd generation immigrants	4.88(1.0)		
AA			
1st generation immigrants	6.40(.97)	-3.06**	<.01
2nd generation immigrants	5.69(1.0)		
SA			
1st generation immigrants	5.05(.95)	-.93	.35
2nd generation immigrants	4.86(.77)		

Note. M = mean, SD = standard deviation, df = degrees of freedom, t = t value, p = significance level

N = 34 1st generation immigrants, N = 38 2nd generation immigrants.

[a]df = 53.5

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

Table 4.4

Analyses of birth order differences on measures

	M(SD)	F(2,63)	P
FBD			
Eldest	3.69(1.0)	2.64	.08
Middle	2.88(.59)		
Youngest	3.27(1.0)		
PAQ			
Eldest	3.58(.515)	1.97	.15
Middle	3.59(.53)		
Youngest	3.28(.74)		
GSE			
Eldest	3.14(.48)	.39	.67
Middle	3.31(.39)		
Youngest	3.17(.50)		
ASE			
Eldest	5.34(.895)	.37	.69
Middle	5.70(.52)		
Youngest	5.42(1.25)		
SSE			
Eldest	4.85(1.1)	.67	.51
Middle	5.29(1.1)		
Youngest	5.09(.99)		
AA			
Eldest	6.11(.99)	.15	.90
Middle	5.92(.96)		
Youngest	6.13(1.2)		
SA			
Eldest	4.91(.98)	.10	.86
Middle	5.12(.94)		
Youngest	4.95(.796)		

Note. M = mean, SD = standard deviation, df = degrees of freedom
N = 27 eldest child, N = 5 middle child, 18 youngest child

Table 4.5

Means and standard deviations of measures

Measures	M	SD
Family Behavioral Duties (FBD)	3.48	.98
Parent Attachment Questionnaire (PAQ)	3.45	.62
General Self-Efficacy (GSE)	3.18	.49
Social Self-Efficacy (SSE)	5.02	1.03
Academic Self-Efficacy (ASE)	5.38	1.02
Social Adjustment (SA)	4.96	.87
Academic Adjustment (AA)	6.07	1.04

Note. Note. M = mean, *SD* = standard deviation
N = 72 participants

Table 4.6

Correlations among measured variables

Scales	1	2	3	4	5	6
1. FBD	-----	-----	-----	-----	-----	-----
2. PAQ	-.096	-----	-----	-----	-----	-----
3. GSE	.180	.222	-----	-----	-----	-----
4. SSE	.108	.209	.455**	-----	-----	-----
5. ASE	-.009	.365**	.655**	.381**	-----	-----
6. SA	.110	.208	.360**	.772**	.358**	-----
7. AA	.023	.416**	.506**	.418**	.770**	.453**

**$p < .01$

Table 4.7

Means, standard deviations, skewness and kurtosis values of FBD items

FBD Item	M	SD	γ_1	β_2
FBD01	4.56	1.64	-0.15	-0.68
FBD02	3.04	1.80	0.40	-1.01
FBD03	4.53	1.63	-0.44	-.22
FBD04	4.08	1.94	-0.20	-1.04
FBD05	2.22	1.57	1.20	.49
FBD06	3.26	1.83	0.18	-1.33
FBD07	2.43	1.94	0.91	- 0.79
FBD08	3.43	2.22	0.21	-1.49
FBD09	2.58	2.08	0.88	-0.79
FBD10	3.15	2.10	0.44	-1.23
FBD11	2.90	2.14	0.66	-1.14
FBD12	2.67	2.04	0.85	-.77
FBD13	4.06	2.02	-0.07	-1.22
FBD14	4.17	1.95	-0.17	-1.13
FBD15	3.94	2.09	0.05	-1.44
FBD16	4.88	1.70	-0.61	-.62
FBD17	3.76	2.02	-0.00	-1.25
FBD18	4.77	1.83	-0.51	-.70
FBD19	4.20	2.31	-0.24	-1.48
FBD20	1.45	0.99	1.96	2.25
FBD21	2.98	2.05	0.58	-1.09
FBD22	2.87	1.92	0.69	-.69
FBD23	3.80	2.36	0.07	-1.60

Note. M = mean, SD = standard deviation, γ_1 = skewness, β_2 = kurtosis
N = 72 participants

Table 4.8
Factor Loadings of FBD items

Item Number	Description	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	Factor 1:Translator Aide						
FBD09	Ran errands for your family because of their limited English skills[a]	.906					
FBD12	Accompanied a family member to handle other business with a school, doctor, employer or other institution to translate or interpret for him/her[a]	.900					
FBD11	Was an advocate for someone in your family because of their limited English skills[a]	.806					
FBD08	Translated/interpreted in English for your parents[a]	.795					
FBD10	Completed documents or papers in English for someone in your family[a]	.838					
FBD06	Helped someone in your family take care of business with a school, doctor, employer, or other institution	.589	.425				

Item Number	Description	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	Factor 2: Family Aide						
FBD03	Ran errands for your family[a]		.868				
FBD04	Shopped for your family[a]		.821				
FBD01	Did household chores (e.g. cooking, cleaning, etc.)		.556		.455		
FBD05	Helped with the family's finances, purchases, or bills[a]		.581				
	Factor 3: Parent Aide						
FBD14	Listened to a parent's distress regarding personal problems as if you were an adult[a]			.875			
FBD15	Listened to a parent's distress regarding personal problems about the other parent as if you were an adult[a]			.861			
FBD13	Listened to a parent's distress regarding financial problems[a]			.586			
FBD16	When requested by a parent, provided input regarding an important manner[a]			.523			
	Factor 4: Sibling Aide						
FBD19	Took care of your sibling(s)[a]				.809		
FBD17	Helped your sibling(s) with their homework[a]				.790		
FBD18	Acted as a confidante to your sibling(s)[a]				.608		
FBD21	Consulted by parents to deal with disciplining your sibling(s)			.509	.515		

Item Number	Description	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	Factor 5: General						
FBD20	Translate/interpret in English for your sibling(s)[a]					.698	
FBD02	Helped your parents with their job[a]					.598	
FBD07	Worked in the family business[a]					.611	
	Factor 6: Grandparent						
FBD22	Took care of your grandparent(s)[a]						.810
FBD23	Translate/interpret in English for your grandparent(s)[a]						.650

Note. Only factor loadings greater than +.40 have been included
[a]Final chosen factors.

Table 4.9

Means and standard deviations of clusters of family behavioral duties

Clusters	M	SD
Translator Aide	2.95	1.88
Family Aide	3.85	1.28
Parent Aide	4.26	1.45
Sibling Aide	3.93	1.48
General Aide	2.31	1.24
Grandparent Aide	3.34	1.81

Note. M = mean, SD = standard deviation
N = 72 participants

Table 4.10

Analyses of gender differences on measures

	M(SD)	*t(df = 70)*	*P*
Translator Aide[a]			
Females	2.69(1.93)	-1. 35	.18
Males	3.29(1.79)		
Family Aide[a]			
Females	3.51(1.51)	-.69	.49
Males	3.74(1.22)		
Sibling Aide[b]			
Females	4.23(1.54)	-.08	.93
Males	4.26(1.74)		
Parent Aide[a]			
Females	4.32(1.31)	.38	.71
Males	4.05(1.61)		
Grandparent Aide[c]			
Females	3.26(1.81)	-.36	.72
Males	3.44(1.85)		
General Aide[d]			
Females	2.05(1.12)	-2.04*	.04
Males	2.67(1.32)		

Note. M = mean, SD = standard deviation, df = degrees of freedom, t = t value, p = significance level

[a]N = 41 females, N = 31 males.

[b]N = 38 females, N = 28 males.

[c]N = 31 females, N = 24 males.

[d]N = 28 females, N = 38 males.

*p <.05.

Table 4.11

Analyses of generational differences on measures

	$M(SD)$	$t(df)$	P
Translator Aide[a]			
1st generation immigrants	3.41(1.91)	-2.29(70)*	.02
2nd generation immigrants	2.42(1.74)		
Family Aide[a]			
1st generation immigrants	3.79(1.53)	-1.15(70)	.25
2nd generation immigrants	3.41(1.21)		
Sibling Aide[b]			
1st generation immigrants	4.51(1.24)	-1.41(64)	57.59
2nd generation immigrants	3.96(1.88)		
Parent Aide[a]			
1st generation immigrants	4.16(1.43)	.63(70)	.53
2nd generation immigrants	4.38(1.49)		
Grandparent Aide[c]			
1st generation immigrants	3.16(1.85)	.78(53)	.44
2nd generation immigrants	3.54(1.79)		
General Aide[b]			
1st generation immigrants	2.56(1.29)	-1.69(64)	.10
2nd generation immigrants	2.05(1.14)		

Note. M = mean, SD = standard deviation, df = degrees of freedom, t = t value, p = significance level

[a]N = 38 1st generation immigrants, N = 34 2nd generation immigrants.

[b]N = 34 1st generation immigrants, N = 32 2nd generation immigrants.

[c]N = 29 1st generation immigrants, N = 26 2nd generation immigrants

*p <.05.

Table 4.12

Analyses of birth order differences on measures

	M(SD)	*F(2,47)*	*P*
Translator Aide			
Eldest	2.94(2.02)	.91	.41
Middle	2.00(1.19)		
Youngest	3.11(1.94)		
Family Aide			
Eldest	3.70(1.46)	.50	.61
Middle	3.00(1.43)		
Youngest	3.70(1.54)		
Sibling Aide			
Eldest	5.17(1.23)	24.5**	<.01
Middle	4.24(1.20)		
Youngest	2.89(1.23)		
Parent Aide			
Eldest	4.33(1.28)	1.91	.16
Middle	3.21(1.42)		
Youngest	4.30(1.60)		
Grandparent Aide			
Eldest	3.61(1.95)	.76	.47
Middle	3.20(2.05)		
Youngest	2.92(1.68)		
General Aide			
Eldest	2.32(1.27)	1.58	.22
Middle	1.33(.408)		
Youngest	2.31(1.16)		

Note. M = mean, SD = standard deviation, df = degrees of freedom, F = F value, p = significance level

N = 27 eldest child, N = 5 middle child, 18 youngest child

**$p < .01$

Table 4.13

Correlations among clusters of family behavioral duties and other measures

Scales	Translator Aide	Family Aide	Parent Aide	Sibling Aide	General Aide	Grandparent Aide
PAQ	-.08	.12	-.29*	.19	-.31*	-.02
GSE	.15	.29*	.00	.02	.02	.04
ASE	.00	.07	-.21	.10	-.05	.13
SSE	-.02	.23	.01	.03	.08	.25
SA	-.08	.22	.04	.14	.02	.33*
AA	-.07	.14	-.09	.24	-.10	.06

*p <.05.

Figure 4.1 Correlations between responsibility, attachment, efficacy and adjustment measures
**p < .01
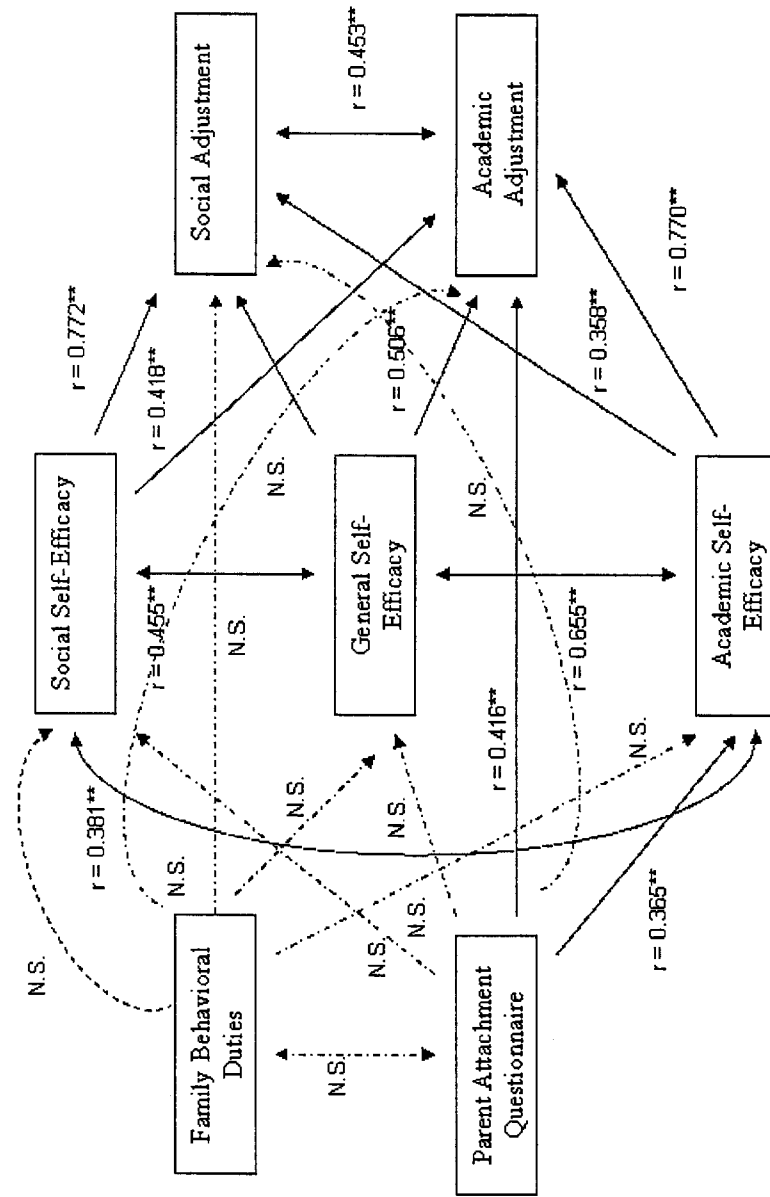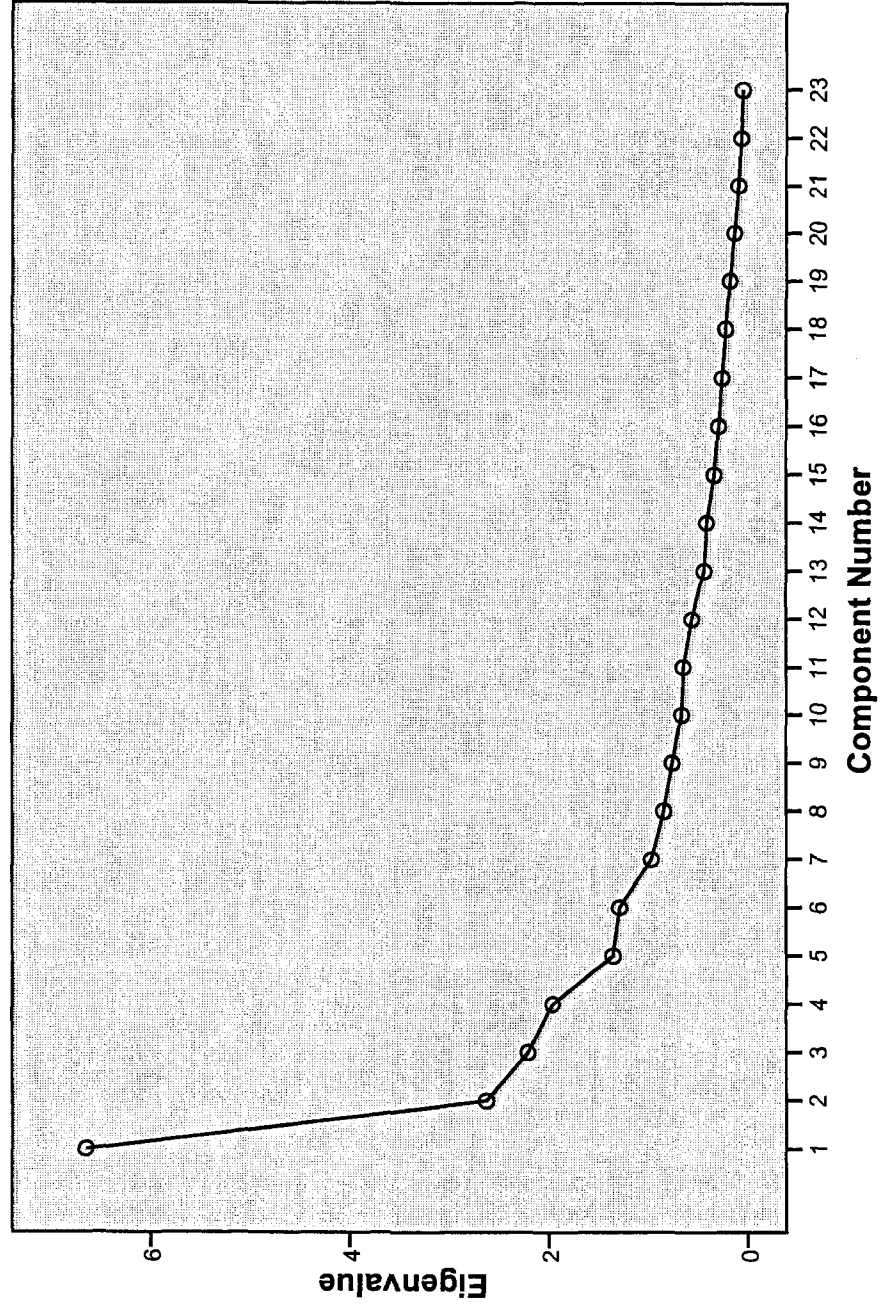
Figure 4.2 Scree plot of FBD items

Scree Plot

Figure 4.3 Correlations between clusters of FBD and attachment, efficacy and adjustment indices
*p <.05.
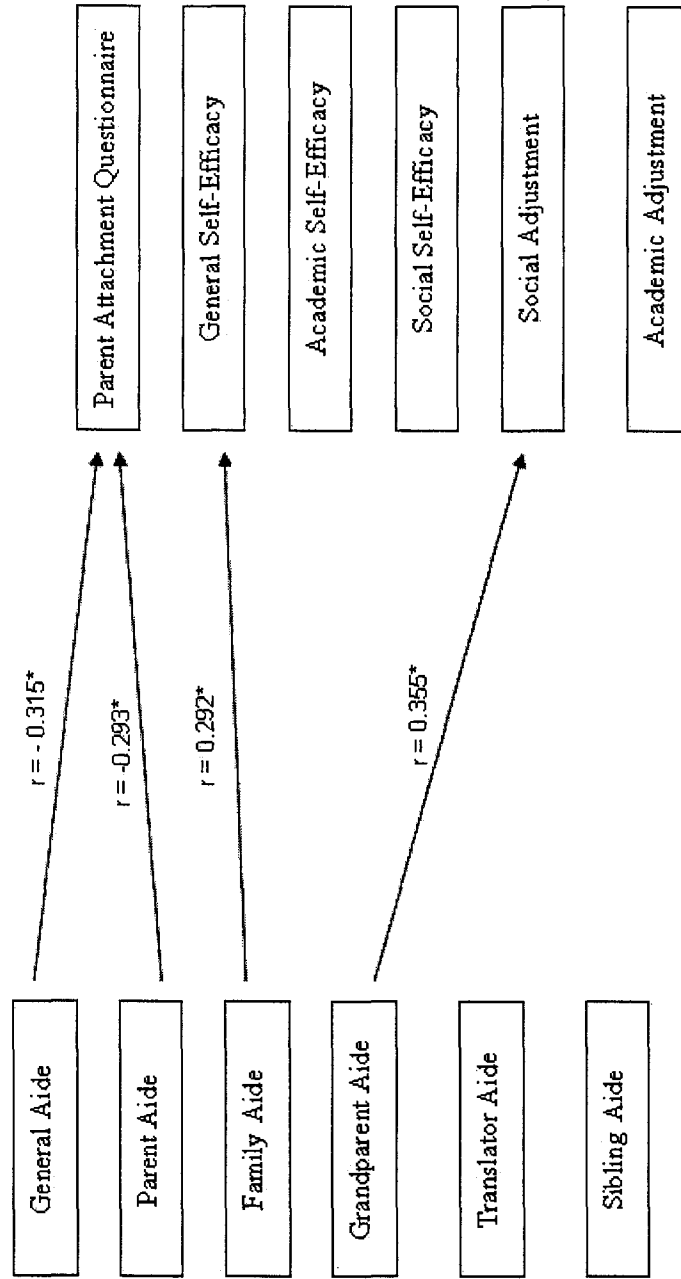
CHAPTER V

Discussion

The purpose of this study was to examine whether retrospective perceptions of adolescent family responsibilities and past parent-adolescent attachment contribute to first-year university adjustment through self-efficacy beliefs among immigrant youth who grew up in Canada. The sample in the study was made up of 72 first-year university students. The overall goal of the study was to investigate whether composite measures of past family responsibilities (FBD) and past parent-adolescent attachment (PAQ) were associated with a) three indices of self-efficacy beliefs: general (GSE), academic (ASE) and social (SSE) and b) two measures of university adjustment: social (SA) and academic (AA). To achieve the overall goals, the study was broken down into three objectives. The first aim was to examine the relationships among perceptions of family responsibilities (FBD), self efficacy beliefs (GSE, ASE, SSE) and academic and social adjustment in university (AA, SA). The second objective was to assess the relationships among perceptions of past parent-adolescent attachment (PAQ), self-efficacy beliefs (GSE, ASE, SSE) and university adjustment (AA, SA).

A further aim was to examine whether participants differed on the measure of family responsibilities (FBD) as a result of birth order, gender or generational status. In particular, this study asked whether a) females compared to males reported more family responsibilities, b) the eldest sibling compared to the middle or the youngest sibling reported more family responsibilities and c) first-generation compared to second-generation immigrants reported more family responsibilities.

Main findings

Family Responsibilities

The results indicated that the composite measure of family responsibilities was not related to any of the other measures. One possibility for the lack of findings is that the FBD measure included too many scales. It is plausible that such a variety of responsibilities has a broad scope that limits a thorough investigation of its consequences. Significant findings were revealed when the composite measure of family responsibilities was partitioned. Six factors emerged from a factor analysis of the FBD measure: *General Aide, Parent Aide, Family Aide, Grandparent aide, translator aide* and *sibling aide*.

Each of these factors represents a category of responsibilities that are specific to a certain family member or a task. *Parent Aide* refers to tasks that require youth to be emotional confidantes to a parent by listening to their dilemmas pertaining to personal or financial issues and providing input to a problem. *Family Aide* refers to tasks that require youth to be caretakers. *Grandparent Aide* refers to caretaking duties and being language brokers to a grandparent. *Sibling Aide* refers to tasks that require youth to be caretakers, emotional confidantes and language brokers for a sibling in their family. *General Aide* refers to a broad category of tasks that require youth to be aides to a specific or all members in their family such as helping a parent with a job or working in the family business. Lastly, *Translator Aide* refers to tasks that involve language brokering to a specific or all members in their family. For instance, a youth may translate, interpret, or complete English documents for a family member. Correlational analyses revealed significant relationships between some of these factors and attachment, efficacy and adjustment indices. The main findings are discussed below.

Relationship between parent aide and parent attachment

There were was an inverse relationship between scoring high as a *Parent Aide* as an adolescent and parent attachment (PAQ). No significant relationships were discovered between *Parent Aide* and efficacy and adjustment measures. This shows that participants who reported a high involvement of being a *Parent Aide* also reported feeling that their attachment to their parents was low in the past. In contrast, the study by Walsh et al (2006) discovered positive findings from immigrant youth partaking in these parental roles. Further analyses by these investigators reported that these immigrant youth had a strong attachment bond with their parents.

However, findings from the present study are consistent with the proposition held by researchers that being overburdened with the responsibility of being a spouse to another parent is detrimental to a child's development particularly in the attachment realm (Jurkovic, 1997; Mika et al, 1987). Such tasks entailed in the duties of a *Parent Aide* require an immigrant youth to deal with complex issues, some that may often be laden with emotions. Such issues require a set of coping skills that may not have been developed by all youth in this sample.

Further, it is usually the child who seeks the comfort of a parent instead of a parent seeking the comfort and counsel of a child. This role reversal cannot always be handled with great ease especially for youth who have not developed a set of coping skills. Research has elaborated that role reversals occur in families because parents experienced an early history of an insecure attachment in their lives (Jurkovic, 1997). Other consequences of being a parent aide are not only felt by the youth as the formation of the parent-child bond may disrupt the existing relationship between two parents,

creating a new dyad between child and parent that pushes the often weak parent aside (Sroufe & Ward, 1980). It is possible that youth may have felt that their aid towards one parent may have disrupted the bond existing between two parents, resulting in feeling distant from the weak parent. Future studies are needed to differentiate whether the effects of being a *Parent Aide* are a result from being overwhelmed by the task at hand, coping with the power struggles amongst their parents, or both.

Relationship between general aide and parent attachment

Findings from the correlational analyses discovered a negative relationship between: *General Aide* and parent attachment. There were no significant relationships between *General Aide* and other efficacy and adjustment measures. Results showed an inverse relationship between scoring high as a *General Aide* and scoring low on the parent attachment in the past. This shows that participants who reported being involved at a high frequency as a *General Aide* also reported feeling that their parent attachment was low in their adolescence. Items on the scale denote tasks that require youth to participate in the financial affairs of their families and to aid their siblings in matters pertaining to language brokering. The effects of these duties on the parent-adolescent attachment bond can be explained by examining the complex picture painted by the research.

On a broad level, studies have suggested the tasks entailed in *General Aide* may become overwhelming and taxing for youth because such tasks require them to become decision-makers instead of mediators within their families (Kamateros, 1998; Walsh et al, 2006). In turn, pressures can have a dual effect on youth, empowering yet overwhelming them as they assume a greater role for the responsibility of their families' welfare. As an

aide in their financial affairs of their families, youth may perceive themselves as significant contributors to the financial stability of their families. Likewise, as translators for their siblings, youth may feel empowered because they become involved in the decision-making of the educational paths of their siblings.

Despite the empowerment, such responsibilities may place greater burdens on immigrant youth by placing them in roles that are not normally within their own province. For instance, as the channel in which school officials communicate with family members, immigrant youth may feel responsible for the decisions that adults should make, a responsibility that is contingent on thoroughly understanding and communicating school practices between school officials and family members. Translator-mediated interactions between school officials and their parents enable youth to become involved in such trivial issues such as the selection of schools, progress reports, and participation in school activities for their siblings and themselves. In a qualitative study, one youth reported feeling remorseful for not explaining thoroughly to her mother her sister's educational progress (Orellana et al, 2003). Since young brokers are commonly entrusted to determine the meaning of the messages within these interactions involving matters of the school, they must make decisions for themselves and their siblings that are usually made by their parents in the absence of adult knowledge and experience (Tse, 1996).

The effects of these role reversals can be detrimental to the parent-child attachment bond especially if youth partake in these responsibilities at higher frequencies (Jurkovic, 1997). Similar effects of being a *Parent Aide* can be applied to being a *General Aide* and they are the following: power struggles between parents as youth become decision-makers and feelings of being distant from a parent as youth learn to

become adults by themselves. Yet, not all language brokering activities require youth to

become decision-makers within their families. It is possible for families to work together

to arrive at a decision (Tyyska, 2006).

Relationship between grandparent aide and social adjustment

Correlational analyses found no significant relationships between *Grandparent*

Aide and any all efficacy and adjustment measures except social adjustment. There was a

direct positive relationship between *Grandparent Aide* and social adjustment. That is

individuals who were a *Grandparent Aide* reported adjusting well to the social

environment of the university. Researchers have suggested that the vast array of places

in which a language broker functions exposes them to a variety of cross-cultural

interactions possibly increasing their high levels of social self-efficacy (Buriel et al,

1998). Despite the lack of a relationship with the social self-efficacy in this study, it is

plausible that being an aide and taking care of their grandparents may have provided

youth many different encounters with different cultures in different domains. For

instance, youth might have escorted their grandparents to a doctor's office or health care

facility thereby encountering many different health officials.

Relationship between family aide and general self-efficacy

Correlational analyses revealed a significant direct positive relationship between

Family Aide and general self-efficacy. This illustrated that those who acted as a *Family*

Aide in the past reported having high levels of general self-efficacy. Parent attachment

and the remaining efficacy and adjustment measures were not related to *Family Aide*. On

a broad scope, household duties have been theorized as tools for self-efficacy and

independence (Jurkovic, 1997). As it relates to responsibilities among immigrant youth,

qualitative studies have suggested the benefits of household chores to immigrant youth in positive realms (Orellana et al, 2003) but quantitative studies that substantiate these findings are very limited.

Other factors of family responsibilities and relationship to efficacy and adjustment measures

No significant relationships were detected between the remaining factors of family responsibilities and other efficacy and adjustment measures. Past literature has found positive outcomes associated with being a financial, parent and a language broker aide to families but still research is limited (Morales & Hanson, 2005; Tyyska, 2006; Walsh et al., 2006; Weisskirch, 2005). It may be that associations with other efficacy or adjustment measures were not found in the present study because there were a small number of items for each factor.

In this study, no relationships were found with *Sibling Aide* and parent attachment, efficacy and adjustment indices. Studies have theorized that immigrant youth functioning as aides, confidantes or disciplinarians for siblings may promote positive growth but few studies have discovered that disciplinarian roles are reported as stressful encounters (Orellana et al, 2003). Most studies that assess the role of being an aide or confidante to a sibling have been included as a cumulative measure of family responsibilities (Tseng, 2004). Future studies are needed to explore if being an aide, confidante or disciplinarian to a sibling has an adaptive function to future development.

Lastly in terms of family responsibilities, there were no associations between *Translator Aide* and parent attachment, efficacy and adjustment indices. Results from past studies suggested that language brokering may be related to social self-efficacy,

academic self-efficacy and academic adjustment. First, researchers proposed that social self-efficacy may emerge from the diverse encounters in different environments with different individuals (Buriel et al, 1998). Secondly, perceptions of academic self-efficacy and high academic performance may stem from language brokering experiences because of the tasks of labeling, describing, explaining, clarifying concepts from two different languages. Such tasks may enable youth to develop their comprehension and problem-solving skills, tools that are beneficial to adjusting well to academic environment. Contrary to these results, this study did not find any relationship. Upon examination of the questions for the *Translator Aide* cluster, nearly half of the sample for each question responded that they never participated in these language brokering duties. It is difficult to measure a relationship between *Translator Aide* and other indices if participants did not partake in these responsibilities.

Relationships between parent attachment, efficacy measures, and academic adjustment

Consistent with past research, past parent attachment (PAQ) had a direct relationship with academic self-efficacy (ASE) and academic adjustment (AA). These results show that participants who felt a strong parent-attachment bond as an adolescent reported high levels of efficacious feelings in dealing with academic issues and also reported adjusting well to the academic environment in the university. Further, consistent with past research, academic self-efficacy was positively related to academic adjustment, illustrating those individuals who felt confident in coping with academic issues reported adjusting well to the academic environment. Since all three variables, parent attachment, academic self-efficacy and academic adjustment are related to each other, it is possible that academic self-efficacy may have mediated the relationship between past parent

attachment and academic adjustment. Researchers have noted the direct association between being highly efficacious in academic settings and adjusting well to the stress and demands in the academic environment (Chemers et al, 2001; Phinney & Haas, 2003).

Relationships between parent attachment and social adjustment

Contrary to findings in the literature, this study found that past parent attachment (PAQ) was not associated with general self-efficacy (GSE), social self-efficacy (SSE) and social adjustment (SA). However, an examination of the relationships (particularly the significance level) indicates that these relationships were close to an alpha level of 0.05 for each pair: parent attachment and general self-efficacy (r = .227, p = .057), parent attachment and social self-efficacy (r = .210, p = .079) and parent attachment and social adjustment (r = .233, p = .051). Despite not finding a relationship, past studies have shown that PAQ dimensions, particularly, Fostering Emotional Support has been a significant predictor for social adjustment in university among visible male minorities (Kalsner & Pistole, 2003). For the present study, these relationships were in the predicted direction but may have failed to reach significance because of the small sample size.

Summary of main findings

From the six factors that were created from a factorial analysis of the family responsibilities measure (FBD), *Parent Aide* and *General Aide* were the only other factors that had an association with past parent attachment. *Family Aide* was related to general self-efficacy and *Grandparent Aide* was related to social adjustment. As well, past parent-adolescent attachment showed relationships with academic efficacy and academic adjustment.

Theoretical implications

Results from this study illustrate a contrasting perspective among the myriad of responsibilities that a young immigrant partakes in. Factors such as *Parent Aide* and *General Aide* were negatively associated with parent attachment, thus affecting the formation of a bond between parent and child. It may be that the presence of a strong parent-child attachment was important in positive adjustment among immigrant youth who acted in different capacities as an aide to their families. Walsh et al (2006) found an association between immigrants who scored high as a spousal aide also scored high on parent-child attachment.

Despite the lack of a relationship between efficacy measures and the factors of family responsibilities, it is important to emphasize the role of a strong parent-child relationship and self-efficacy. Central tenets of attachment and self-efficacy theories and their relationship to adjustment focus on the need for a strong parent-child relationship as a basis for positive development. Despite the inevitable changing nature of the parent-child bond, the roots of a secure relationship begin at an early age with the formation of stable positive internal working models that depict children as efficacious individuals capable of exploring the world on their own (Weinfeld, et al, 1999). Through early mastery experiences, a child's personal efficacy will be strengthened by the positive feedback given by their caregivers (Bandura, 1997). In adolescence, feedback and a strong parent-child bond is still necessary in the development of self-efficacy.

Research in resiliency has shown that children and adolescents benefit from a strong relationship with their parents among immigrant and non-immigrant populations (Cowen et al, 1991; Egeland et al, 1993; Gribble et al, 1993; Loughry & Flouri, 2000;

Walsh et al, 2006). As stressed by Bandura, a particular type of caretaking is essential in promoting positive development under aversive experiences: providing emotional support and guidance, promoting meaningful values and standards, modeling constructive styles of coping and providing diverse and multiple opportunities for mastery experiences. Clearly, the nature of a strong parent-child attachment can differentiate between positive and negative psychological outcomes for youth who partake in responsibilities that would be otherwise be detrimental to them (Walsh et al, 2006).

Secondary findings

As a composite measure, FBD showed differences between first and second-generation immigrants. This illustrated that first-generation compared to second-generation immigrants reported partaking in a higher frequency of responsibilities as an adolescent. This finding is consistent with past research that reported first compared to subsequent generations of immigrants are involved in a higher level of caretaking roles (Morales & Hanson, 2005; Tseng, 2004). As a six factor measure for family responsibilities, a few significant findings emerged from independent t-test analyses when groups were compared based on gender, generational status and birth order.

Gender differences were found between females and males with the latter group reporting a more frequent involvement of being a general aide as an adolescent. Items within this factor of responsibility reflect financial responsibilities and translating for a sibling. This finding is not consistent with past research that has found that girls are more involved in the role of a financial aide (Valenzuela, 1999). However, Tyyska (2006) has suggested that males in Tamil families perform tasks that are outside the family whereas girls perform work that can be found within the household.

While it is not known in what capacity these participants acted as financial aides to their families, future studies could explore the nature of this role. It is plausible that as adolescents, participants may have been involved extensively with the financial stability in their families. For instance, if a youth assists a parent, he or she may be involved in translating employment-related forms and speaking to co-workers on behalf of one's parent. While present studies have not reported a difference between genders as it relates to the task of translating for a sibling, it may be that this sample of males acted in this role in their families on a frequent basis as an adolescent.

Differences were found between first and second-generation immigrants with the former group reporting a higher frequency of being a *Translator Aide* in their families as an adolescent. This finding coincides with research on language brokering that reports first compared to second generation immigrants are more likely to be involved in these responsibilities (Morales & Hanson, 2005). Birth order differences were found between the eldest and the youngest sibling with the former group reporting a higher frequency of being a sibling aide in their families. This finding is consistent with existing research on sibling caretaking as it is expected among many immigrant families that the eldest takes care of their younger siblings (Valenzuela, 1999). Lastly, differences were found between the middle and the youngest sibling with the former group reporting a higher involvement in helping in taking care of their siblings. This finding has not been mentioned in the existing research because the sole focus has been on the difference between elder and younger siblings. Caution must be exercised in interpreting these results because of the small number of middle compared to younger siblings. Future

studies should explore the difference of responsibilities taken on by the middle compared to the youngest child.

Limitations and recommendations for future research

The breadth of this study is not sufficiently expansive to assess other aspects of the parent-child relationship among adolescents that can contribute to positive functioning. As youth enter adolescence, the relationship between parent and child evolves as roles are negotiated. Researchers in attachment emphasize the importance of negotiating boundaries between parent and child that allow the child to be respected for their independence (Kenny & Rice, 1995). Yet as Tseng (2004) stresses, immigrant youth are obliged to support their families while balancing their need for autonomy within their families. Research has shown that setting limits on children is positively related to experiencing stressful events as being difficult (Walsh et al, 2006).

While this study assessed one component of the parent-child relationship, it is essential to examine the broad nature of the bond. Factors such as youth's attitudes towards family obligations and conflict between parent and child have been examined to determine their relationship with positive adjustment for youth who partake in adult-like responsibilities (Fuligni et al, 1999). Despite the relatively high reliability rate of the parent attachment, the modified 40-item version was not able to differentiate into its original three factor solution: *Facilitating Independence, Affective Quality of Attachment* and *Parents As Sources of Support*. As a result, this study could not provide an in-depth analysis of the parent-child attachment except to provide an overall assessment.

Despite the significance of the parent-child bond, it is essential to widen the spectrum to include family dynamics. Jurkovic (1997) stresses the family context in

which the youth operates is necessary to differentiate between adaptive and destructive parentification. Children who are supported in their caretaking tasks by their family and their community are more likely to experience an adaptive form of parentification (Byng-Hall, 2002). For instance, family duties may be distributed equally among family members thereby not burdening a child with many responsibilities. Walsh et al (2006) identified a family environment characterized by cohesiveness, supportive of independence, values achievement and promotes expression of feelings has been associated with youth who partake in high levels of parentification (spousal role taking, parental role for siblings).

Researchers emphasize on examining the nature of the youth's parentified role within the family dynamics before determining whether a given responsibility can be destructive to a youth's development (Jurkovic, 1997). Future studies that examine the effects of parentification for immigrants should focus on a thorough assessment of the parent-child relationship and the family climate in which this relationship operates in. As well, other factors such as age at which youth begin to partake in these responsibilities need to be considered as existing studies suggest that positive outcomes from these responsibilities is contingent on the age of the child (Morales & Hanson, Walsh et al, 2006).

The small sample size in this study prevented further analyses within each group of demographic variables particularly generational status and gender. Research has shown differences exist between first and subsequent generations of immigrants pertaining to areas of attitudes towards and frequency of performing family responsibilities on a daily basis (Tseng, 2004). Likewise, studies have shown that

cultural customs play a role in the delegation of family duties as females compared to males partake in more caretaking roles such as being an emotional confidante to a parent (Orellana et al, 2003; Valenzuela, 1999). Subsequent studies should increase sample size to incorporate these demographic variables to assess their role in understanding the nature of family responsibilities.

The inclusion of certain demographic variables may have yielded different results in the study. First, this study did not differentiate between immigrant, international and refugee status as these different categories may have different results. For instance as a refugee, one can arrive in the country alone. Compared to the immigrant adolescent, a refugee adolescent may not have any family responsibilities. In turn, this may have different effects on the self-efficacy and adjustment indices.

Secondly, this study did not assess ethnicity as a demographic variable. It is possible that results may have been different. For instance, family practices of a particular ethnic group are not presumed to be similar across different ethnicities. More importantly, parenting practices and child behavioral expectations may be similar within an ethnic group but intersecting factors such as education background and income level paint a distinctive picture for each family.

Further, as the present study dealt with constructs that are culturally-based on Western concepts, it is possible that not all ethnic groups share similar perceptions with the Western culture when assessing constructs of parent attachment, efficacy beliefs or adjustment measures. As a result, there may have been differences in these measures for some cultures that have a collectivistic rather than an individualistic perspective. For instance, the cross-cultural applicability of the construct, self-efficacy has been debated

because of its individualistic as opposed to a collectivistic cultural perspective. Bandura (2002) suggested that the functionality of personal efficacy remains the same regardless of whether one lives in an individualistic-oriented (self-directedness) versus a collectivistic-oriented society (group directedness). He contends that personal efficacy is not revered for its individualism but its' key to achieve success at a task regardless of whether it is attained individually or through a group. Bandura emphasized that the development of personal efficacy beliefs, the structure, the ways in which they are exercised and the purposes in which they are used varies across cultures. Despite this argument, there is still an emphasis in the field of social cognitive theory to assess the cross-cultural validity of established indices of self-efficacy on individuals who come from collectivistic cultures to differentiate their perceptions from those who come from individualistic cultures (Lindley, 2006).

Lastly, in the assessment of settlement within a new country, acculturation has been examined to determine its effects on the adjustment of an immigrant. Acculturation is defined as the process whereby individuals modify their own attitudes and behaviors from their culture as a result of contact with a different culture (cited from Thomas, 1995). According to Berry (1997) psychological acculturation at the individual level refers to the changes in ethnic identity, attitudes and values as one integrates into a new country. There are four different types of acculturation strategies that an individual can use: a) assimilation, b) separation, c) integration, and d) marginalization (Berry, 1999). Assimilation refers to an individual who does not want to maintain his/her cultural identity and seeks daily interactions with the host culture. Separation refers to an individual who values his/her native culture and avoids interactions with the host culture.

Integration refers to an individual who maintains his/her native cultural identity and selects aspects of the host culture. Marginalization refers to an individual who rejects his/her own and the host culture. There is a general consensus in the literature that suggests acculturation is not a linear but a multidimensional process whereby an individual identifies with his/her own group and the larger society (Kvernmo & Heyerdahl, 2004). Future studies should incorporate this variable in the assessment of adaptive development of immigrant youth.

One recommendation is to assess acculturation of the adolescent and the parent using the Language, Identity and Behavioral Acculturation Scale (LIB; Birman and Trickett, 2001) as this scale assesses acculturation to the native culture of the immigrant and the new culture in three domains: language competence, identification and behavioral participation. Using this index, Jones and Trickett (2005) found a relationship between language acculturation of the mother and amount of cultural brokering an adolescent is involved in. These authors suggested that the level of acculturation of the parents determines the level of brokering an adolescent partakes in. Given this finding, in the context of family responsibilities, it is possible that a high level of acculturation of the parents to the host culture is beneficial for adolescents primarily because it allows the bond between parents and child to be strengthened. Parents will not be heavily invested in dealing with personal issues that stem from acculturation stress and can attend to roles that are within their own province of parenting instead of relegating these duties to an inexperienced youth. Difficulties from the acculturation process experienced by the parents may indirectly affect the parent-child bond as it may create family conflict. Research has found a relationship between type of acculturation strategy or style used by

parents and family conflict among Asian Indians living in the United States of America, reporting that Asian Indians who reported a marginalized or separated acculturation style reported more family conflict (Farver, Xu, Bhadha, Narang, & Lieber, 2007).

While research has illustrated the effects of acculturation on the parent that indirectly affects the parent-child bond, it is important to assess the effects of acculturation on the adolescent. Different acculturation strategies used by the adolescent have different effects on adolescent adjustment (Smokowski & Bacallao, 2007; Shim & Schwartz, 2007). Among a sample of Korean immigrant adolescents living in North America, those who strongly adhered to their own native values reported more cultural difficulties (Shim and Schwartz, 2007). However, research has found that Latino immigrant adolescents who adopted both their own and the host culture had fewer internalizing problems and high self-esteem (Smokowski & Bacallao, 2007).

Since the process of adaptation to a new country is stressful, it may be that there are resiliency factors that operate in the background. Masten (1997) has identified a list of protective factors that may explain resiliency and these include feelings of self-worth, feelings of hope and meaningfulness of life and connections to positive role models. Future studies need to incorporate one or a few of these factors when examining the nature of the caretaking roles among immigrant youth and how it relates to positive development.

Implications

Immigrant youth face both personal and family obstacles as they learn to integrate into the new country. Past research illustrates the difficulty in handling family responsibilities (Koc & Nunes, 2001; Morales & Hanson, 2005; Orellana et al., 2003; Sy,

2006). For some, the development of coping skills may have emerged from past experience with coping family responsibilities. For others, some may lack a set of coping skills that can effectively deal with the variety of stressful situations found in the university environment. Such a case becomes problematic especially for youth who have recently arrived to Canada and must learn quickly to negotiate between fulfilling family obligations and personal academic goals. Tseng (2004) found that immigrant youth who spent more time fulfilling their family obligations experienced academic difficulties. Without prior guidance in the past, it is possible that youth may have adjustment difficulties in the future.

At the high school level, therapists can intervene with immigrant youth who are experiencing adjustment difficulties. For example, clinicians can work with youth on developing a set of coping skills to solve a variety of problems in different domains. Such a strategy can be applied for clinicians and therapists who wish to work with immigrant youth who have adjustment difficulties in university. Secondly, a program can be designed to educate parents and youth on healthy relations that would not always place the child as the decision-maker or the primary emotional confidante in the family. Many immigrant groups in Canada come from cultures where interdependence and not independence is emphasized by parents to their offspring (Tseng, 2004). Clinicians and therapists must be aware how integral the immigrant youth is to his/her family throughout his/her life. It would be difficult for an immigrant youth to focus on his/her own personal development towards independence without considering the welfare of the family.

Conclusion

The literature on family responsibilities and its effects on immigrant youth paint a mixed picture, one that is contingent on a number of factors such as the parent-child bond, the age of the child in which these duties were delegated to them, and the family dynamics. Other socio-demographic variables such as generational status, gender and socioeconomic background deepen the picture. It is the interplay of these factors that determine whether positive outcomes may result from immigrant youth who partake in family responsibilities. In particular, it is important to investigate this interplay of factors within the context of adaptation to a new country as each immigrant family arrives under its own set of circumstances that make their adaptation to the new country unique.

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Appendix

Information Letter

January 8, 2006

Dear Student,

My name is Roz Zulla and I am a Masters student in the Department of Educational Psychology at the University of Alberta. I have invited you to participate in a study that I am conducting as part of my graduate program, Psychological Studies in Education. The purpose of the study is to investigate how your responsibilities as an adolescent along with your relationship with your parent contribute to your adjustment to the academic and social demands of the university. This research is being supervised by Dr. Judy Cameron from the Department of Educational Psychology at the University of Alberta. This study is significant because it is one of the few Canadian studies that will shed light on the contribution of caretaking responsibilities to later adjustment for an immigrant.

Your participation in this study is voluntary and you may withdraw at any time. Your response to the questionnaire will be anonymous as your name will not be attached the survey. If you have any concerns, inquiries or complaints about the study, please contact me through email at rzulla@ualberta.ca

If you decide to participate, please complete the survey package. If you have any questions as you are filling out the survey, please do not hesitate to ask me. There are six questionnaires that should take you about 25-30 minutes to complete. Please answer all questions.

"The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Faculties of Education, Extension and Augustana Research Ethics Board (EEA REB) at the University of Alberta. For questions regarding

participant rights and ethical conduct of research, contact the Chair of the EEA REB at (780) 492-3751."

Sincerely,

Roz Zulla

<u>Assent for Research Participation</u>

I, _____, a student at the University of Alberta consent to participate in a thesis research project being conducted by Miss Roz Zulla, a graduate student in the Psychological Studies of Education, Research Stream of the Department of Educational Psychology at the University of Alberta. This research is being supervised by Judy Cameron, Ph.D., a full-time professor in the Department of Educational Psychology at the University of Alberta. The purpose of this project is to examine the relationship between adolescent responsibilities, parent-child relationship, self-efficacy and adjustment to university.

By signing this form, I understand that:

- My participation is voluntary and I can withdraw from the study at any time without any penalty.
- All information gathered will remain anonymous as my name will not be attached to the questionnaire.
- Information will be kept in a stored file cabinet in the Department of Educational Psychology.

_____

Signature of participant

Date signed: _____

If there are any further questions regarding this project, please feel free to contact Miss Zulla at rzulla@ualberta.ca.

DEMOGRAPHIC INFORMATION

Please do <u>not</u> write your name on this form

Age: _____   **Gender:**   Female ☐   Male ☐

**University
Major:**   _____

**Citizenship
Status:**

☐   Born in Canada

☐   Born outside Canada (please respond to the next question)

Length of residence in Canada _____

Ethnicity: Please mark off the ethnic or cultural group to which you belong to

☐   European (i.e. Italian,

☐   Central and South American (i.e. Columbian, Brazilian, Peruvian)

☐   Caribbean and Bermuda (i.e. Trinidadian, Guyanese, Jamaican)

☐   African (i.e. Kenyan, Ethopian, Sudanese)

☐   East/Southeast Asian (Chinese, Filipino, Korean)

☐   South Asian (East Indians, Pakistani, Sri Lankan)

☐   Arabic/West Asian (Afghan, Arabic, Iranian, Iraqi)

☐   Other (please specify):_____

Housing:

☐ On-campus   ☐ Off-campus (living without parents)   ☐ Off-campus (living with parents)

Family Information:

Birth Order: ☐ Eldest Child   ☐ Middle Child   ☐ Youngest Child   ☐ Only Child

Number of brothers and/or sisters: _____

Mother's First Language: _____   **Father's First Language:**

_____

Mother's Occupation: _____ **Father's Occupation:**

_____

Your first language (mother tongue):

_____

Who did you live with when you were growing up:

_____

FAMILY BEHAVIORAL DUTIES
How often did you do the following when you were in high school:

	Almost Never						Almost Always
1. Did household chores (e.g. cooking, cleaning, etc.	1	2	3	4	5	6	7
2. Helped your parents with their job	1	2	3	4	5	6	7
3. Ran errands for your family.	1	2	3	4	5	6	7
4. Shopped for your family	1	2	3	4	5	6	7
5. Helped with the family's finances, purchases or bills	1	2	3	4	5	6	7
6. Helped someone in your family take care of business with a school, doctor, employer, or other institution	1	2	3	4	5	6	7
7. Worked in the family business.	1	2	3	4	5	6	7
8. Translated/interpreted in English for your parents	1	2	3	4	5	6	7
9. Ran errands for your family because of their limited English skills	1	2	3	4	5	6	7

	Almost Never						Almost Always
10. Completed documents or papers in English for someone in your family	1	2	3	4	5	6	7
11. Was an advocate for someone in your family because of their limited English skills	1	2	3	4	5	6	7
12. Accompanied a family member to handle business with a school, doctor, employer or other institution to translate or interpret for him/her (i.e. an interpreter in a conversation)	1	2	3	4	5	6	7
13. Listened to a parent's distress regarding financial problems	1	2	3	4	5	6	7
14. Listened to a parent's distress regarding personal problems as if you were an adult	1	2	3	4	5	6	7
15. Listened to a parent's distress regarding personal problems about the other parent as if you were an adult.	1	2	3	4	5	6	7
16. When requested by a parent, provided input regarding an important matter.	1	2	3	4	5	6	7

Please answer if you have brothers and/or sisters, please answer the following. If not, go question #22.

	Almost Never						Almost Always
17. Helped your sibling(s) with their homework	1	2	3	4	5	6	7
18. Acted as a confidante to your sibling(s)	1	2	3	4	5	6	7
19. Took care of your sibling(s)	1	2	3	4	5	6	7
20. Translate/interpret in English for your sibling(s)	1	2	3	4	5	6	7
21. Consulted by parents to deal with disciplining your sibling(s)	1	2	3	4	5	6	7

If you have grandparents, please answer the following. If not, go to the Parental Attachment Questionnaire

	Almost Never						Almost Always
22. Took care of your grandparent(s)	1	2	3	4	5	6	7
23. Translate/interpret in English for your grandparent(s)	1	2	3	4	5	6	7

PARENTAL ATTACHMENT QUESTIONNAIRE (Kenny, 1985)
The following pages contain statements that describe your family relationship and the kinds of feelings and experiences you had as an adolescent in high school (14 years to 17 years). Please respond to each item by filling in the number on a scale of 1 to 5 that best described your parents, your relationship with your parents, and your experiences and feelings. Please provide a single rating to describe your parents and your past relationship with them. If only one parent is living, or if your parents divorced, respond with reference to your living parent or the parent with whom you feel closer.

In general, my parents…	Not at all				Very Much
1. Persons that I could count on to provide emotional support when I feel troubled	1	2	3	4	5
2. Supported my goals and interests	1	2	3	4	5
3. Lived in a different world	1	2	3	4	5
4. Understood my problems and concerns	1	2	3	4	5
5. Respected my privacy	1	2	3	4	5
6. Restricted my freedom or independence	1	2	3	4	5
7. Available to give me advice or guidance when I wanted it	1	2	3	4	5
8. Took my opinions seriously	1	2	3	4	5
9. Encouraged me to make my own decisions	1	2	3	4	5

	Not at All				Very Much
	1	2	3	4	5
10. Imposed their ideas and values on me	1	2	3	4	5
11. Gave me as much attention as I wanted	1	2	3	4	5
12. People to whom I could express differences of opinions on important matters	1	2	3	4	5
13. Had no idea of my feelings or my thoughts	1	2	3	4	5
14. Provided me with the freedom to experiment and learn things on my own	1	2	3	4	5
15. Had trust and confidence in me	1	2	3	4	5
16. Protected me from danger and difficulty	1	2	3	4	5
17. Ignored what I had to say	1	2	3	4	5
18. Sensitive to my feelings and needs	1	2	3	4	5
19. Disappointed in me	1	2	3	4	5
20. Gave me advice whether I wanted to or not	1	2	3	4	5
21. Respected my judgment and decisions, even if different from what they wanted	1	2	3	4	5

	Not at All				Very Much
22. Did things for me which I could do for myself	1	2	3	4	5
23. Whose expectations I felt obligated to make	1	2	3	4	5
24. Treated me like a younger child	1	2	3	4	5

During our time spent together, my parents were persons...	Not at All				Very Much
25. With whom I argued	1	2	3	4	5
26. With whom I felt relaxed and comfortable	1	2	3	4	5
27. Who made me angry	1	2	3	4	5
28. Who got on my nerves	1	2	3	4	5
29. Who aroused feelings of guilt and anxiety	1	2	3	4	5
30. To whom I enjoyed telling about things I did and learned	1	2	3	4	5
31. For whom I felt a feeling of love	1	2	3	4	5
32. I tried to ignore	1	2	3	4	5

	Not at All				Very Much
33. To whom I confided my most personal thoughts and feelings	1	2	3	4	5
34. Whose company I enjoyed	1	2	3	4	5

When I had a serious problem or an important decision to make…	Not at All				Very Much
35. I looked to my family for support, encouragement, and/or guidance	1	2	3	4	5
36. I thought about how my family might respond and what they might say	1	2	3	4	5
37. I knew that my family would know what to do	1	2	3	4	5

When I went to my parents for help…	Not at All				Very Much
38. I felt more confident in my ability to handle the problems on my own	1	2	3	4	5
39. I felt confident that things will work out as long as I followed my parent's advice	1	2	3	4	5
40. I am disappointed with their response	1	2	3	4	5

Social Self-Efficacy (Fan & Mak, 1998)

Please indicate to the degree that you agree with each statement:

		Strongly Disagree						Strongly Agree
1.	I do not handle myself well in social gatherings	1	2	3	4	5	6	7
2.	It is difficult for me to make new friends	1	2	3	4	5	6	7
3.	I have difficulties making new friends in university	1	2	3	4	5	6	7
4.	I find it difficult to hold a conversation with most people	1	2	3	4	5	6	7
5.	I have difficulties participating in class discussions	1	2	3	4	5	6	7
6.	I am usually quiet and passive in social situations	1	2	3	4	5	6	7
7.	I have difficulties getting a date when I want one	1	2	3	4	5	6	7
8.	I have difficulties talking to the university staff	1	2	3	4	5	6	7
9.	It is difficult for me to express a different opinion	1	2	3	4	5	6	7

	Strongly Disagree						Strongly Agree
10. I feel confident asking a lecturer a question	1	2	3	4	5	6	7
11. I feel confident in asking questions in class	1	2	3	4	5	6	7
12. I feel confident in talking to my lecturers	1	2	3	4	5	6	7
13. I feel confident of my language skills	1	2	3	4	5	6	7
14. I feel comfortable requesting information	1	2	3	4	5	6	7
15. I have common interests with local people	1	2	3	4	5	6	7
16. I have common topics for conversation with local people	1	2	3	4	5	6	7
17. I enjoy activities that most local people enjoy	1	2	3	4	5	6	7
18. When I'm trying to become friends with someone who seems uninterested at first, I don't give up easily	1	2	3	4	5	6	7

	Strongly Disagree						Strongly Agree
19. If I see someone I would like to meet, I go to that person instead of waiting for him or her to come to me	1	2	3	4	5	6	7
20. I feel confident in joining a student organization	1	2	3	4	5	6	7

Generalized Self-Efficacy (Schwarzer & Jerusalem, 1995)

Please indicate to the degree that you agree with each statement:

	Not at all true of me			Exactly True
1. I can always manage to solve difficult problems if I try hard enough	1	2	3	4
2. If someone opposes me, I can find the ways and means to get what I want	1	2	3	4
3. I am certain that I can accomplish my goals	1	2	3	4
4. I am confident that I could deal efficiently with unexpected events	1	2	3	4
5. Thanks to my resourcefulness, I can handle unforeseen situations	1	2	3	4
6. I can solve most problems if I invest the necessary effort	1	2	3	4
7. I can remain calm when facing difficulties because I can rely on my coping abilities	1	2	3	4
8. When I am confronted with a problem, I can find several solutions	1	2	3	4
9. If I am in trouble, I can think of a good solution	1	2	3	4
10. I can handle whatever comes my way	1	2	3	4

Academic Self-Efficacy (Pintrich & DeGroot, 1990)

Please indicate to the degree that you agree with each statement:

		Not at all true of me						Very true of me
1.	Compared with other students in my year I expect to do well	1	2	3	4	5	6	7
2.	I'm certain I can understand ideas taught in my courses	1	2	3	4	5	6	7
3.	I expect to do well in my courses	1	2	3	4	5	6	7
4.	Compared with others in my year, I think I'm a good student	1	2	3	4	5	6	7
5.	I am sure I can do an excellent job on the problems assigned for my courses	1	2	3	4	5	6	7
6.	My study skills are excellent compared with others in my year	1	2	3	4	5	6	7
7.	Compared with other students in my courses, I think I know a great deal about the subjects I am studying	1	2	3	4	5	6	7
8.	I know that I will be able to learn the material for my courses	1	2	3	4	5	6	7
9.	I think I will receive a good grade in my courses	1	2	3	4	5	6	7

Academic Adjustment (Baker & Siryk, 1984)
The 24 items in this survey are statements that describe university academic experiences. Read each one and decide how well it applies to you at the present time (within the last few days). Please indicate to the degree that you agree with each statement:

1   2   3   4   5   6   7   8   9

◄——— Doesn't apply to me at all   Applies very close to me ———►

1. I have been keeping up to date on my academic work

1   2   3   4   5   6   7   8   9

2. I know why I'm in university and what I want out of it

1   2   3   4   5   6   7   8   9

3. I am finding academic work at the University of Alberta difficult

1   2   3   4   5   6   7   8   9

4. I have not been functioning well during examinations

1   2   3   4   5   6   7   8   9

5. I am satisfied with the level at which I am performing academically

1   2   3   4   5   6   7   8   9

6. I'm not working as hard as I should at my course work

1   2   3   4   5   6   7   8   9

7. My academic goals and purposes are well-defined

1   2   3   4   5   6   7   8   9

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

←———— Doesn't apply to me at all Applies very close to me ————→

8. I'm not really smart enough for the academic work I am expected to be doing now

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

9. Getting a university degree is very important for me

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

10. I haven't been very efficient in the use of study time lately

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

11. I enjoy writing papers for courses

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

12. I really haven't had much motivation for studying lately

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

13. Lately I have been having doubts regarding the value of a university education

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

14. I am satisfied with the number and courses available at the University of Alberta

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

← Doesn't apply to me at all   Applies very close to me →

15. Recently I have had trouble concentrating when I try to study

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

16. I'm not doing well enough academically for the amount of work I put in

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

17. I am satisfied with the caliber of courses available at the University of Alberta

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

18. I am attending classes regularly

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

19. I am enjoying my academic work at the University of Alberta

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

20. I am having a lot of trouble getting started on homework assignments

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

21. I am satisfied with my program of courses for this semester/quarter

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

22. Most of the things I am interested in are not related to any of my course work at the University of Alberta

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

⟵ Doesn't apply to me at all   Applies very close to me ⟶

23. I am very satisfied with the professors I have now in my courses

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

24. I'm quite satisfied with my academic situation at the University of Alberta

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Social Adjustment

The 18 items in this survey are statements that describe university social experiences that may affect you because of your ethnicity. Read each one and decide how well it applies to you at the present time (within the last few days).

Please indicate to the degree that you agree with each statement:

		Almost Never						Almost Always
1.	I have several close social ties at the University of Alberta with students of my ethnic group	1	2	3	4	5	6	7
2.	I have had informal, personal contacts with my university professors	1	2	3	4	5	6	7
3.	I have several close social ties at the University of Alberta with students of different ethnic group	1	2	3	4	5	6	7
4.	I feel comfortable talking in my ethnic language with students of my ethnic group	1	2	3	4	5	6	7
5.	I feel comfortable in participating in class discussions	1	2	3	4	5	6	7
6.	I feel I am different from students of different ethnicities at the University of Alberta in ways that I don't like	1	2	3	4	5	6	7

		Almost Never						Almost Always
7.	I feel accepted at the University of Alberta as an ethnic minority	1	2	3	4	5	6	7
8.	I feel comfortable talking in English with students from different ethnic groups	1	2	3	4	5	6	7
9.	I feel comfortable talking to university staff	1	2	3	4	5	6	7
10.	I have some friends from my ethnic group at the University of Alberta that I can talk to about my problems	1	2	3	4	5	6	7
11.	I feel that my language and/or ethnicity make it hard for me to fit in with other students	1	2	3	4	5	6	7
12.	I feel comfortable asking a question in class	1	2	3	4	5	6	7
13.	I feel I am different from students of my ethnicity at the University of Alberta in ways that I don't like	1	2	3	4	5	6	7
14.	I have some friends from different ethnic groups at the University of Alberta that I can talk to about my problems	1	2	3	4	5	6	7

	Almost Never						Almost Always
15. I feel comfortable asking a lecturer a question	1	2	3	4	5	6	7
16. I often feel like a chameleon, having to change myself depending on the ethnicity of the person I am with at school	1	2	3	4	5	6	7
17. I am involved in social activities at the University of Alberta	1	2	3	4	5	6	7
18. I am quite satisfied with my social life at the University of Alberta	1	2	3	4	5	6	7

Sample of written debriefing

Thank you for your participation

Dear participant,

This research study assessed you on the following variables: your past duties you completed for your family, the relationship you had with your parent as an adolescent, your confidence in your academic and social skills, and your adjustment to the academic and social environment of the university. In particular, the study aims to determine whether a moderate level of caretaking responsibilities taken as an adolescent and a strong parent-adolescent attachment fosters a greater sense of self-efficacy (academic and social). In turn, does this sense of self-efficacy (academic and social) lead to better university adjustment (academic and social) among first-year immigrant students. Some of the benefits that are associated with immigrants' responsibilities are the ability to improve their language skills, have been related to academic performance, being independent, having positive coping skills, feeling more mature, and feeling closer to their family members (Buriel, 1998; Kaur & Mills, 1993; Walsh, Shulman, Bar-On, & Tsur, 2006). As well, feeling obligated to one's family (i.e. doing caretaking responsibilities) is related to positive educational outcomes (Fuligni, Tseng, & Lam, 1999).