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The Relationship between Acculturation Gap and Adjustment: Exploring the mediating effects of perceived rejection, value conflict, and communication.

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DEDICATION

I would like to dedicate this thesis to my husband and parents. Thank you for everything that you have done and continue to do. I also dedicate this thesis to all immigrants who make the courageous decision to start a brand new life. Your ability to thrive despite all the challenges will always inspire me.

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Abstract

Numerous studies have found that children adjust to the mainstream culture at a faster rate than their parents; this is termed an acculturation gap. The literature demonstrates that acculturation gap is associated with increased conflict in the family and reduced well-being in children; one recent theory suggests that this occurs as a result of incongruent values and communication problems with parents (Hwang, 2006). The primary goal of this study was to examine whether acculturation gap was associated with both internalizing and externalizing symptoms in first and second generation immigrants from a variety ethnic backgrounds. Another goal of this research was to examine whether multiple mediators (specifically, parent rejection, peer rejection, incongruent cultural values, and communication problems) could account for the relationship between acculturation gap and risk taking behaviours and well-being. Finally, European and non-European participants were compared on the study variables and the patterns of relationships among them. One hundred and sixteen first and second generation immigrants completed an online questionnaire assessing their experiences during adolescence that relate to the acculturation process. Results indicated that both mainstream and heritage acculturation gaps were significantly associated with increased family conflict and decreased life satisfaction. Rejection by parents and peers were found to mediate the relationship between acculturation gap and outcomes, above and beyond the mediating effect of incongruent cultural values and problematic communication with parents. Finally, both similarities and differences in the patterns of relationships between acculturation gap and outcome were observed between European and non-European participants. Implications regarding the results of the study are provided for future research and clinical contexts.

The Relationship between Acculturation Gap and Adjustment: Exploring the mediating effects of perceived rejection, value conflict, and communication.

According to Statistics Canada, in 2006 over six million Canadian residents were foreign born, which represented approximately 19.8% of the total population (Statistics Canada, 2008). It was also reported that the immigrant population is outgrowing the Canadian-born population by about ten percent. Furthermore, the majority of the immigrants that have entered Canada were young, with approximately 35% being under the age of twenty-four (Statistic Canada, 2008). The situation is similar in the United States. The US Department of Homeland Security reported that the United States granted immigration to over 1 million people each year since 2007 (Chertoff, Baker, & Hoefer, 2008). As of 2005, the majority of these immigrants came from Asia, followed by North America and Europe. In 2008, the United States reported a 5% increase in providing immigration status with 42% of these individuals listed as new arrivals (Monger & Rytina, 2009). It is apparent from these statistics that there are large yearly influxes of immigrant individuals entering North America. This phenomenon is also occurring in other countries, which speaks to the increasing trend of individuals becoming migrant (Sam, 2006). Given the large number of immigrants that have entered our society, and continue to do so, it is imperative that we examine how immigrants adapt in North America. Therefore, research regarding the positive and negative experiences of immigrant individuals and their families and the factors that affect their adjustment is beneficial to both health professionals and policy makers.

Research in psychology has contributed significantly to our understanding of immigrant adjustment. The primary focus of these studies has been to examine how ethnic minorities adapt to their host country, and how this process affects their well-being.

However, there are a number of critical gaps in the literature. For example, many studies on the outcomes of acculturation for first and second generation individuals have examined internalizing behaviours, but there is scarce literature regarding how these two processes impact externalizing behaviours. While many studies have demonstrated the positive outcomes of immigrant populations, particularly in academic functioning, research is beginning to demonstrate that immigrant population are not necessarily the stereotypical "model minority" and that they too may engage in aggressive and risk-taking behaviours (Go & Le, 2005; Le & Stockdale, 2008; Soriano, Rivera, Williams, Daley & Reznik, 2004). In order to inform treatment providers and immigrant families, it would be important to examine in which situations these negative behaviours tend to occur. Furthermore, there has been limited examination of how the quality of relationship with parents and peers mediate the relationship between acculturation and risk taking behaviours. The current study will address these research questions.

Models of Acculturation

The initial research interest in acculturation began in anthropology and sociology and focused on how various ethnic groups acculturated to their new environment (Sam & Berry, 2006). Once an understanding was gained regarding how groups of people engaged in the process of acculturation, focus shifted onto the individuals themselves. Cross-cultural psychology in particular has focused its attention on immigrant individuals, and attempted to ascertain strategies used to navigate between their heritage culture and the host country. Furthermore, distinction has been made between group-level and individual-level changes as a result of acculturating. For example, group level changes could describe economic,

political, and social structure shifts, whereas individual level changes include changes to identity, values, attitudes, and/or behaviours (Sam, 2006).

The majority of the research on acculturation has focused on the behaviours and attitudes of the immigrants themselves; however, it is necessary to understand that the political atmosphere of the host country plays a large part in the immigrants' experiences. Behaviours and attitudes of immigrant individuals must be considered in relation to their contexts. Bourhis, Moise, Perrault, and Senecal (1997) described the Interactive Acculturation Model (IAM) which proposes that acculturation occurs in both host and immigrant individuals, and that the outcomes of acculturation are determined partly by state immigration and integration policies. While immigration policies determine which immigrants are allowed into the country, integration policies influence the approaches that the state uses to integrate new immigrants to the host culture. These researchers argue that the "acculturation orientations of individuals... do not emerge in a social or political vacuum but rather are influenced by the integration policies adopted by the state" (Bourhis et al., 1997, p. 373).

Graves (1967) has been credited with introducing the concept of psychological acculturation, which he defined as the change that occurs in individuals when they have contact with a new culture. The individual is not only influenced directly by the dominant culture, but also by the changes that occur within the individual's heritage culture as a result of the contact between the two groups. Berry (1997; 2005) has taken this concept and used it to describe the strategies that individuals can engage in when adapting to a new culture. These acculturation strategies, which are described below, are based on a bidimensional

model of acculturation, which takes into account the individual's attitudes and behaviours toward both the mainstream and ethnic cultures.

Acculturation has been defined as a dual process of cultural and psychological change that results when two cultures and their individual members come into contact (Berry, 2005). As described earlier, acculturation can be described as a process that takes place on both the individual level as well as on the group level. At the group level, acculturation can result in changes in social structures, institutions, and cultural practices (Berry, 2005). On the other hand, acculturation at the individual level results in changes in a person's behaviour, values, and beliefs (Berry, 2005). The extent to which an individual adapts to a new country is dependent upon various factors such as age, gender, ethnic background, generational status, socioeconomic status, and length of time in the host country (Dinh & Nguyen, 2006).

Acculturation has been assessed in research using two different models: unidimensional and bidimensional. Unidimensional models describe acculturation on a single continuum, with immigrant individuals able to be either high or low in acculturating to the host country (Gordon, 1964 as cited in Bourhis et al., 1997; Graves, 1967; Suinn, Ahuna, & Khoo, 1992). The premise of the unidimensional model is that immigrant individuals are likely to shed their heritage culture as they move closer toward adopting the host country's values (Sam & Berry, 2006). Therefore, there are essentially two outcomes of unidimensional models: traditional or assimilation (Flannery, Reise, & Yu, 2001). However, subsequent researchers have criticized this model for failing to acknowledge that the heritage and the host culture can be viewed as orthogonal concepts, and that the acceptance of one does not necessarily mean a rejection of the other (Ryder, Alden, & Paulhus, 2000). Therefore, a bidimensional

model was proposed in order to acknowledge the individual's level of acceptance of either culture, and to provide a more comprehensive understanding of their ethnic identity.

Berry's (1997, 2005) bidimensional model of acculturation has been predominately adopted by researchers examining the acculturation process in immigrant populations. The bidimensional model of acculturation places an individual's level of maintenance with the heritage culture and adoption of mainstream culture at equal importance, recognizing that they can vary independently. The combination of high and low levels of each variable intersects to create four acculturation strategies: *integration* (high heritage culture maintenance, high contact with mainstream culture), *assimilation* (low heritage culture maintenance, high contact with mainstream culture), *separation* (high heritage culture maintenance, low contact with mainstream culture, and *marginalization* (low heritage culture maintenance, low contact with mainstream culture).

Over the years, many researchers have attempted to provide a model that best describes the experiences of immigrants adjusting to the host country. While there are some opposing viewpoints regarding the strategies used by immigrants to navigate in the dominant society, what remains consistent is that the acculturation process is complex and individuals can use a wide range of tactics to adapt themselves in their new life.

The Impact of Acculturation on Immigrant Individuals and their Families

Acculturation and individual adjustment. Research has shown that the four acculturation strategies that John Berry described have different outcomes for individuals. Overall, the integration acculturation style seems to foster the best mental well-being and higher self-esteem, whereas marginalization produces the worst outcomes; separation and assimilation, on the other hand, tend to fall somewhere in the middle (Berry, 1997; Farver,

Narang & Bhadha, 2002). In a study of 107 Asian Americans attending college, it was found that acculturation to the mainstream culture was associated with more favourable outcomes as compared to those who retained a majority of their heritage culture (Hwang & Ting, 2008). Specifically, those who identified less with American culture experienced higher levels of psychological distress and were at an increased risk of clinical depression (Hwang & Ting, 2008). Similar results were found in South Asian Americans, such that those with an integrated acculturation style reported higher self-esteem than participants who had a marginalized or separated acculturation style (Farver et al., 2002).

Other researchers have found contradictory results regarding the positive outcomes of integration or assimilation acculturation styles. Asvat and Malcarne (2008) investigated past year and lifetime depressive symptoms in immigrant Muslim university students. They found that those who had higher mainstream cultural identity had more depressive symptoms over the past year, whereas those with higher heritage cultural identity reported less depressive symptoms over their lifetime. The authors suggested that because the Muslim religion supports close relationships among their members, it may be a protective factor for their members from negative psychological outcomes associated with the Western culture (Asvat & Malcarne, 2008).

Discrepant findings in acculturation research highlight the importance of taking the individual's context into account. Different acculturation strategies may be protective for different cultural groups. Furthermore, the extent to which an individual acculturates depends in part on how receptive the host country is to immigrants (Berry, 2003). For example, for integration to occur in a particular society, mutual accommodation is required by both the dominant and non-dominant groups whereby both groups accept each other, and

the immigrant individual can adopt the basic values of the dominant society (Berry, 2006a). In general, the process of acculturation is complex and dependent upon individual, contextual, and political factors. Therefore, when providing meaning to research findings, researchers must take into account not only the values and beliefs of a particular cultural group, but also the society and the political milieu in which the individuals live.

Another way to explain the process of acculturation by individuals and the implications of this process for adjustment has been through research on psychological acculturation. Psychological acculturation describes the change that occurs in an individual (e.g. beliefs, values, identity) as a result of their contact with the mainstream culture (Graves, 1967). It further helps to explain the process of acculturation by understanding how the various intercultural variables (such as family values, peers, discrimination, language proficiency, and attitudes towards ethnic and mainstream culture) impact a person's ability to adopt and integrate both cultures (Phinney, 1990). The difficulty associated with adapting to a new culture has been termed acculturative stress, and has been frequently linked to depression and anxiety in a variety of ethnic immigrants (Asvat & Malcarne, 2008; Berry, 2006b; Hwang & Ting, 2008; Wei et al., 2007). Berry (2006b) states that acculturative stress occurs as a result of intercultural contact, in which immigrant individuals may have had negative experiences or conflict with the host culture. While research indicates that the process of acculturation can cause stress in individuals and pose a challenge to their ability to cope, Berry (2006b) postulates that individuals also have the ability to deal effectively with stressors by utilizing various coping strategies. As a result, outcomes can range from very negative to very positive. However, research on acculturative stress has consistently found negative outcomes for many immigrant populations.

Although Canada and North America in general is seen by many immigrants as the land of "opportunity", research is revealing that immigrants and their families experience various difficulties adjusting to the West (Bacallao & Smokowski, 2007; Birman, 2006; Farver et al., 2002). Racial discrimination is one factor that increases acculturative stress, which in turn negatively impacts mental health and daily functioning. For example, acculturative stress and racial discrimination have been associated with DSM-IV mental disorders in Asian American immigrants (Gee, Spencer, Chen, Yip, & Takeuchi, 2007). As a result of the stress associated with racial discrimination, the Surgeon General of the United States reported that discrimination was a risk factor for mental disorders in ethnic minorities (Gee et al., 2007). A study completed by Gee and colleagues (2007) revealed that while acculturative stress had a strong correlation with mental health disorders. Similar findings were also found in Latino populations, in which racial discrimination and threat of stereotype confirmation predicted anxiety and decreased positive affect (Chavez & French, 2007).

The most consistent findings regarding acculturative stress is that it increases immigrant individuals' vulnerability to depression. Wei and colleagues (2007) conducted a study with 189 Chinese international students to determine whether acculturative stress, perfectionism or length of time in the United States impacted depression symptoms. Their findings indicated that even after controlling for perfectionism and length of stay, acculturative stress significantly predicted depression. A similar study with Mexican American college students had similar findings, and reported that acculturative stress was associated with high levels of anxiety and depressive symptoms (Crockett et al., 2007). However, the researchers also included protective factors such as social support and coping styles and found that parental support and having an active coping style buffered against the

negative effects of acculturative stress, even when stress was reported to be high. Unexpectedly, peer support was positively related to anxiety symptoms. The authors speculated that obtaining support from friends may increase anxiety in some people because their friends may heighten cultural conflict or increase other types of distress.

One of the concerning research findings regarding acculturative stress is its association with suicidal ideation or behaviours. Walker, Wingate, Obasi, & Joiner (2008) compared African American and European American college students on depressive symptoms and suicidal ideation. While depression predicted suicidal ideation in both groups, high acculturative stress moderated the relationship between depression and suicidal ideation in African American participants (Walker et al., 2008). This indicates that African American students who are depressed are at increased risk for suicidal ideation when they experience stress related to acculturating. Unfortunately, acculturation level was not included in this study to determine its impact on acculturative stress, depression and suicidal ideation. However, the researchers found that African Americans who were less closely attached to their ethnic identity had increased levels of suicidal ideation.

Overall, research appears to show that acculturation can be a difficult process for some immigrant individuals. However, when examining the four acculturation strategies from the bidimensional model proposed by Berry, it appears that certain strategies are more useful than others. For example, being active and open to both one's own natal culture and the host culture has the best outcomes for immigrants. The most frequent negative outcomes stem from relinquishing engagement with both the natal culture and the host culture. Therefore, identification and participation in either the natal or host culture serve as protective factors

from negative outcomes, however being able to equally balance both cultures is seen as the better strategy in promoting well-being.

Acculturation and family functioning. Studies with immigrant individuals and their families have focused on the process of adapting and adjusting to the host culture, and the impact of this process on family functioning (Berry, 1997). As noted above, acculturative stress has negative implications for individuals' adjustment. Research on acculturation and family functioning extends these findings and has revealed various negative outcomes for family members such as increased conflict, decreased family cohesion, and decreased support (Dinh & Nguyen, 2006). The extent to which parents and their children acculturate appears to contribute to the acculturative stress experienced in immigrant families. In a study of 180 South Asian adolescents and one of their parents, Farver and colleagues (2002) found that the four acculturation styles impacted family functioning. The researchers found less family conflict in families that reported integration or assimilation acculturation styles, as compared to families who were marginalized or separated.

The acculturation process also appears to affect parenting beliefs and behaviour. Research has revealed that the parents' acculturation level influences parenting beliefs about discipline and the type of relationship they have with their children. Parents who were less acculturated were more likely to utilize traditional methods of discipline such as shaming or to endorse more of an authoritarian parenting style as compared to parents who were more acculturated (Farver et al., 2002; Farver, Xu, Bhadha, Narang & Lieber, 2007; Kim, Chen, Li, Huang, & Moon, 2009). Research findings also suggest that parenting style impacts children's adjustment. In a comparison of East Indian and European families, Farver and colleagues (2007), found that children who experienced shaming reported more symptoms of

anxiety compared to children who did not experience shaming parenting techniques. Likewise, the type of parenting behaviour has been found to be related to family conflict, such that families that are marginalized or separated have a greater frequency of family conflicts (Farver et al., 2002; Farver et al., 2007).

In another study where parenting style was examined, 38 Chinese immigrant adolescents who achieved high grades were separated into two groups, one group consisted of those who reported higher levels of distress, as measured by mental health scores, and the second group consisted of those who scored low on mental health scores (non-distressed) (Qin, 2008). This study was a five year qualitative research project in which interviews were conducted with parents and adolescents regarding family dynamics. Qin (2008) found that common family conflicts in both groups centered on language barriers, acculturation gap, and parent-child conflicts. Majority of the adolescents interviewed stated that discipline was a major source of conflict, and that their parents were stricter than their American peers' parents. However, Qin found that the two groups differed in how parents approached parenting. The results indicated that in comparison to parents of the distressed group, the parents of the non-distressed group were more aware of the challenges associated with parenting after adapting, attempted to communicate and understand their children's needs, and were less focused on education achievement. Qin (2008) concluded that "different parenting styles after migration may contribute to different parent-child dynamics at home, which in turn may contribute to different levels of psychological adjustment in children" (p.32).

A significant source of conflict that is often seen in immigrant families is termed the *acculturation gap,* and it occurs when family members acculturate to the host culture at

different rates. More often than not, children tend to acculturate faster than their parents and older relatives, creating a gap which in turn increases conflict between the two generations. Unlike typical parent-child conflicts that commonly occur during adolescence, conflicts that occur as a result of discrepant levels of acculturation tend to center on differences between parents and children regarding beliefs, values and attitudes associated with immigration and acculturation (Le & Stockdale, 2008). As a result, conflicts that occur in immigrant families as a result of the acculturation process are understandably different in nature than conflicts that occur in non-immigrant families.

Research studies have utilized a number of methods to measure acculturation gap in immigrant families. Some studies compute a difference score whereby acculturation level of parents and children are assessed and then are subtracted from each other (e.g. Birman, 2006; Buki, Ma, Strom, & Strom, 2003; Kim et al., 2009; Merali, 2002). Other studies employ a categorical approach by assessing parents and children's acculturation strategy (integrated, assimilated, separated or marginalized) separately and then determining if the family members are matched or mismatched (e.g. Asvat & Malcarne, 2008; Farver et al., 2002). When parents and children are mismatched on acculturation level they are deemed as experiencing an acculturation gap because they are likely to have discrepant beliefs, attitudes and behaviours towards mainstream and heritage culture. Finally, researchers have also created instruments or included questions that assess intergenerational conflicts that are associated with discrepant acculturation levels between parents and children (e.g. Dinh & Nguyen, 2006; Le, Goebert & Wallen, 2009). Although there are a variety of ways that acculturation gap is measured, the objectives of these research studies is to examine whether

the conflict that occurs from different acculturation levels between parents and children is associated with negative outcomes for immigrant groups.

Research has shown that acculturation gap and acculturation level can predict conflict between parents and children in immigrant families. In a study of Soviet Jewish refugees, Birman (2006) assessed how acculturation gaps between parents and children impacted family relationships. Birman (2006) assessed level of acculturation in three domains: identity, language and behaviour. Not surprisingly, the children were significantly higher than their parents on all three dimensions of acculturation. Results also indicated that increased conflict occurred in families who had resided in America the longest, and more disagreements occurred with male children than with female (Birman, 2006). Interestingly, parents and children disagreed on the cause for their disagreements. While the children reported conflict with their parents due to gaps associated with American behaviour, parents reported that disagreements on the use and importance of the Russian language were the reason for conflicts with their children (Birman, 2006). The implications of this study are that acculturation can result in family conflict through differential impacts on both parents and children.

A study by Dinh and Nguyen (2006) sought to determine whether acculturation level or acculturation gap better predicted family conflict. The researchers recruited 172 undergraduate students and at least one of their parents to complete surveys regarding acculturation, perceived acculturation gap, quality of parent-child relationship, and relationship satisfaction. The results indicated that while both acculturation level and acculturation gap predicted family conflict, acculturation gap was a stronger predictor. They also found that a higher level of acculturation towards the mainstream culture in parents and

children was associated with a lower perceived acculturation gap (Dinh & Nguyen, 2006). These findings concur with other research studies that showed that acculturation gap between parents and children were associated with increased family conflict and decreased parenting satisfaction (Buki et al., 2003; Ho, 2010; Tardiff & Geva, 2006). Furthermore, it appears that both mainstream and heritage acculturation gap may be negatively associated with family functioning (Kim et al., 2009).

There is some evidence that maintaining a positive parent-child relationship despite having discrepant acculturation levels can mitigate some of the negative effects of acculturation gap. A study conducted by Shoefield and colleagues (2008) followed Mexican American children from grade five to seven to determine if acculturation gap was associated with family conflict and internalizing and externalizing symptoms in children. They found that although acculturation gap with fathers was positively associated with both conflict and externalizing symptoms, the effect was moderated by relationship quality with their father (Shoefield, Park, Kim, & Coltrane, 2008). That is, acculturation gap with fathers was associated with negative outcomes only if children had a poor relationship with their fathers (Shoefield et al., 2008). The authors did not find a relationship between acculturation gap with mother and negative outcomes, which they suggested was because mothers were more likely to be involved in their children's lives. This study highlights that although acculturation gap may be a stressor for immigrant parents and their children, it can be less disruptive if family members have a positive relationship with one another (Shoefield et al., 2008). Thus, examining relationship quality with parents is an important variable to examine when investigating how acculturation gap impacts well-being of individuals and families.

Research has also focused on examining how acculturation gap and family conflict impacts children. Findings from research studies indicate that both acculturation gaps and family conflict in immigrant families impact children's well-being. In particular, families that experienced acculturation gaps also experienced family conflict which in turn increased symptoms of depression and anxiety (Farver, et al, 2002; Gonzales, Deardorff, Formoso, Barr & Barrera, 2006). Kim and colleagues (2009) examined the relationship between acculturation gap, parenting practices and depressive symptoms in Chinese immigrant families. They found that acculturation gaps in either mainstream or heritage culture negatively impacted the supportive nature of the parenting relationship, which in turn was associated with more depressive symptoms in children (Kim et al., 2009). Therefore, research appears to support that the quality of the family relationship may mediate the relationship between acculturation gap and children's well-being.

Since children are immersed into and influenced by various social contexts, such as school, peers, media, and work, it is understandable why they acculturate at a faster rate than their parents. Immigrant parents on the other hand may be less proficient in the mainstream language as compared to their children, and may have limited access or ability to function in mainstream contexts. As a result, parents may rely on their children to be brokers and translators in the host country, thereby reversing traditional parent-child roles found in many foreign countries (Baccallao & Smokowski, 2007; Qin, 2006). With time, children may begin to challenge their parent's authority and disagree regarding traditional expectations and roles placed on them. As noted by Dinh and Nguyen (2006), this exhibition of defiance may undermine the quality of parent-child relationship, which in turn weakens the supportive nature and cohesion of the family network. This finding that acculturation gap is associated

with weakening bonds between immigrant parents and children has been demonstrated in other research studies (Buki, et al., 2003; Lim, Yeh, Liang, Lau & McCabe, 2009)

Although there are a wealth of studies that have demonstrated the negative impact of acculturation gap on immigrant families, findings from other research studies have failed to find a relationship between these variables (e.g. Lau et al., 2005; Pasch et al., 2006). For instance, Pasch and colleagues (2006) found that acculturation gaps in Mexican American families were unrelated to family conflict and adolescent adjustment problems. Rather, a high acculturation level by both parents and adolescents (i.e. no acculturation gap or having a matched acculturation style) was associated with increased family conflict and early sexual initiation (Pasch et al., 2006). Atzaba-Poria and Pike (2007) also found that higher mainstream acculturation in East Indian mothers was positively associated with internalizing symptoms in their children. Finally, there is also evidence that parents who are more acculturated towards the mainstream culture than their children (termed "benign mismatch") was associated with negative outcomes (Atzaba-Poria & Pike, 2007; Lau et al., 2005; Lim et al., 2009). While these studies raise some question about the relationship between acculturation gap and negative outcomes in immigrant families, Lim and colleagues (2009) found that the relationship quality between parents and children better explained the negative outcomes associated with acculturation conflicts and well-being of family members. Therefore, examining the relationship quality between parents and children may provide a more comprehensive understanding of why acculturation gap is negatively associated with immigrant adjustment.

Many studies have not only revealed that a higher acculturation gap between immigrant parents and children results in more family conflicts as compared to immigrant families with

lower acculturation gaps, but that these results are consistent across diverse ethnic groups (e.g., Birman, 2006; Dinh & Nguyen, 2006; Smokowski, Rose & Bacallao, 2008). In contrast, immigrant families that have a small acculturation gap is associated with decreased depression in children and better family functioning (Asvat &Malcarne, 2008; Farver et al., 2002; Merali, 2004). There is also evidence that acculturation gap negatively impacts parents as well. For instance, research shows that increased acculturation gap was associated with parents having lower parenting efficacy and satisfaction (Buki et al., 2003). A number of research studies have demonstrated a negative relationship between acculturation gap and well-being for individual family members and the family as a unit. However, studies are only beginning to investigate the mechanisms underlying the negative outcomes associated with acculturation gap.

Acculturative family distancing model. As highlighted earlier, the acculturation process has a strong impact on families and individual family members. In particular, the literature suggests that family dynamics plays a significant role in the acculturation process and individuals' well-being. Drawing on the acculturation literature and clinical experience, Hwang (2006; Hwang & Wood, 2009) developed the acculturative family distancing (AFD) theoretical model to further explain how acculturation affects the relationship between parents and children. The AFD model states that different levels of acculturation by parents and children results in incongruent cultural values and breakdowns in communication, which in turn results in family conflict and increased risk for depression and other psychological problems (Hwang, 2006; Hwang & Wood, 2009). To date, there is only one study that tests the theoretical constructs of AFD. Hwang and Wood recruited Asian American and Latino college students to participate in their study to test the theory. The participants completed an

AFD youth report questionnaire in addition to questionnaires that tested psychological maladjustment and family conflict. Overall, their model indicated that poor communication and cultural value differences were associated with family conflict. The results also supported that family conflict was associated with greater psychological maladjustment and that family conflict mediated the relationship between AFD and youth psychological adjustment (Hwang & Wood, 2006).

Although the researchers who created the AFD model propose it to be a proximal measure of acculturation gap, they did not include measures for acculturation gap in their study. However, they clearly stated that "incongruent cultural values and breakdowns in communication ... are a consequence of different rates of acculturation among parents and children" (p. 125). Therefore, it may be useful to analyze whether poor communication and incongruent values are mediators between acculturation gap and internalizing or externalizing behaviours. Furthermore, Hwang and Wood (2009) report a high correlation between poor communication and incongruent values ($r = .66$) but did not analyze whether communication and value differences uniquely and independently predicted family conflict or psychological distress.

Overall, the literature indicates that the process of acculturation can create negative consequences for families. It appears that acculturation gap is common in immigrant families and causes significant problems in family functioning. Furthermore, it appears that family members' use of acculturation strategies impacts the cohesiveness of the family and the frequency of family conflicts. However, it must be noted that research regarding acculturation of parents and children is significant when there is a mismatch on acculturation strategies (Asvat & Malcarne, 2008). For example, having a particular acculturation level

may not by itself result in family conflict, but rather when parents and children have discrepant acculturation levels or mismatched acculturation strategies (i.e. high acculturation gap) increases the likelihood of adverse outcomes in family functioning and individual well-being (Dinh & Nguyen, 2006; Farver et al., 2002; Tardif & Geva, 2006). The acculturative family distancing theory provides a detailed measure of the difficulties that are experienced between immigrant parents and their children. In particular, discrepancies between cultural values and poor communication were associated with increased family conflict and poor adjustment for the children. Therefore, the acculturation process and the acculturation gap experienced in families are important constructs that need to be considered when examining outcomes for children of immigrant parents.

While many studies have examined the relationship between acculturation gap, family conflict and internalizing behaviours such as depression and anxiety, few studies have researched externalizing or risk taking behaviours as potential outcomes for immigrant youth. Since risk-taking behaviours such as underage drinking, substance use, unprotected sexual practices, aggressiveness and other illegal activities impact the individual, and have the potential for negatively impacting others, it is important to determine which situations increase the likelihood of these outcomes in immigrant populations. In particular, does acculturation gap and family conflict have implications for risk taking behaviour? If so, are these effects as pronounced in risk-taking behaviours as they are with internalizing behaviours? The answers to these questions have research, treatment and policy implications. This study proposes to add to the body of knowledge regarding the impact of acculturation on immigrant families and individuals adapting to life in North America.

Acculturation and Risk Taking Behaviours

Delinquent and risk taking behaviours by adolescents and young adults is often in the forefront in the media. In the past few decades, the focus has shifted to determine the extent to which minorities engage in risk-taking behaviours. Evidence appears to suggest that minority youth are over-represented as both offenders and victims of violence and crime (Choi, Harachi, Gillmore & Catalano, 2006; Soriano et al., 2004; Wong, 1999). There are few studies that have examined how acculturation affects risk taking behaviours in immigrant populations. The research has tended to focus on how acculturation impacts individuals' well-being and adjustment. Furthermore, there has been a lack of consistency in how acculturation and delinquent behaviours are measured. The few studies that are available acknowledge that acculturation can be both a protective and risk factor for engaging in delinquent behaviours. As a result, it is important to examine the factors that lead to delinquency in immigrant populations for preventative and treatment measures.

Acculturation studies that examine risk-taking behaviour have hypothesized that increased acculturation to the host country will increase an individual's risk for delinquent behaviour. Furthermore, alignment with one's heritage culture is a protective factor, and thus will be associated with lower rates of delinquency. Research studies have supported both hypotheses. In a Canadian study conducted by Wong (1999), Chinese adolescents were recruited to determine how acculturation and associating with delinquent peers impacted the individual's own delinquent behaviour. The study found a significant positive relationship between participation in North American culture and engaging in delinquent acts or minor offences. Interestingly, Wong (1999) expected that adolescents who had more friends from Chinese descent would be less likely to engage in delinquent acts. Instead a positive

relationship was found between having Chinese peers and engaging in delinquent behaviours. However, in a study of Mexican-American gang members and non-gang members, researchers found that lowered acculturation towards mainstream culture (that is, closely aligned with being Mexican) was higher in gang members than non-gang members (Lopez & Brummett, 2003). Therefore, associating with one's own heritage culture may or may not be a protective factor, depending on the particular cultural context. As found in studies regarding acculturation and adjustment, individuals may be less likely to engage in delinquent behaviours if they engage in an integration acculturation strategy, where they can receive support from both the mainstream and heritage culture.

Through an interview study with 329Asian-American adolescents, the researchers found that acculturation gap significantly predicted serious incidents of violence (Le & Stockdale, 2008). Interestingly, they also found that acculturation gap predicted association with delinquent peers. Le and Stockdale (2008) speculated that conflict with parents as a result of intergenerational and/or intercultural differences may have resulted in the youths' association with delinquent peers, which in turn may have impacted their own delinquent behaviours. These findings were similar to a research study that followed a group of Hispanic adolescents to determine if acculturation gap was associated with substance use (Unger, Ritt-Olson, Soto, & Baezconde-Garbanati, 2009). Unger and colleagues (2009) found that having discrepant orientations between parents and adolescents toward the mainstream and heritage culture was a risk factor for future marijuana and alcohol use. Interestingly, the researchers found that the relationship between acculturation gap and substance use was partially mediated by family cohesion. That is, acculturation gap was associated with lower family cohesion which in turn was associated with higher substance use (Unger et al., 2009). The

findings from the above studies lend support to the idea that the quality of relationships between parents and peers serves as a mediator between acculturation gap and risk-taking behaviours.

Other studies that have examined serious risk taking behaviours in immigrant youth have failed to find a significant relationship between acculturation gap and risk taking behaviours. Lau and colleagues (2005) conducted a two year follow up study investigating 265 Mexican youths and their parents' acculturation levels and how it impacted outcomes for the youth. Although they found acculturation gaps between youth and their parents, this was not found to increase the youth's engagement in risk taking behaviours (Lau et al, 2005). In other words, youths who were more aligned to the mainstream culture as compared to their parents did not have increased conflict or conduct problems. Unexpectedly, youths who were found to be more traditional had more conduct problems (Lau et al, 2005). Therefore, this study highlights that although acculturation causes difficulties for some immigrants, it does not necessary result in increased aggression and conflict in the youth. As a result, other predictors need to be examined to determine if they provide clarity into the relationship between acculturation and delinquent behaviour in minority adolescents and young adults.

Overall, there is some mixed research regarding the effects of acculturation on risk taking behaviours. While some studies report that having contact with mainstream culture increases delinquency, others have found affiliation with heritage culture results in delinquency. What does appear to be consistent in the research regarding risk-taking behaviour in immigrant populations is the effect of parental and peer relationships. In many of the studies, parental involvement or quality of peer relationships influenced the effect of acculturation and ethnic identity on risk-taking behaviours (Arbona, Jackson, McCoy, &

Blakely, 1999; Go & Le, 2005; Lopez & Brummett, 2003; Wong, 1999). Therefore, examining parent and peer relationships may be useful in providing clarity to the association of acculturation and risk-taking behaviours.

Relationships with peers and parents are another way to understand the association of acculturation and negative outcomes. As outlined earlier, relationship with parents not only plays a large role in the acculturation process and establishing an identity, but it also impacts an individual's adjustment. However, the importance of peers cannot be ignored, especially since many studies indicate that peer groups influence adjustment and well-being in immigrant individuals (e.g., Kan & McHale, 2007; Lev-Wiesel, Nuttman-Swartz & Sternberg, 2006). One important dimension in the quality of both parental and peer relationships is the degree of perceived rejection versus acceptance. Studies that have investigated acceptance and rejection experienced by individuals suggests that rejection results in negative outcomes, while acceptance is associated with positive outcomes (e.g., Berenson, Crawford, Cohen & Brook, 2005; Kan & McHale, 2007; Kim, Cain & McCubbin, 2006). Despite being well studied in the literature, acceptance-rejection has received little attention in immigrant populations. It would be worthwhile to examine how rejection impacts acculturation and adjustment.

Role of Parental and Peer Rejection

Numerous studies have been conducted within the field of developmental psychology on the outcomes of rejection by parents and peers on children and youth's well-being. Researchers have defined rejecting as the act of shunning one member by most of the other members of the group (Lev-Wiesel et al., 2006). In contrast acceptance is feeling popular, having many friends, and feeling likeable for the way they are (Kovacev & Shute, 2004). In

research, acceptance and rejection have been used together to represent a continuum on which one end represents rejection and the other is acceptance (Kim et al., 2006). Acceptance and rejection have been well investigated in parenting and peer relationships. While peers remain influential primarily during adolescence, perceptions about parental acceptance or rejection continues to be influential for most people up into at least young adulthood (Ryan & Lynch, 1989). Rejecting behaviour by parents can be exemplified as cold, hostile, indifferent, and undifferentiating (Kim et al, 2006). In contrast, accepting parents are warm, affectionate, and supportive (Kim et al., 2006). A wealth of research have consistently shown that being accepted by parents is associated with enhanced self-esteem in children and adolescents (Kim et al., 2006; Berenson et al., 2005)

A study examining Korean American families found that perceived parental acceptance-rejection by adolescents was related to their psychological adjustment. Kim and colleagues (2006) recruited 106 Korean American families, and participants included adolescents and both sets of parents. In addition to examining parental acculturation and control, the researchers used Rohner's (1991; 2005) parental acceptance-rejection questionnaire (PARQ) and child personality assessment questionnaire (CPAQ). The CPAQ examined elements of psychological adjustment such as dependence, hostility, self-esteem, self-adequacy, emotional unresponsiveness, emotional instability and negative worldview (Rohner, 1991; 2005). Their results indicated that adolescent's perceptions of both maternal and paternal rejection were correlated with their psychological maladjustment (Kim et al, 2006).

Khaleque and Rohner (2002a) conducted a worldwide meta-analysis of 43 studies to determine if the Parental Acceptance Rejection Theory (PARTheory) was related to

adolescent psychological adjustment. They wanted to examine whether the psychological adjustment of children and adults – regardless of culture, ethnicity, gender and socioeconomic status – was related to parental acceptance-rejection. They found support for this hypothesis. Perceived parental acceptance-rejection was associated panculturally with various indices that make up psychological adjustment. The mean effect size for children was r = .51 and r = .46 for adults. A review by Rohner & Britner (2002) found that parental acceptance-rejection was associated with mental health issues such as depression, behavioural problems (including conduct problems) and substance abuse. Although causal inferences cannot be made between parental acceptance-rejection and adjustment, there is significant evidence in a variety of countries that perceived rejection by parents is associated with both internal and external maladjustment.

Like the research on parental acceptance-rejection, peer acceptance-rejection has consistently been found to be associated with an individual's well-being. The most common examination of peer rejection is how it impacts affiliation with deviant peers and engaging in delinquent activities. In general, there are two ways in which peer rejection is examined in relation to delinquent behaviours. One method is examining how individual characteristics impact rejection, which may increase the likelihood of associating with deviant peers (Dishion, Patterson, Stoolmiller, & Skinner, 1991; Patterson, DeBaryshe, & Ramsey, 1989). In other words, a child who exhibits disruptive behaviour may be rejected by normative peers, which may result in associating with deviant peers. In turn, association with deviant peers may cause the individual to engage in delinquent behaviours. Another idea is that peer rejection and affiliation with deviant peers contribute independently to delinquent behaviour (Vitaro, Pedersen & Brendgen, 2007). Therefore, it is possible that peer rejection itself can

contribute to the effect of individual characteristics, such as immigrant status or ethnicity, on delinquent behaviour.

There is limited research regarding peer acceptance in immigrant populations. In an Australian study, researchers Kovacev and Shute (2004) examined how acculturation and social support impacted psychosocial adjustment in Yugoslavian refugees. Their goal was to examine how peer relationships in the adopted country impacted the adjustment of Yugoslavian adolescents who had resettled in Australia. Kovacev and Shute found that individuals who had higher levels of participation in both mainstream and ethnic culture (e.g. integrated style) were more likely to have higher global self-worth and social acceptance by peers. In contrast, participation in only one culture and not the other (e.g., assimilation and marginalization) was negatively correlated with adjustment and peer social acceptance. The researchers also found that peer social acceptance not only was associated with adjustment, but also mediated the link between acculturation and adjustment. This research lends support to previous research that connecting with the host country and maintaining native culture is important in adjustment, and provides evidence that acculturation impacts relationships with peers.

There is a lack of evidence regarding the meditational effects of parental and peer rejection on acculturation and risk-taking behaviours. As outlined by Baron and Kenny (1985), meditational models explain how or why effects occur between independent and outcome variables. In contrast, moderation specifies when these effects will occur, and can determine the direction or strength of these effects (Baron & Kenny, 1985). There appears to be some support that peer social acceptance mediates the link between acculturation and adjustment (Kovacev & Shute, 2004). In this same study, parental rejection was examined

but found to have no meditational effect on any of the variables (Kovacev & Shute, 2004). However, the study by Kovacev and Shute appears to be one of the few studies that have researched parental rejection as a mediating variable. Nonetheless, the literature shows a clear relationship between parental rejection and adjustment of their children. Therefore, one can surmise that parental rejection along with peer rejection could explain why variables such as acculturation gap influence risk-taking behaviours or adjustment. Examining relationships between parents and peers simultaneously is important because both of these relationships are impacted as an adolescent explores their values and identity. If a child is experiencing a discrepancy about their values with their parents, such that the parents are traditional and the child is more accepting of the majority culture, the child may feel misunderstood or rejected by their parents. Likewise, if the child retains traditional values to remain similar to parents, they may risk peer rejection. Thus adolescents navigating through two cultures may experience a crossroads. By aligning with the host culture they may increase peer acceptance but they risk losing their parents' acceptance; on the other hand, appearing traditional may alienate their peers but they could regain parental acceptance. Overall, it is a difficult situation that immigrant youth and subsequent generations may experience. As youths navigate their way through this predicament, it would be important to examine whether this process affects their adjustment and their propensity to engage in risk-taking behaviours.\

Current Study

The current study had three main objectives. One objective was to determine whether perceived acculturation gap was associated with risk-taking behaviours, family conflict and well-being in first and second generation young adults. The second objective was to explore some of the factors that may mediate this relationship between acculturation gap and both

internalized and externalized adjustment. Specifically, based on the Acculturation Family Distancing Model (Hwang & Wood, 2002), it was expected that value conflict and family communication would each mediate these relationships. In addition, we expected that perceived parental and peer rejection would also mediate the relationship between acculturation gap and risk-taking behaviours and well-being. Based on these results multiple mediation analyses will explore which of these factors contributes uniquely to the effect of acculturation gap on adjustment. Research studies indicate that European immigrants experience less maladjustment as compared to non-European immigrants when acculturating to the host country (Sondregger & Barrett, 2004; Yeh & Inose, 2002). Therefore, the last objective was to compare European and non-European ethnic populations on the study variables and the relationships among them.

First and second generation Canadians completed several measures assessing acculturation gap, perceived rejection by parents and peers, value conflict, family communication, risk-taking behaviour and well-being. It was hypothesized that (a) acculturation gap would be negatively correlated with well-being and positively correlated with risk-taking behaviour and family conflict. It was also hypothesized that (b) perceived parental and/or peer rejection, family communication, and value conflict would each mediate the relationships between acculturation gap, and risk-taking behaviours and well-being, such that the relationships between acculturation gap and adjustment would be explained by the additional effects of acculturation gap on perceived rejection, communication, and value conflict. Finally, it was hypothesized that (c) acculturation gap will have differential effects in non-European and European populations.

Method

Participants

Demographic information about the participants who completed the study is displayed in Table 1. The study consisted of 181 participants between the ages of 18 and 30 years (mean 21.84). However, due to incomplete data or participants who fell outside the age parameters, 65 (*36%*) were removed from the analysis leaving 116 participants as the final sample. The sample was comprised of 82 (*70.7%)* females and 34 (*29.3%*) males. Majority of the sample reported themselves as second generation (n = 89*; 76.7%*), while 27 (*23.3%*) participants described themselves as first generation. The participants identified themselves with the following ethnicities: African/Caribbean (n = 6*; 5.2%)*, Asian (n = 23*; 19.8%),* European (n = 60*; 51.7%*), Latino/Hispanic (n = 8*; 6.9%*), Middle Eastern (n = 8*; 6.9%*), and South Asian (n = 11; *9.5%*). The participants reported a similar average amount of time that their mothers and fathers resided in Canada. From the available data, the mothers (n = 79*)* resided in Canada for an average of 29.18 years (*SD* = 15.169*; range* = 0-60), while the fathers (n = 85*)* resided in Canada for an average of 28.86 years (*SD* = 14.191*; range* = 0-56).

Table 1
Demographic Information.

	Frequency (%)	N
Gender		116
Female	82 (70.7%)	
Male	34 (29.3%)	
		116
Generational Status		
First	27 (23.3%)	
Second	89 (76.7%)	
Ethnicity		116
African/Caribbean	6 (5.2%)	
Asian	23 (19.8%)	
European	60 (51.7%)	
Latino/Hispanic	8 (6.9%)	
Middle Eastern	8 (6.9%)	
South Asian	11 (9.5%)	
Education Level		116
Completed High School	73 (62.9%)	
College diploma/ Certificate Program	8 (6.9%)	
University Degree	28 (24.1%)	
Graduate Degree	7 (6%)	

Procedures

The majority of the participants were recruited via internet social networks such as Facebook and email, as well as through community contacts and student groups in Thunder Bay, Ontario. In addition, Lakehead University students from Thunder Bay were recruited to participate through classroom presentations and through the Introductory Psychology student research pool. Potential participants were given a link to a secure website from Survey Monkey where they could participate in the study. As an incentive, participants were able to enter into a draw to win one of three cash prizes valued at $25 or $50. In addition, introductory psychology students from Lakehead University were given one participation mark as part of their final grade for their participation in the study.

Participants were first provided with an information screen outlining the procedure of the study and a short summary of the study's purpose (Appendix A). All participants were informed that their participation was voluntary and anonymous, and that they were free to withdraw from the study at any time. Because the survey was completed online, participants gave their consent to participate by clicking a box "yes" or "no" (Appendix B). After reading the recruitment letter and providing consent to participate, participants were asked to identify themselves as first or second generation immigrants. First generation was described as individuals who were born outside of Canada and arrived after the age of six. Second generation were those who arrived in Canada before the age of six or were born in North American but had at least one parent who was foreign born. Next, participants completed demographic information and all the instruments. The instruments assessed a wide range of variables related to acculturation, acculturative family distancing, rejection, family conflict, risk-taking behaviours and well-being (Appendix C). Participants were directed to answer all

questions as it pertained to their experiences during adolescence (between 12-19 years old). After the questionnaires were completed, participants were provided with a debriefing information page that provided them with more information about the study as well as contact information if participants were interested in a summary of the results (Appendix D). Participants were then given the option to provide their email address so that they can be entered into the draw and contacted if they win. Participation in this study on average took less than 45 minutes.

Measures

Independent variables.

Demographic questionnaire. Participants were asked about their age, gender, place of birth, number of years in Canada, highest grade completed, ethnicity and generational status. They were also asked about each of their parents' places of birth, time spent living in Canada, education level, and occupation.

Acculturation gap. In order to assess acculturation attitudes toward both the mainstream and ethnic cultures, the Vancouver Index of Acculturation (VIA) was used (Ryder et al., 2000). The VIA is a self-report instrument that assesses three domains of acculturation: values, social relationships and adherence to traditions (Ryder et al, 2000). The 20 questions are rated on a 5 point likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). All the questions assess the extent to which respondents participate in and identify with mainstream and heritage cultures. Each cultural orientation has 10 items that are worded identically, except for the culture referenced. As a result, two scores are computed - one for mainstream acculturation and one for heritage acculturation. High scores suggest increased acculturation with the referenced culture, while low scores suggest decreased

acculturation. The VIA has been used widely to assess acculturation in a variety of ethnic populations and has demonstrated acceptable reliability (Asvat & Malcarne, 2008; Huynh, Howell & Benet-Martinez, 2009; Ryder et al., 2000).

Participants completed this survey three times, once with reference to their own behaviours, and twice with reference to how they perceived each of their parents' behaviours. Following the practice of other studies (e.g., Buki et al., 2003; Merali, 2002), the absolute value of the difference between participants' self-ratings and their ratings of their parents was calculated as the index of acculturation gap (Merali, 2002). As a result, acculturation gap scores were obtained separately for heritage and mainstream cultures by computing a mean of each individual's gap scores with their mother and father. For the present sample, the internal consistency (coefficient alpha) for participant heritage acculturation was .84, for mother's perceived heritage acculturation it was .89 and for father's perceived heritage acculturation it was .87. With regards to mainstream acculturation, the internal consistency for participant was .86 while perceived mainstream acculturation for both mother and father was .91 (Table 2).

Mediating variables.

Value conflict and communication. According to the AFD theory developed by Hwang and colleagues, the acculturation gap results in problematic distancing between parents and children as a result of value conflict and breakdown in communication. The AFD measured value conflict in a variety of areas such as gender roles, dating practices, moral values, work ethics, social norms, and parenting style. The inability to communicate effectively with parents was measured through willingness to disclose personal information, ability to communicate feelings and emotional needs, and the degree that communication was

hindered by linguistic issues. At this time, the AFD questionnaire is not available for public use (W-C. Hwang, personal communication, September 22, 2009). Therefore, measures that approximate value conflict and communication with parents were used for the purpose of this study.

Value conflict was measured using the Intergenerational Conflict Inventory (ICI), which assesses conflict in three areas: family expectations, education and career, and dating and marriage (Chung, 2001). As stated earlier, AFD measures value conflict in a variety of domains, some of which are assessed in the ICI. The ICI was developed by its author through literature research and clinical experience with Asian American families (Chung, 2001). In total, there are 24 items on the ICI to assess extent of conflict in the three dimensions described earlier (Chung, 2001). However, we wanted to include questions that would address potential value conflicts in other contexts (such as values regarding intimate relationships, religious practices and work/school decisions) so for the purpose of this study seven additional questions were added to this measure. The ICI has demonstrated good reliability in previous studies (Ahn, Kim & Park, 2008; Chung, 2001). For the present sample, the internal consistency (coefficient alpha) for all 31 items was .93 (Table 2).

Communication with parents was assessed using the Parental-Adolescent Communication Scale (PACS), developed by Barnes and Olson (1985). This measure has been used in a variety of studies examining quality of communication between parents and children, and has demonstrated adequate reliability (Barnes & Olson, 1985; Rhee, Chang & Rhee, 2003). The PACS has 20 items that measure positive and negative communication between adolescents and their parents. The PACS has two scales: degree of openness and extent of problems in family communication. Participants indicate how closely each item

matches the communication style they have with each of their parents using a scale that ranged from 1 (strongly disagree) to 5 (strongly agree). However, problems associated with language were not captured in the PACS and thus three additional questions were added to address linguistic problems: "I have difficulty communicating with my mother/father because we speak a different language", "My mother/father and I speak the same language when we communicate" and "Sometimes my mother/father and I misunderstand each other because I prefer to speak in English and she/he prefers to speak in our native language". For the present sample, internal consistency for communication with mother was .91 and .91 for father (Table 2).

Acceptance-Rejection. To the best of my knowledge, there are few measures that assess parental and peer rejection simultaneously. However, the acceptance-rejection questionnaire used by Rohner and colleagues has been adapted for use with spouses and teachers (Rohner & Khaleque, 2005). Therefore, for the purpose of our study, the adult PARQ was adapted to include rejection from same-ethnic peers and different-ethnic peers. The short form version of the adult PARQ was used and items from only two subscales (warmth/affection and undifferentiated rejection) were included, which totalled 12 items. The remaining two subscales (indifference/neglect and hostility/aggression) measure more overt forms of physical and verbal aggression, which is not consistent with the rejection construct we were attempting to measure, so they were not included (Rohner, Khaleque & Cournoyer, 2005). To date, there are few studies that have examined the short form PARQ, but because the items from the long form have demonstrated strong reliability and validity, it was expected that the short form would likewise have strong psychometric properties (Rohner, 2005; Khaleque & Rohner, 2002a; Khaleque & Rohner, 2002b).

The items that we used from the PARQ still did not directly assess the more subtle type of rejection in which we were interested. This type of rejection makes people feel they do not belong. Therefore, four additional items were included in order capture this type of rejection. These additional items are: "accepted me as who I was" "made me feel that I did not belong" "often misunderstood me" and "made me feel rejected". Individuals were asked to respond to all acceptance-rejection items using a 5 point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores reflect higher feelings of acceptance while lower scores indicate feelings of rejection. Participants were asked the same 16 items for their mother, father, same-ethnic peers and different-ethnic peers. For the present sample, internal consistencies (coefficient alpha) for the 16 items assessing level of acceptance with mother, father, same-ethnic peers and different-ethnic peers were .96, .97, .96 and .94, respectively (Table 2).

Dependent variables.

Risk-taking behaviours. The Cognitive Appraisal of Risky Events scale (CARE) developed by Fromme, Katz & Rivet (1997) assesses the individual's beliefs and perceived consequences of 30 risky activities in the following subscales: drug and illegal alcohol use, aggressive/illegal behaviours, risky sexual activities, heavy drinking, high-risk sports and academic/work behaviours. Although CARE assesses the frequency of involvement it is given in an open format, where individuals provide the number of times they engaged in the risky activity in the past 10 days. We were interested in a longer time range, which might have been difficult for people to provide accurately. Therefore, participants were asked to answer how often they engaged in risky behaviours during their adolescence using a 5 point scale ranging from 1 (never, or very rarely) to 5 (very often). Additional changes to CARE

were to remove involvement in high-risk sports subscale and adding the following question regarding impaired driving: "Rode in vehicle when the driver was intoxicated". The CARE has demonstrated adequate reliability and validity (Fromme et al., 1997). For the present sample, the internal consistency (coefficient alpha) for risk taking behaviours was .92 (Table 2).

Peer delinquent behaviour. Since studies have shown that having delinquent peers is strongly associated with adolescent risk-taking behaviours (Le & Kato, 2006; Le & Stockdale, 2008), a measure of peer delinquency was included as a potential control for the risk-taking behaviours of participants. A commonly used 16 item measure asks respondents to estimate how many of their friends engaged in delinquent activities, such as stealing, hitting, joyriding, in the past 6 months (Thornberry, Lizotte, Krohn, Farnworth & Jang, 1994; Jang & Thornbery, 1998). Two additional items were included: "drove a vehicle when intoxicated" and "sold illegal drugs to other people". Responses were categorized into: none, few, half, most and all. This measure has evidenced good reliability and validity (Le & Stockdale, 2008; Thornberry et al., 1994). For the present sample, the internal consistency for the 18 items (coefficient alpha) was .92 (Table 2).

Family conflict. The Social Interaction Scale (SIS) assesses social support and social conflict from spouses, family, and friends (Kessler et al., 1994). Only the family conflict subscale was used for the purpose of this study. The family conflict subscale has six items that focus on how often family members argue, criticize, let you down, make you feel tense, get on your nerves, and make too many demands. Participants answered using a 5 point Likert scale ranging from 1 (not at all) to 5 (all the time). The SIS has been used in a variety of studies and demonstrates good reliability (Hwang & Wood, 2009). Furthermore, it has

demonstrated adequate cross-cultural validity and reliability (Hwang, Chun, Kuraski, Mak & Takeuchi, 2000). For the present sample, the internal consistency (coefficient alpha) was .91 (Table 2).

Well-being. In order to assess well-being, three domains were measured: self-esteem, life satisfaction and positive and negative emotions.

Self-esteem. The Rosenberg self-esteem scale (RSE) is widely used to assess self-esteem in a variety of populations and has been found to be highly reliable (Lee, 2008; Kiang & Fuligini, 2009; Rosenberg, 1986). The scale has 10 negative and positive statements that assess global acceptance and self worth. The responses range from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate a more positive self-esteem. Participants were asked to answer the items based on their experiences during their adolescence. For the present sample, the internal consistency (coefficient alpha) was .91 (Table 2).

Satisfaction with life. The Satisfaction with Life Scale (SWLS) was used to assess the individual's global judgment of their life satisfaction (Diener, Emmons, Larsen & Griffin, 1985). It has 5 items, and all items are worded in a positive manner. A 5 point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) were used as the individual's response choices. High scores on the SWLS indicate high life satisfaction. Consistent with the other measures, individuals were asked to answer items based on their experiences during their adolescence. The SWLS has demonstrated high reliability, including within a variety of cross-cultural studies (Pavot & Diener, 2008). For the present sample, internal consistency (coefficient alpha) for life satisfaction was .88 (Table 2).

Affect. The Positive and Negative Affect Schedule (PANAS) is a widely used measure to assess positive and negative emotional states in individuals (Watson, Clark &

Tellegen, 1988). Positive affect is the extent that a person feels enthusiastic, active and alert, while negative affect is a general dimension of emotional distress. Participants use a 5 point Likert scale ranging from 1 (very slightly, not at all) to 5 (extremely), to indicate how often they felt each of the 10 positive affect words and 10 negative affect words during their adolescence. The PANAS has evidenced strong reliability and validity (Watson et al., 1988). For the present sample, the internal consistency for positive affect was .84 and .85 for negative affect (Table 2).

Table 2
Descriptive Statistics for the Study Instruments.

	Mean	Standard Deviation	Cronbach's Alpha	N	Excluded
Heritage Acculturation (VIA)					
Participant	37.72	6.27	.841	116	0
Mother	41.94	6.08	.887	112	4
Father	42.45	5.70	.866	109	7
Mainstream Acculturation (VIA)					
Participant	41.96	5.52	.856	115	1
Mother	37.13	7.87	.907	112	4
Father	37.00	7.78	.905	110	6
Acculturation Gap					
Heritage Gap	5.92	5.30	n/a	114	2
Mainstream Gap	5.51	5.62	n/a	114	2
Congruent Values (ICI)	96.87	18.66	.931	108	8
Acceptance (RQ)					
Mother	62.78	13.80	.964	111	5
Father	60.80	15.10	.967	113	3
Same ethnic peers	60.64	11.20	.955	106	10
Different ethnic peers	60.68	9.83	.938	111	5
Effective Communication (PARQ)					
Mother	70.45	16.16	.914	113	3
Father	69.06	15.18	.905	110	6
Risk-Taking Behaviours (CARE)	47.34	14.55	.922	112	4
Peer Delinquency (PD)	23.78	6.75	.921	113	3
Satisfaction with Life (SWL)	17.25	4.72	.878	114	2
Self-Esteem (SE)	35.58	7.65	.906	115	1
Positive Affect (PA)	37.26	5.63	.838	115	1
Negative Affect (NA)	26.38	6.05	.853	113	3
Family Conflict (SIS)	17.90	5.73	.909	115	1

Results

The Statistical Package for Social Sciences (SPSS) v17 was utilized to organize and analyze the information obtained from the instruments. Participants who had entire scales missing from their data were removed from the analyses. However, individuals were included if a set of items were missed because it only pertained to one of their parents (i.e. they were raised by a single parent).The remaining data was evaluated through DESCRIPTIVES and FREQUENCIES analyses to determine its characteristics. Boxplots and histograms were used to assess normality in the instruments. Outliers were identified and examined within the data set to determine their nature. One case was deleted due to missing values on two scales, while the outliers were deemed to be meaningful representations of participants' experiences.

Skewness ranged from -1.19 to 1.91 on the measures, with a majority falling into an acceptable range (Field, 2009; Tabachnick & Fidell, 2007). To further assess for normalcy, z-scores of skewness and kurtosis were computed. It has been suggested that in a sample size that is greater than 100, a z-score greater than 3.29 ($p < .001$) indicates significant deviation from normality (Field, 2009; Tabachnick & Fidell, 2007). Using this benchmark, it was found that several measures were significantly skewed. In particular, PARQ-Mother (z skewness=-3.90), PARQ-Father (z skewness = -4.68), PARQ-same ethnic peers (z skewness = -5.09), VIA participant mainstream (z skewness = -4.44) and VIA Mother heritage (z skewness = -3.95) were negatively skewed. In addition, CARE (z skewness = 5.75) and PD (z skewness = 8.48) were found to be positively skewed.

It is recommended that variables be transformed in order to correct for non-normality. However, because many of the measures will be entered into statistical procedures together,

it is recommended that all measures be transformed using the same transformation method (Field, 2009). When transformations were computed (e.g. log10, square root and reciprocal), some of the measures became severely negatively skewed, which sometimes occurs in transformation procedures (Tabachnick & Fidell, 2007). Since the statistical procedures being employed are considered to be robust (Field, 2009) and the transformations increased non-normality in some of the measures, it was considered reasonable to maintain the measures despite deviations from normality. Cautious interpretations will be made when using these skewed measures. In addition, because correlations between the measures was less than .90 (Tabachnick & Fidell, 2007), issues of multicollinearity was not considered to be significant. Finally, internal consistencies of the measures were deemed to be acceptable as they ranged from .838 to .967 (Table 2).

Lastly, multivariate analysis (MANOVA) was computed to determine the effect of gender and generational status on the variables in the study. With the multivariate tests it was determined that gender had a significant effect on the dependent variables, F (7, 106) = 2.673, $p < .05$. Specifically, gender had a significant effect on the measures that assessed for peer delinquency, F (1, 115) = 11.759, $p < .01$, and risk-taking behaviours, F (1, 115) = 4.432, $p < .05$. In contrast, generational status had no effect on the dependent variables F (7, 106) = 1.213, $p > .05$. As a result, gender and peer delinquency were entered as covariates in analyses that include risk-taking behaviours. With regard to mediating variables, neither gender, F (6, 105) = 1.445, $p > .05$, or generational status, F (6, 105) = .768, $p > .05$, had a significant effect on the measures. Tables 3 and 4 provide the means and standard deviations for all study variables across gender and generational status, respectively.

Table 3
Descriptive statistics for study instruments across genders.

	Male			Female		
	Mean	SD	n	Mean	SD	n
Heritage Acculturation (VIA)						
Participant	37.59	6.13	34	37.77	6.36	82
Mother	40.32	6.32	34	42.49	5.84	82
Father	40.21	6.01	33	43.19	5.28	81
Heritage Acculturation Gap	4.35	3.47	33	6.56	6.21	81
Mainstream Acculturation (VIA)						
Participant	42.24	6.08	34	41.66	5.52	82
Mother	38.06	8.88	34	36.40	7.52	82
Father	38.64	7.33	33	36.02	7.95	81
Mainstream Acculturation Gap	4.88	4.87	33	5.77	5.47	81
Congruent Values (ICI)	99.97	16.39	34	95.11	18.93	82
Acceptance (RQ)						
Mother	67.53	10.16	34	60.71	14.59	82
Father	62.24	12.74	33	60.34	15.83	82
Same ethnic peers	60.13	10.89	30	60.43	11.88	77
Different ethnic peers	59.24	8.96	34	61.56	10.00	81
Effective Communication (PARQ)						
Mother	76.15	11.86	34	67.73	17.40	82
Father	69.97	13.10	33	62.60	15.52	82
Risk-Taking Behaviours (CARE)	53.41	15.64	34	45.18	13.51	82
Peer Delinquency (PD)	27.62	7.31	34	22.39	6.06	82
Satisfaction with Life (SWL)	17.18	5.13	34	17.23	4.53	82
Self-Esteem (SE)	35.41	8.04	34	35.33	7.49	82
Positive Affect (PA)	37.03	6.48	34	37.32	5.26	82
Negative Affect (NA)	27.38	6.22	34	26.07	6.27	82
Family Conflict (SIS)	16.94	5.49	34	18.21	5.84	82

Table 4
Descriptive statistics for study instruments across generational status.

	First Generation			Second Generation		
	Mean	SD	n	Mean	SD	n
Heritage Acculturation (VIA)						
Participant	39.67	7.43	27	37.12	5.79	89
Mother	43.26	5.09	27	41.43	6.26	89
Father	43.04	5.33	26	42.11	5.74	88
Heritage Acculturation Gap	5.15	6.63	26	6.15	5.32	88
Mainstream Acculturation (VIA)						
Participant	38.00	6.25	27	42.99	4.96	89
Mother	32.26	7.67	27	38.29	7.51	89
Father	31.50	8.14	26	38.34	7.06	88
Mainstream Acculturation Gap	6.35	4.97	26	5.27	5.39	88
Congruent Values (ICI)	99.22	19.53	27	95.72	17.93	89
Acceptance (RQ)						
Mother	64.37	10.74	27	62.20	14.57	89
Father	57.59	17.23	27	61.90	14.18	88
Same ethnic peers	63.04	10.25	26	59.48	11.88	81
Different ethnic peers	58.78	11.36	27	61.51	9.14	88
Effective Communication (PARQ)						
Mother	72.07	14.29	27	69.63	17.01	89
Father	63.30	14.96	27	65.15	15.31	88
Risk-Taking Behaviours (CARE)	43.56	12.48	27	48.82	15.02	89
Peer Delinquency (PD)	22.22	5.65	27	24.44	7.13	89
Satisfaction with Life (SWL)	17.81	4.51	27	17.03	4.76	89
Self-Esteem (SE)	38.33	6.94	27	34.45	7.63	89
Positive Affect (PA)	38.15	4.07	27	36.96	6.00	89
Negative Affect (NA)	25.15	4.01	27	26.85	6.77	89
Family Conflict (SIS)	17.41	4.99	27	17.97	5.98	89

Level of Acculturation and Acculturation Gap

Mean acculturation scores for heritage and mainstream culture for the participants and each of their parents are shown in Table 2. Paired-samples t tests were employed to determine whether differences observed in participants' own acculturation scores for heritage and mainstream cultures, and between participants and their parents' acculturation scores were significant. In total, seven paired-samples t-tests were computed. From this analysis it was found that participants reported having greater acculturation to mainstream (Canadian) culture than to their heritage culture, t (115) = 5.08, $p < .001$. In addition, participants reported significantly higher mainstream acculturation than their mother, t (115) = 8.08, $p < .001$, and father, t (113) = 8.75, $p < .001$. In contrast, participants perceived themselves as having significantly lower heritage acculturation than their mother, t (115) = -6.12, $p < .001$, and father, t (113) = -7.41, $p < .001$.

Finally, the analysis revealed no significant difference between the mothers' and fathers' perceived acculturation levels for mainstream, t (113) = 1.10, *ns* and heritage culture t (113) = -1.21, *ns*. As a result of the lack of difference between parents on the perceived acculturation scores for either culture, it was deemed reasonable to compute a mean parental heritage and mainstream acculturation score. These mean scores were then subtracted from the participants' mainstream and heritage acculturation scores in order to obtain the gap scores.

Hypothesis 1 – Acculturation gap would be associated with family conflict, risk-taking behaviours and poor well-being

Correlation analysis.

Mainstream acculturation gap. Bivariate correlations between study variables are reported in Table 5. The results indicate that mainstream acculturation gap is associated with increased family conflict and decreased satisfaction with life. No significant relationship was found between mainstream acculturation gap and engaging in risk-taking behaviours. With regard to mediator variables, mainstream acculturation gap was negatively associated with congruent values, effective communication with parents and feeling accepted by parents.

Heritage acculturation gap. As shown in Table 5, heritage acculturation gap was found to be positively associated with family conflict and negatively associated with satisfaction with life. No significant relationship was found between heritage acculturation gap and risk-taking behaviours. Significant correlations were found between heritage acculturation gap and the mediator variables. That is, heritage acculturation gap was found to be negatively associated with congruent values, effective communication with parents, feeling accepted by parents and feeling accepted by same ethnic peers.

Table 5
Correlation matrix of the study variables.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Acculturation Gap – Heritage [a]	-														
2	Acculturation Gap – Mainstream [a]	.608***	-													
3	Congruent Values	-.445***	-.418***	-												
4	Effective Parental Communication [b]	-.347**	-.304***	.680***	-											
5	Acceptance parents [b]	-.204*	-.260**	.531***	.840***	-										
6	Acceptance– Same ethnic peers [c]	-.385***	-.186	.409***	.306**	-.344***	-									
7	Acceptance peers – Different ethnic	.132	.043	.098	.083	.270**	.239**	-								
8	Family Conflict	.222*	.202*	-.500***	-.662***	-.704***	-.380***	-.146	-							
9	Satisfaction with Life	-.185*	-.209*	.441***	.418***	.463***	.459***	.330***	-.511***	-						
10	Self-esteem	-.162	-.147	.421***	.398***	.509***	.456***	.434***	-.506***	.655***	-					
11	Positive Affect	-.145	-.066	.256**	.152	.202**	.211*	.352***	-.160	.404***	.557***	-				
12	Negative Affect	.132	.066	-.333***	-.386***	-.445***	-.405***	-.192*	.583***	-.409***	-.556***	-.117	-			
13	Well-Being	-.199*	-.153	-.469***	.441***	.532***	.493***	.426***	-.576***	.774***	.922***	.665***	-.697***	-		
14	Risk Taking Behaviours	-.093	-.183	-.301**	-.253**	-.303***	-.246*	-.082	.403***	-.279**	-.295**	-.147	.440***	-.380***	-	
15	Peer Delinquency	.003	.-.093	-.240**	-.217*	-.330***	-.321**	-.244**	.282**	-.208*	-.230*	-.017	.375***	-.276**	.685***	-

N=116, a : n=115, b: n=114, c: n= 107
*$p < .05$, two-tailed; **$p < .01$, two-tailed, ***$p < .001$, two-tailed

Hypothesis 2: Family communication, incongruent values, and rejection by parents or peers would each uniquely mediate the relationship between acculturation gap and outcomes

Mediation analysis. To address the second hypothesis regarding whether communication, perceived rejection or congruent values mediated the relationship between acculturation gaps and adjustment, Baron and Kenny's (1986) procedure for testing mediation was implemented. Analysis of mediation compares the X (acculturation gap) – Y (outcomes) relation (the c path) with the relation accounting for the mediators of interest (the c' path). For each meditational analysis, four regressions were computed using the causal steps method outlined by Baron and Kenny. Based on the correlations obtained, four mediator variables (incongruent values, effective communication, acceptance by parents, and acceptance by same ethnic peers) and two dependent variables (family conflict and satisfaction with life) were tested for heritage acculturation gap. For mainstream acculturation gap, three mediator variables (incongruent values, effective communication and acceptance by parents) and two dependent variables (family conflict and satisfaction with life) were tested for mediation. As a result, eight mediation models were tested for heritage acculturation gap and six mediation models were tested for mainstream acculturation gap for a total of 14 mediation models. In sum, 56 regression equations were utilized in order to fulfill Baron and Kenny's procedure for mediation. Given that alpha inflates as the number of regressions increase, a conservative p-value of less than .001 was the minimum requirement on the fourth step to confirm mediation.

In order to establish mediation, the first requirement would be that there is a significant relationship between the acculturation gaps and the dependent variables (family conflict and

satisfaction with life). The second requirement would be a significant relationship between the mediator variables (effective communication, congruent values, acceptance by parents, and acceptance by same ethnic peers) and the dependent variables. The third requirement would be a significant relation between each acculturation gap and each of the mediator variables. In order to establish full mediation, the last requirement is a non-significant result between the acculturation gaps and outcome when the mediator variables are included in the same model.

Tables 6 and 7 outline the regression models for mediation analysis for heritage acculturation gap. Table 6 describes the relationship between heritage acculturation gap and family conflict through four possible mediator variables. As shown from this table, all four regression steps for mediation outlined by Baron and Kenny (1986) were fulfilled for each mediator. This demonstrates that as separate models, congruent values, effective communication, acceptance by parents and acceptance by same-ethnic peers each fully mediated the relationship between heritage acculturation gap and family conflict. That is, for each of the mediators the fourth step (path *c'*) revealed a non-significant effect of heritage acculturation gap while each of the mediators remained significant (Table 6).

Table 7 describes the relationship between heritage acculturation gap and satisfaction with life using the four possible mediator variables. Once again, all four regression steps for mediation were fulfilled. In other words, full mediation was achieved at the last step because heritage acculturation gap became non-significant while each of the mediators maintained significance. Therefore, this demonstrates that congruent values, effective communication, acceptance by parents and acceptance by same-ethnic peers each mediated the relationship between heritage acculturation gap and satisfaction with life.

Table 6

Multiple regression models testing for the mediating effects of congruent values, effective communication, rejection by parents and rejection by peers on heritage acculturation gap and family conflict.

Variables	β	*SE*	R^2	*t*	*p*
Mediator: ICI					
1. IV: H Gap	.222	.093	.049	2.407	.018
DV: SIS					
2. IV: ICI	-.500	.025	.250	-6.161	.000
DV: SIS					
3. IV: H GAP	-.445	.272	.198	-5.253	.000
DV: ICI					
4. IV: H GAP	.005	.094		.053	.958
ICI	-.488	.029	.240	-5.281	.000
DV: SIS					
Mediator: PACS					
5. IV: H Gap	.222	.093	.049	2.407	.018
DV: SIS					
6. IV: PACS	-.662	.028	.438	-9.390	.000
DV: SIS					
7. IV: H GAP	-.347	.221	.120	-3.941	.000
DV: PACS					
8. IV: H GAP	.007	.077		-.097	Ns
PACS	-.661	.031	.433	-8.674	.000
DV: SIS					
Mediator: PARQ					
9. IV: H Gap	.222	.093	.049	2.407	.018
DV: SIS					
10. IV: PARQ	-.704	.030	.495	-10.527	.000
DV: SIS					
11. IV: H GAP	-.204	.204	.042	-2.209	.029
DV: PARQ					
12. IV: H GAP	.082	.070		1.192	Ns
PARQ	-.685	.032	.498	-9.970	.000
DV: SIS					
Mediator: RQ SEP					
13. IV: H Gap	.222	.093	.049	2.407	.018
DV: SIS					
14. IV: RQ SEP	-.380	.045	.144	-4.210	.000
DV: SIS					
15. IV: H Gap	-.385	.182	.148	-4.231	.000
DV: RQ SEP					
16. IV: H Gap	.121	.097		1.226	Ns
RQ SEP	-.329	.048	.153	-3.329	.001
DV: SIS					

Note. Four regression tests are portrayed for each type of mediating variable. ICI=Intergenerational Conflict Inventory; SIS= Social Interaction Scale- Family Conflict Scale; H GAP= Heritage Acculturation Gap; PACS = Parental Adolescent Communication Scale; PARQ= Parental Acceptance Rejection Questionnaire

Table 7

Multiple regression models testing for the mediating effects of congruent values, effective communication, rejection by parents and rejection by peers on heritage acculturation gap and satisfaction with life.

Variables	β	*SE*	R^2	*t*	*p*
Mediator: ICI					
1. IV: H Gap	-.186	.077	.035	-2.005	.047
DV: SWL					
2. IV: ICI	.441	.022	.195	5.247	.000
DV: SWL					
3. IV: H GAP	-.445	.272	.198	-5.253	.000
DV: ICI					
4. IV: H GAP	.001	.079		.011	.991
ICI	.421	.025	.177	4.378	.000
DV: SWL					
Mediator: PACS					
5. IV: H Gap	-.186	.077	.035	-2.005	.047
DV: SWL					
6. IV: PACS	.418	.028	.175	4.892	.000
DV: SWL					
7. IV: H GAP	-.347	.221	.120	-3.914	.000
DV: PACS					
8. IV: H GAP	-.055	.076		-.589	.557
PACS	.379	.031	.161	4.092	.000
DV: SWL					
Mediator: PARQ					
9. IV: H Gap	-.186	.077	.035	-2.005	.047
DV: SWL					
10. IV: PARQ	.463	.031	.215	5.558	.000
DV: SWL					
11. IV: H GAP	-.204	.204	.042	-2.209	.029
DV: PARQ					
12. IV: H GAP	-.099	.071		-1.152	.252
PARQ	.424	.032	.207	4.910	.000
DV: SWL					
Mediator: RQ SEP					
13. IV: H Gap	-.186	.077	.035	-2.005	.047
DV: SWL					
14. IV: RQ SEP	.459	.036	.211	5.300	.000
DV: SWL					
15. IV: H Gap	-.385	.182	.148	-4.231	.000
DV: RQ SEP					
16. IV: H Gap	-.012	.077		-.123	.903
RQ SEP	.453	.039	.210	4.571	.000
DV: SWL					

Note. Four regression tests are portrayed for each type of mediating variable. ICI=Intergenerational Conflict Inventory; SIS= Social Interaction Scale- Family Conflict Scale; H GAP= Heritage Acculturation Gap; PACS = Parental Adolescent Communication Scale; PARQ= Parental Acceptance Rejection Questionnaire

Regression models testing for mediation with mainstream acculturation gap are outlined in Tables 8 and 9. Table 8 describes the relationship between mainstream acculturation gap and family conflict through three possible mediator variables. As shown from this table, all four regression steps required for mediation were fulfilled. This demonstrates that congruent values, effective communication and acceptance by parents each mediate the relationship between mainstream acculturation gap and family conflict. Similarly, Table 9 describes the relationship between mainstream acculturation gap and satisfaction with life through three possible mediator variables. As shown from this table, all four regression steps required for simple mediation were fulfilled. That is, congruent values, effective communication and acceptance by parents each mediated the relationship between mainstream acculturation gap and satisfaction with life.

Table 8

Multiple regression models testing for the mediating effects of congruent values, effective communication, rejection by parents and rejection by peers on mainstream acculturation gap and family conflict.

Variables	*β*	*SE*	R^2	*t*	*p*
Mediator: ICI					
17. IV: M Gap	.202	.100	.041	2.188	.031
DV: SIS					
18. IV: ICI	-.500	.025	.250	-6.161	.000
DV: SIS					
19. IV: M GAP	-.418	.293	.175	-4.874	.000
DV: ICI					
20. IV: M GAP	-.003	.098		-.033	.973
ICI	-.491	.029	.240	-5.393	.000
DV: SIS					
Mediator: PACS					
21. IV: M Gap	.202	.100	.041	2.188	.031
DV: SIS					
22. IV: PACS	-.662	.028	.438	-9.390	.000
DV: SIS					
23. IV: M GAP	-.304	.239	.093	-3.383	.001
DV: PACS					
24. IV: M GAP	.002	.081		.030	.976
PACS	-.658	.030	.433	-8.765	.000
DV: SIS					
Mediator: PARQ					
25. IV: M Gap	.202	.100	.041	2.188	.031
DV: SIS					
26. IV: PARQ	-.704	.030	.495	-10.527	.000
DV: SIS					
27. IV: M GAP	-.260	.213	.068	-2.854	.005
DV: PARQ					
28. IV: M GAP	.021	.075		.303	.762
PARQ	-.696	.032	.492	-9.936	.000
DV: SIS					

Note. Four mediating tests are portrayed for each type of mediating variable. ICI=Intergenerational Conflict Inventory; SIS= Social Interaction Scale- Family Conflict Scale; H GAP= Heritage Acculturation Gap; PACS = Parental Adolescent Communication Scale; PARQ= Parental Acceptance Rejection Questionnaire

Table 9

Multiple regression models testing for the mediating effects of congruent values, effective communication, rejection by parents and rejection by peers on mainstream acculturation gap and satisfaction with life.

Variables	β	*SE*	R^2	*t*	*p*
Mediator: ICI					
29. IV: M Gap	-.209	.081	.044	-2.263	.026
DV: SWL					
30. IV: ICI	.441	.022	.195	5.247	.000
DV: SWL					
31. IV: M GAP	-.418	.293	.175	-4.874	.000
DV: ICI					
32. IV: M GAP	-.040	.083		-.425	.672
ICI	.404	.024	.178	4.261	.000
DV: SWL					
Mediator: PACS					
33. IV: M Gap	-.209	.081	.044	-2.263	.026
DV: SWL					
34. IV: PACS	.418	.028	.175	4.892	.000
DV: SWL					
35. IV: M GAP	-.304	.239	.093	-3.383	.001
DV: PACS					
36. IV: M GAP	-.097	.080		-1.065	.289
PACS	.369	.030	.167	4.055	.000
DV: SWL					
Mediator: PARQ					
37. IV: M Gap	-.209	.081	.044	-2.263	.026
DV: SWL					
38. IV: PARQ	.463	.031	.215	5.558	.000
DV: SWL					
39. IV: M GAP	-.260	.213	.068	-2.854	.005
DV: PARQ					
40. IV: M GAP	-.100	.077		-1.144	.255
PARQ	.418	.033	.207	4.777	.000
DV: SWL					

Note. Four mediating tests are portrayed for each type of mediating variable. ICI=Intergenerational Conflict Inventory; SIS= Social Interaction Scale- Family Conflict Scale; H GAP= Heritage Acculturation Gap; PACS = Parental Adolescent Communication Scale; PARQ= Parental Acceptance Rejection Questionnaire

Multiple mediation analysis. One problem with conducting multiple individual mediation analyses utilizing the procedure outlined by Baron and Kenny is that we cannot assess a number of mediators at once to determine how the entire model impacts outcomes and which mediators contribute the most to the model (Preacher & Hayes, 2008). Furthermore, the number of regressions used to test the various mediation models may have inflated the p-value. It has also been identified that the difference between the c and c' paths are not directly tested using the causal step approach to mediation but rather implied by the non-significance of the c path when the variance of the a and b paths are removed (Lundgren, Dahl & Hayes, 2008). In order to address these shortcomings, Preacher and Hayes (2008) have presented a relatively new method for assessing multiple mediators in one model using a non-parametric bootstrapping approach. Employing a bootstrapping approach is especially useful with the sample size of the current study since the assumption of normality of the sampling distribution of the total and specific indirect effects is questionable in small samples (Preacher & Hayes, 2008).

There are two objectives with multiple mediation: (1) the determine the total indirect effect of X on Y and (2) to test the effects of individual mediators within the context of the entire mediation model (Preacher & Hayes, 2008). Through the use of bootstrapping where the original sample is re-sampled *k* (minimum 1000) times to estimate of the total and specific indirect effects of X on Y through a_ib_i paths, confidence intervals are created for the indirect effects of each mediator (Preacher & Hayes, 2008). From these bootstrapping confidence intervals (BC CI) the population-specific indirect effect through M*i* (the mediator) is derived by sorting the *k* values of a_ibi from low to high. As a result, confidence interval at the 95th percentile provides the lower and upper limits of the indirect effect and

suggests that there is 95% chance that the true effect is contained in the interval. As such, the confidence interval gives a range for the observed effect size and when a zero is contained in the interval, there is a possibility that there is no effect between the variables (Shrout & Bolger, 2002). In contrast, when the confidence interval(s) does not contain a zero, this indicates that the indirect effect is significant at the .05 level (Shrout & Bolger, 2002). Furthermore, confidence intervals can be in the negative or positive direction as long as both the upper and lower limits of the interval are in the same direction. The bootstrapping method has demonstrated to be a superior method of assessing mediation in comparison to the causal step analysis or Sobel test (Mackinnon, Lockwood, Hoffman, West & Sheets, 2002).

Using a macro created Preacher and Hayes (2008) a non-parametric bootstrapped multivariate analysis was employed assessing all the mediators in one model for each combination of dependent and independent variables. In total, four models were tested to assess each acculturation gap (heritage and mainstream) on the two dependent variables significantly related to gap (family conflict and satisfaction with life). Each of these mediation models are graphically depicted in Figures 1 to 4. For the current analysis, bootstrapping was set to1000 random samples to be taken from the original sample. Table 10 displays all four mediation models with information regarding product coefficients and bootstrapping confidence intervals. Explanation of each mediation model is provided below.

The first set of values describes the mediation of the effect of heritage acculturation gap on family conflict through congruent values, effective communication with parents, perceived acceptance by parents and perceived acceptance by same ethnic peers (Table 10, "A"). The total indirect effect ("TOTAL") is the effect of the heritage gap on family conflict through the four mediators. With a point estimate of .2592 and a 95% BCa bootstrap CI

[.0982, .4399], the interpretation of these results is that taken as a set, the four mediators do mediate the effect of heritage acculturation gap on family conflict. An examination of the specific indirect effects indicates that perceived acceptance by parents and same ethnic peers were the only mediators since their 95% CI does not contain zero. Similarly, the second set of variables describes the effect of heritage acculturation gap on satisfaction with life using the same four mediators described above (Table 10, "B"). As demonstrated by the total indirect effect (point estimate = -.2116, 95% BCa bootstrap CI [- .3603, - .0988]) all four mediators as a set were found to mediate the effect of heritage acculturation on satisfaction with life. Examination of specific indirect effects indicates that perceived acceptance by parents and same ethnic peers emerged as the only mediators since their 95% CI does not contain zero.

The last set of values in Table 8 provides information about mediation models for mainstream acculturation gap. With regard to family conflict as a dependent variable (Table 10, "C"), the total indirect effect (point estimate = .2573, 95% BCa bootstrap CI [.0947, .4630]) suggests that as a set, congruent values, effective communication and perceived acceptance by parents mediated the effect of mainstream acculturation gap on family conflict. Through the examination of specific indirect effects, perceived acceptance by parents emerged as the only mediator since its 95% BCa CI [.0411, .2888] does not contain zero. The last total indirect effect (Table 10, "D") has a point estimate of - .1641 and a 95% BCa CI [- .2895, -.0598], which suggests that all three mediators (congruent values, effective communication and perceived acceptance by parents) as a set mediate the effect of mainstream gap and satisfaction with life. Specifically, both congruent values (BCa CI [-

.2377, -.0598]) and acceptance by parents (BCa CI [-.2212, -.0204]) emerged as the only mediators since their confidence intervals did not contain zero.

In conclusion, the multiple mediation analysis partially supports individual mediation models that were conducted through the casual step approach as outlined by Baron and Kenny (1986). That is, when congruent values, effective communication, perceived acceptance by parents and perceived acceptance by same ethnic peers are entered into one model, they mediate the relationship between heritage acculturation gap and family conflict, as well as satisfaction with life. Likewise, when the three mediators (congruent values, effective communication and perceived acceptance by parents) are entered in the same model, they mediated the relationship between mainstream acculturation gap and family conflict and satisfaction with life. However, through examination of specific indirect effects of each mediator, it appears that rejection by parents and peers emerged as the sole mediators for each of the models. The one exception was that having congruent values with parents was identified as one of the unique mediators for mainstream gap and satisfaction with life.

Table 10

Indirect effects of acculturation gap on family conflict and life satisfaction through congruent values, effective communication, rejection by parents and rejection by same-ethnic peers.

		Product of Coefficients		Bootstrapping (95% Confidence Intervals)		
	Point Estimate	*SE*	Z	Lower	Upper	*p*
	A) IV: Heritage Gap; DV: Family Conflict					
Congruent Values	.07	.05	1.55	-.0068	.1961	.12
Effective Communication	.04	.05	.73	-.0763	.1566	.46
Acceptance Peers	.04	.03	1.39	.0007	.1281	.17
Acceptance Parents	.11	.05	2.01	.0094	.2650	.04
TOTAL	.26	.08	3.33	.0982	.4399	.00
	B) IV: Heritage Gap; DV: Satisfaction with life					
Congruent Values	-.07	.05	-1.53	-.1856	.0248	.13
Effective Communication	.01	.05	.11	-.0855	.1256	.91
Acceptance Peers	-.10	.04	-2.67	-.2306	-.0361	.01
Acceptance Parents	-.05	.03	-1.39	-.1717	-.0014	.16
TOTAL	-.21	.06	-3.56	-.3603	-.0988	.00
	C) IV: Mainstream Gap; DV: Family Conflict					
Congruent Values	.07	.04	1.52	-.0206	.1975	.13
Effective Communication	.04	.05	.95	-.0340	.1669	.34
Acceptance Parents	.15	.06	2.40	.0411	.2888	.02
TOTAL	.26	.08	3.33	.0947	.4630	.00
	D) IV: Mainstream Gap; DV: Satisfaction with life					
Congruent Values	-.11	.05	-2.32	-.2377	-.0245	.02
Effective Communication	.04	.05	.87	-.0426	.1458	.38
Acceptance Parents	-.09	.05	-2.00	-.2212	-.0204	.05
TOTAL	-.16	.05	-3.27	-.2895	-.0598	.00

Note. Bootstrap re-samples = 1000, N=105

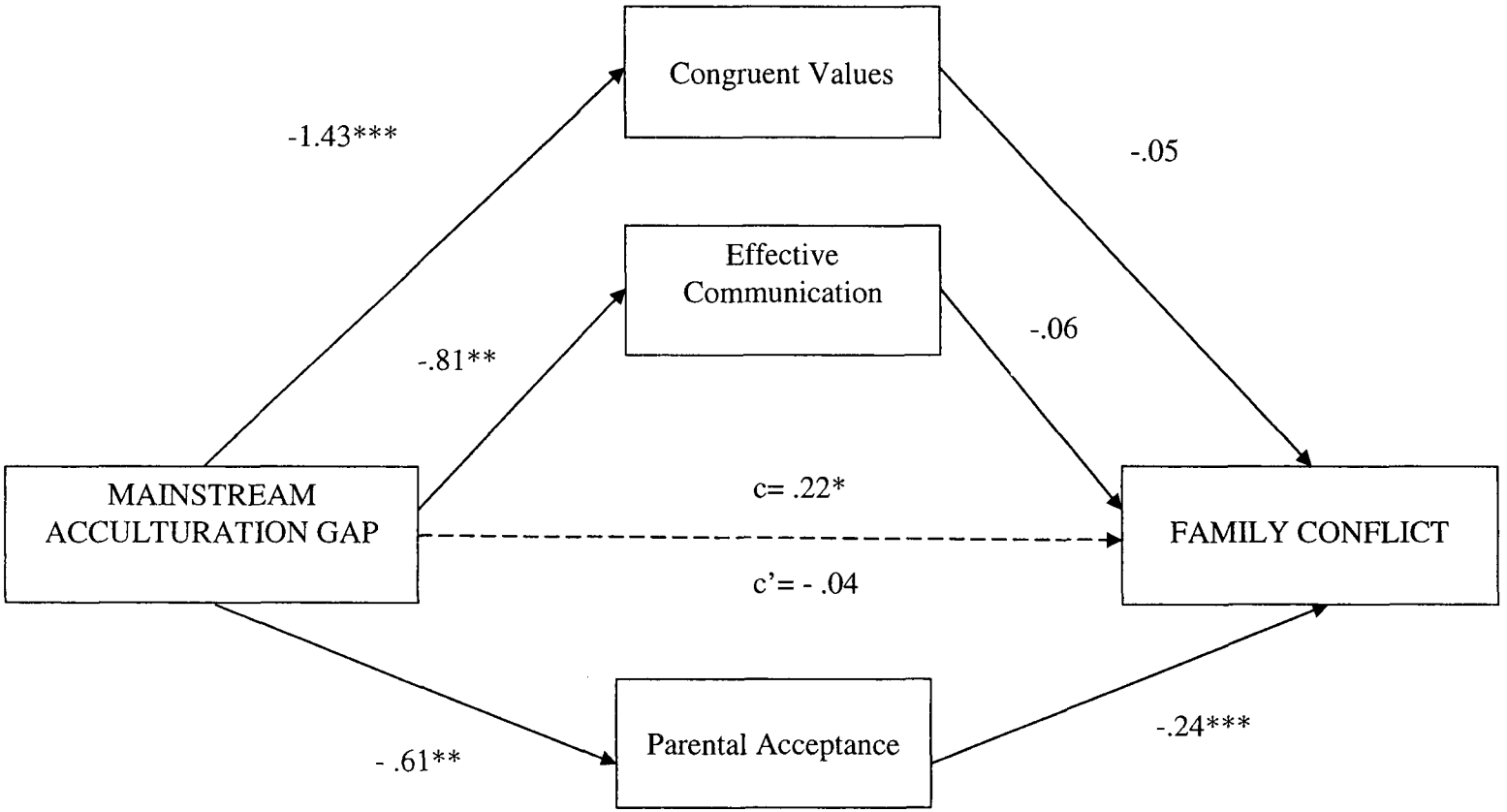

Figure 1. A multiple mediation model representing the relationship between mainstream acculturation gap and family conflict as mediated by congruent values, effective communication, and percieved parental acceptance. * $p < .05$. ** $p < .01$. ** $p < .001$.

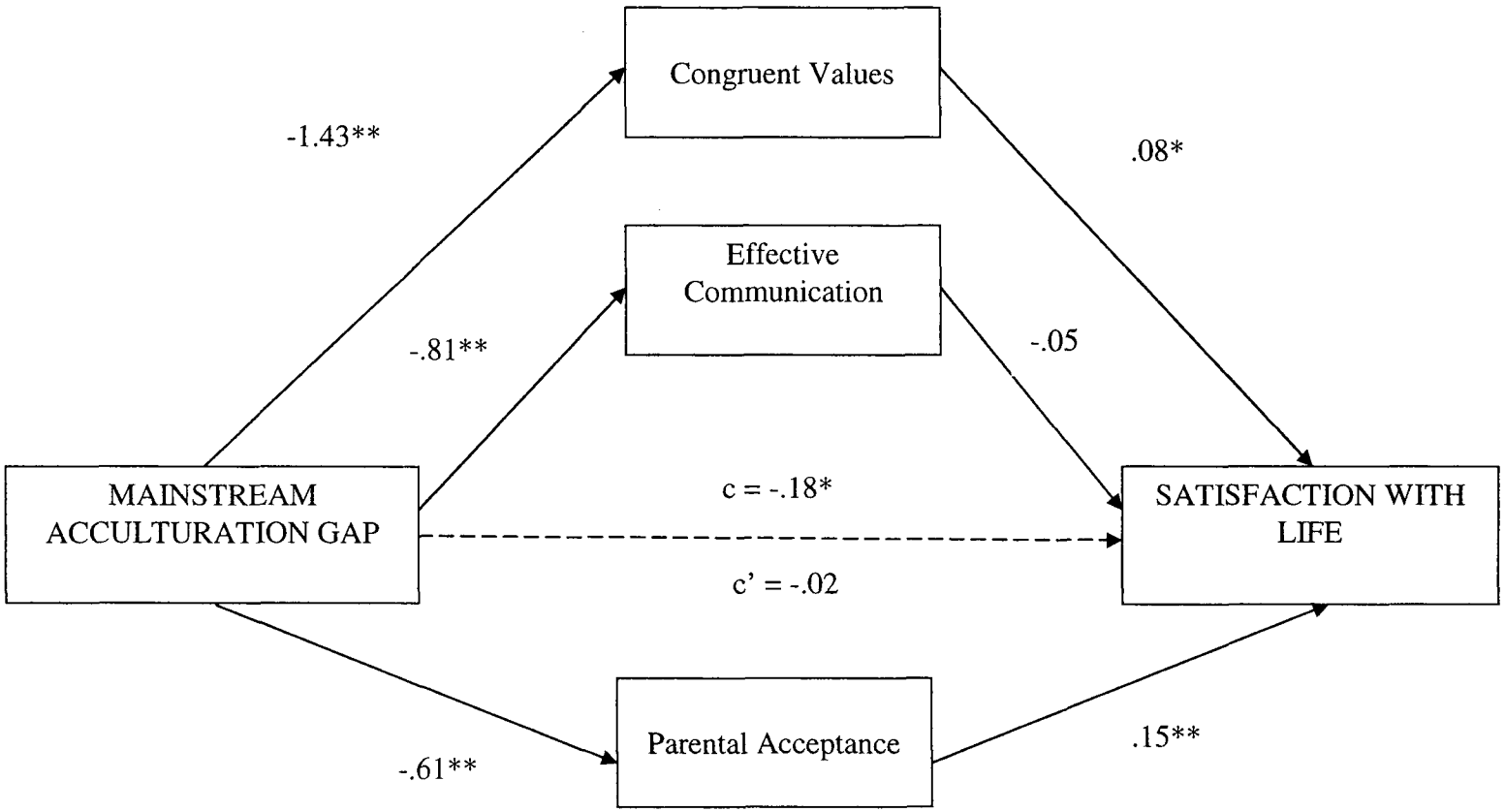

Figure 2. A multiple mediation model representing the relationship between mainstream acculturation gap and satisfaction with life as mediated by congruent values, effective communication, and percieved parental acceptance. * $p < .05$. ** $p < .01$. ** $p < .001$.

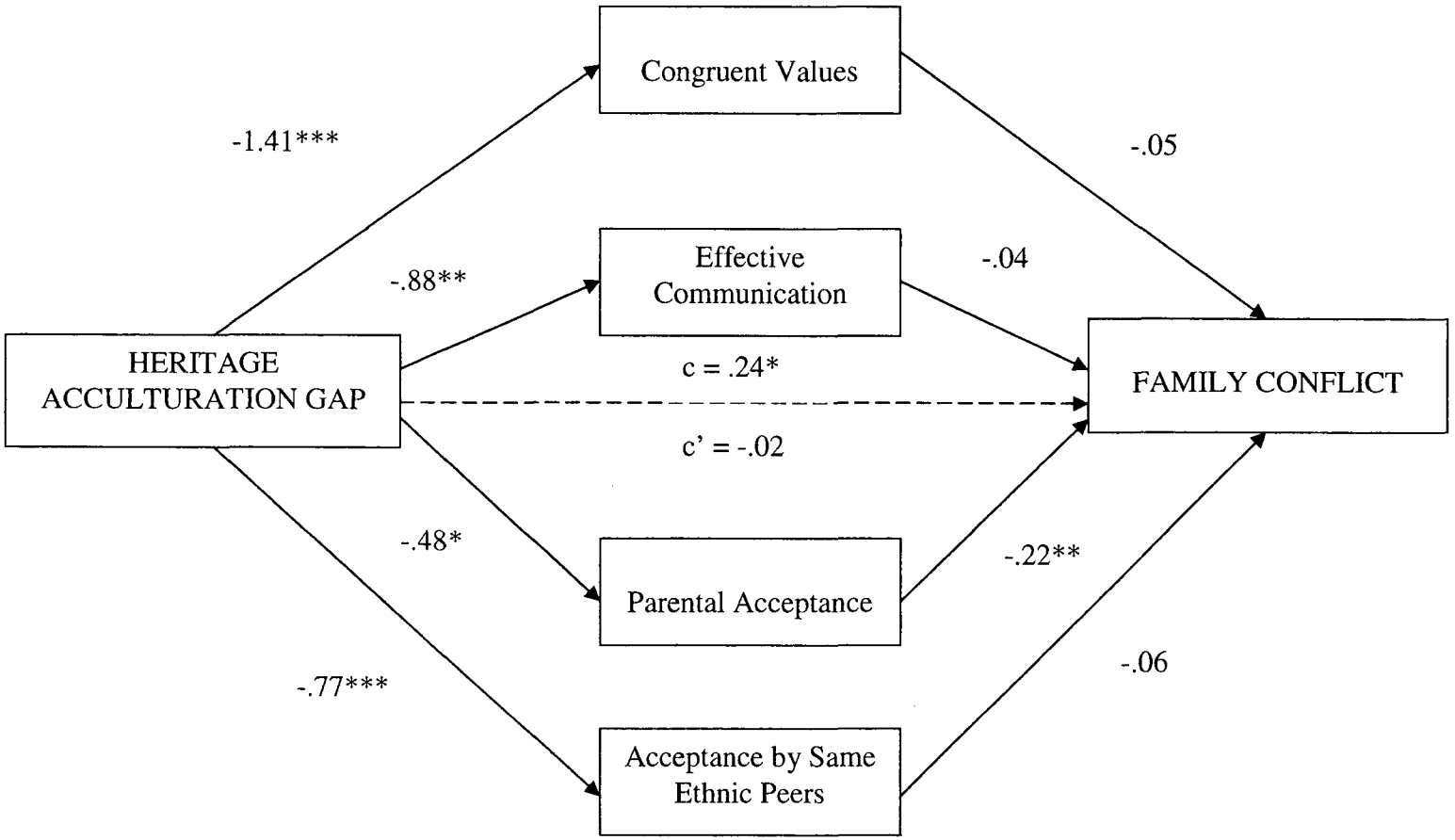

Figure 3. A multiple mediation model representing the relationship between heritage acculturation gap and family conflict as mediated by congruent values, effective communication, percieved parental acceptance and periceved acceptance by same ethnic peers. * $p < .05$. ** $p < .01$. ** $p < .001$.

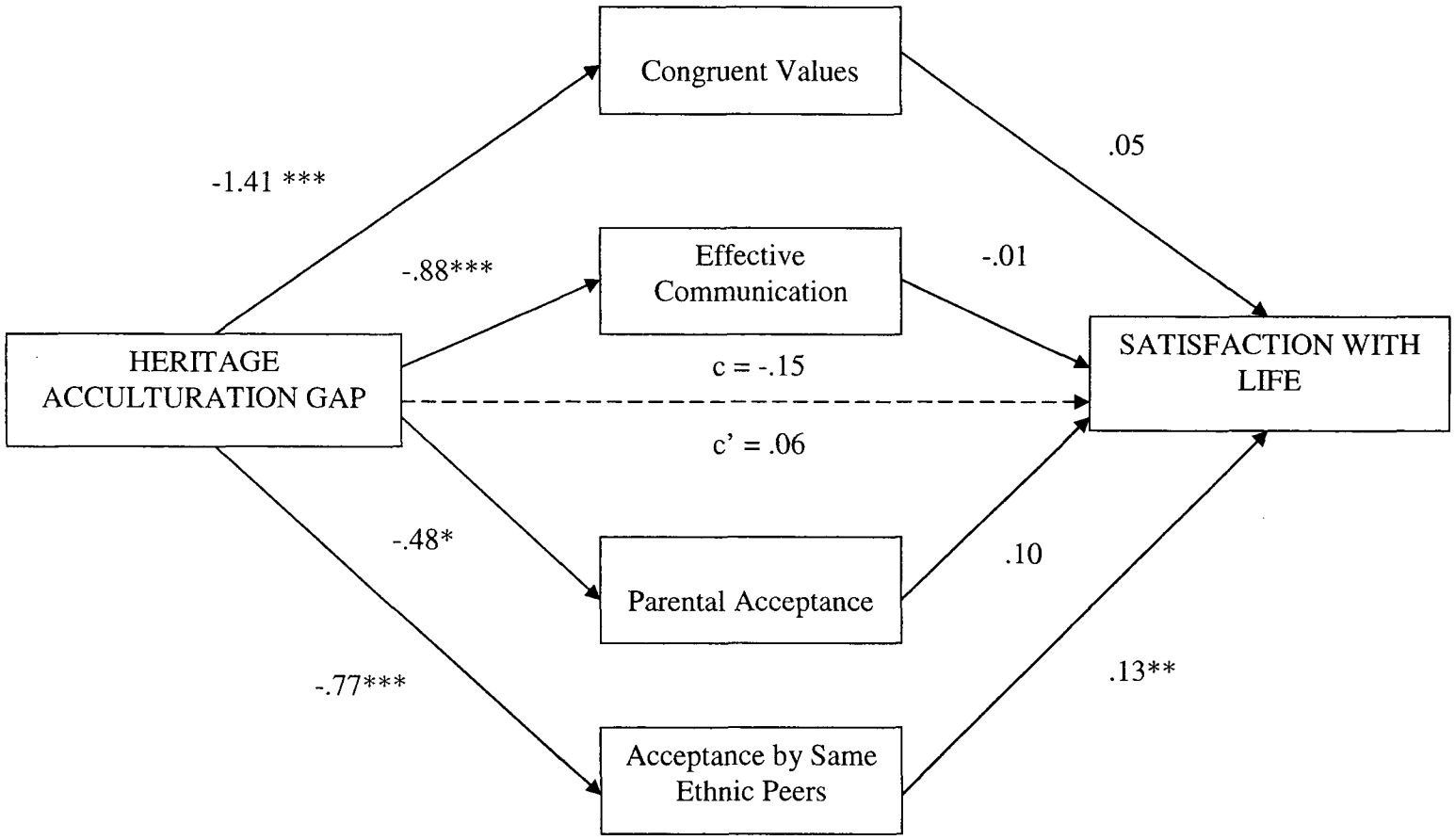

Figure 4. A multiple mediation model representing the relationship between heritage acculturation gap and satisfaction with life as mediated by congruent values, effective communication, percieved parental acceptance and periceved acceptance by same ethnic peers. * $p < .05$. ** $p < .01$. ** $p < .001$.

Hypothesis 3: Comparison of European and non-European populations would reveal significant differences associated with acculturation gap and outcomes

Research evidence has shown that European individuals experience less negative adjustment related to the acculturation process in comparison to non-European individuals (Sonderegger & Barrett, 2004; Yeh & Inose, 2003). Participants were grouped into European or non-European populations in order to compare outcomes. Non-European participants were those who reported themselves as Asian, Middle Eastern, Latino/Hispanic, African/Caribbean, or South Asian in the current study.

A between-subjects multivariate analysis of covariance (MANCOVA) was performed to determine if European and non-European participants significantly differed on any of the variables of interest in this study. Adjustments were made for two covariates: gender and generational status. Ethnic background (European vs. non-European) was entered as the independent variable in the multivariate analysis while acculturation gaps, dependent and mediating variables were entered as the dependent variables. Adjustments were made to control for gender and generational status. With the use of Wilks' criterion, the combined dependent variables were significantly related to gender, $F\ (14, 87) = 4.571, p< .01,$ and ethnic background, $F\ (14, 87) = 4.530, p < .01$. Specifically, univariate tests in the MANCOVA revealed that European and non-European populations differed on heritage acculturation gap, $F\ (1,100) = 9.32, p < .01$, mainstream gap, $F\ (1, 110) = 14.01, p < .001$, and effective communication with parents, $F\ (1, 100) = 5.03, p < .05$. That is, in the current sample having a non-European background predicted higher heritage and mainstream acculturation gaps, as well as lower effective communication with parents (Table 11).

Table 11
Comparison of European and non-European participants on the study variables.

	European participants			Non-European participants		
	M	*SD*	*n*	*M*	*SD*	*n*
Independent Variables						
Heritage Acculturation Gap	4.56	4.68	58	7.33	6.19	56
Mainstream Acculturation Gap	3.63	4.26	58	7.46	5.59	56
Mediator Variables						
Effective Communication	69.84	15.19	59	65.14	12.92	56
Acceptance Parents	62.36	12.93	59	61.41	12.37	56
Acceptance Same – Ethnic Peers	61.02	9.51	56	59.61	13.52	51
Acceptance Different – Ethnic Peers	60.24	9.20	59	61.54	10.29	56
Congruent Values	98.08	15.79	60	94.88	20.66	56
Dependent Variables						
Satisfaction with life	17.27	4.43	60	17.14	4.99	56
Self-esteem	34.97	6.73	60	35.77	8.52	56
Positive affect	37.25	5.18	60	37.21	6.10	56
Negative affect	27.05	5.55	60	25.82	6.93	56
Risk-taking behaviours	50.43	13.54	60	44.55	15.17	56
Family conflict	18.02	5.78	60	17.64	5.76	56

Correlation analysis. Table 12 displays the comparison between European and visible minorities' bivariate correlations between the independent variables and the mediator and dependent variables. As can be seen from these correlations, both similarities and differences emerge in the two populations. Unexpectedly, mainstream acculturation gap in European participants was negatively associated with risk-taking behaviours and peer delinquency. In contrast, mainstream acculturation gap in non-European sample was positively associated with family conflict and negatively associated with satisfaction with life and self-esteem. For European participants, heritage acculturation gap was negatively associated with risk-taking behaviours while heritage gap for non-European was positively associated with family conflict.

As shown in Table 12, differences between the two ethnic populations also emerged with regard to the type of gap and its relationship with the mediator variables. For example, mainstream acculturation gap in European participants was negatively associated with congruent values, while mainstream gap for non-European participants was negatively associated with congruent values, effective communication and parental acceptance. Heritage gap for both European and non-European participants was negatively associated with congruent values and effective communication. However, there were differences in the source of acceptance between the two populations. In European participants heritage acculturation gap was negatively associated with acceptance by parents while for non-European heritage gap was negatively associated with acceptance by same ethnic peers.

Table 12
Correlations of study variables for European and non-European samples.

	Independent Variables			
	European Heritage Gap	European Mainstream Gap	Visible Minority Heritage Gap	Visible Minority Mainstream Gap
Mediators:				
Effective Communication	-.318**	-.214	-.326*	-.307*
Compatible Values	-.419***	-.303**	-.441**	-.468***
Acceptance Parents	-.325*	-.214	-.098	-.304*
Acceptance Same Ethnic Peers	-.096	-.038	-.542***	-.252
Acceptance Different Ethnic Peers	-.019	.055	.210	-.012
Dependent Variables:				
Risk-taking behaviours	-.275*	-.293*	.115	-.002
Peer Delinquency	-.168	-.293*	.181	.119
Family Conflict	.180	.162	.275*	.271*
Satisfaction with Life	-.201	-.114	-.170	-.275*
Self-esteem	-.167	.027	-.170	-.302*
Positive Affect	-.244	-.059	-.089	-.082
Negative Affect	.057	.009	.227	.173
Well-Being	-.224	-.041	-.211	-.119

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

Discussion

Summary and Review of Findings

First and second generation Canadian immigrants were recruited to participate in a study on the effects of the acculturation process on personal and family adjustment. Specifically, this study employed the bidimensional model of acculturation as described by Berry (1997; 2005) to investigate the relationship between acculturation gap and outcomes for both individuals and their families. Outcome measures examined family conflict, risk-taking behaviours and well-being. In addition, measures were included to assess relationship quality with parents and peers, which have been identified as important variables to measure in order to gain a comprehensive understanding of the process of acculturation in families (Hwang & Wood, 2009; Schofield et al., 2008).

As expected, participants in the current study described themselves as more mainstream acculturated than their parents, whom they perceived as more acculturated towards the heritage culture. This finding is consistent with previous research studies examining acculturation levels in parent-child dyads (Farver et al., 2002; Ho, 2010). Furthermore, the pattern of results suggests that the children identified more with the Canadian culture than their heritage culture. This concurs with a number of studies that have found that immigrant youth are more oriented towards the mainstream culture than their heritage culture (Asvat & Malcarne, 2008; Buki et al., 2003; Farver et al., 2002; Schofield et al., 2008).

Objective one. The first objective of this study was to determine the impact of acculturation gap on the adjustment of first and second generation immigrants. Specifically, we hypothesized that acculturation gap would be positively associated with family conflict, negative affect and risk-taking behaviours but negatively associated with satisfaction with life,

self-esteem and positive affect. Our results demonstrate that we achieved partial support for this hypothesis. We found that both mainstream and heritage acculturation gap were associated with increased family conflict and decreased satisfaction with life. This concurs with a myriad of studies that have found that discrepancies in acculturation between children and parents is associated with negative outcomes for both individuals and families (Asvat & Malcarne, 2008; Birman, 2006; Buki et al., 2003; Gonzales et al., 2006; Dinh & Nguyen, 2006; Farver et al., 2002; Farver et al., 2007; Ho, 2010; Merali, 2002; Smokowski et al., 2008).

Our hypothesis that acculturation gap would be associated with risk taking behaviours was not supported. The reason for this finding may be that the majority of our sample were female and had more than a high school education. Research evidence shows that individuals with these demographics tend to participate in fewer delinquent activities (Goodkind, Wallace, Shook, Bachman & O'Malley, 2009; Loeber, Pardini, Stouthhamer-Loeber & Raine, 2007; Natsuaki, Ge & Wenk, 2008). Furthermore, because participants were asked to retrospectively report their delinquent activities from their adolescence, it is possible that individuals underreported their actual risk-taking behaviours. Finally, it is possible that we recruited individuals who were generally pro-social. These interpretations are consistent with the findings of Lau and colleagues (2005), who found that other factors, including a marginalized acculturation style, predicting conduct problems while acculturation gap did not. As will be described later, interesting results were found examining risk-taking behaviours in European participants.

Objective two. The second objective of this study was to examine possible mediators that could account for the effects of acculturation gap on family conflict, risk-taking

behaviours and well-being. We hypothesized that communication with parents, congruent values, perceived rejection by parents and perceived rejection by peers would each mediate the effect of acculturation gap on outcomes. Furthermore, we wanted to explore whether rejection by parents and peers would provide a unique mediating effect above and beyond the mediating effect of problematic communication with parents and value conflict on the relationship between acculturation gap and negative outcomes. From our causal step mediation analysis, we achieved full support of our hypothesis that each of the four mediating variables mediated the relationship between acculturation gap and outcomes.

Effective communication and congruent values are two constructs that are described in the Acculturative Family Distancing (AFD) theory (Hwang, 2006). Based on clinical experience and the literature on acculturation in Asian families, Hwang postulated that different acculturation levels leads to a distancing between parents and children, which in turn results in problematic communication and value conflict. Therefore, the AFD model is seen as a more "proximal construct" of acculturation gap (Hwang & Wood, 2009, p. 24). To date, there is only one study that has tested the AFD model. The findings from this study demonstrated that poor communication with parents and value conflict was associated with increased family conflict and personal distress (Hwang & Wood, 2009). However, the authors did not test whether acculturation gap was associated with poor communication and value conflict, as assumed within the AFD theory. Our study confirmed that acculturation gap was associated with problematic communication and incongruent values. In addition, the results demonstrated that these two constructs each mediated the effect of acculturation gap on family conflict and satisfaction with life. In other words, the relationship between acculturation gap

with parents and both family conflict and satisfaction with life appears to be accounted for by the effects of acculturation gap on communication and value conflict.

In addition to the AFD model, the current study attempted to examine whether rejection by parents or peers mediated the effect of acculturation gap on family conflict and well-being. Furthermore, perceived rejection was analyzed against the AFD model to determine if it added a unique understanding to the relationship between acculturation gap and outcome. From the literature on rejection, it was hypothesized that acculturation gap would be associated with perceived rejection by either parents or peers. For instance, immigrant youth who are more aligned with the mainstream culture and who experience an acculturation gap with their parents may feel different from and less accepted by both their parents and same-ethnic peers who identify more with the heritage culture. However, these same youth may feel more similar to and accepted by their mainstream peers. Therefore, immigrant youth face a paradox whereby if they identify with the mainstream culture they may perceive rejection by parents and same-ethnic peers but acceptance by their mainstream peers. Likewise, if the immigrant youth were similar to their parents and aligned more towards the heritage culture, they may risk perceiving rejection by their mainstream peers.

The few existing research studies that have investigated immigrant youth who experienced rejection by parents or peers found that it was associated with maladjustment (Kim et al., 2006; Kovacev & Shute, 2004). However, unlike the current study these research studies did not examine rejection by parents and peers in the same research design. Furthermore, they did not examine the impact of acculturation gap on perceived rejection. Results from the current study showed that both mainstream and heritage acculturation gap were significantly associated with perceived rejection by parents. Furthermore, parental

rejection mediated the effect of both mainstream and heritage acculturation gap on family conflict and satisfaction with life. With regard to rejection by peers, only heritage acculturation gap was associated with perceived rejection by same-ethnic peers. Therefore, it appears that feeling less orientated towards the heritage culture appears to make adolescents feel rejected by their same-ethnic peers as well. No relationship was found for rejection by different-ethnic peers and either acculturation gap. Consistent with the results from parental rejection, rejection by same ethnic peers mediated the effect of each acculturation gap on family conflict and satisfaction with life.

The above results suggest that the dynamic that may be underlying poor relationships with parents and peers who have different cultural orientations than oneself maybe the feeling of not being understood or accepted by them. Perhaps the reason for this could be that identification with the mainstream culture could make participants feel that their parents and same-ethnic peers reject aspects of their core values or identity. On the contrary, because the current sample described themselves as aligned more towards the mainstream culture than the heritage culture, may partly explain why they did not report rejection from their different ethnic (i.e. mainstream) peers. Implications of the findings on rejection on adjustment will be described in more depth later in this report.

Multiple mediational analyses were employed to test all the mediators (communication with parents, congruent values, rejection by parents, and rejection by same-ethnic peers) as one model and to determine if certain mediator(s) contributed significantly more to the overall mediation model. Furthermore, it allowed rejection by parents and peers to be tested against the AFD model to determine if these factors contributed uniquely to the model, above and beyond incongruent values and problematic communication. In total, four models were tested

– two for each heritage and mainstream gap. Although these analyses supported all four mediators, specific indirect effects indicated that rejection by parents was the only variable that mediated the effect of mainstream gap on family conflict and satisfaction with life. Similarly, both rejection by parents and rejection by same-ethnic peers each were found to be the only variables that mediated the effect of heritage gap on family conflict and satisfaction with life. These results support that rejection by parents and peers each uniquely explain the relationship between acculturation gap and adjustment beyond the effect of problematic communication and incongruent values with parents. As a result, this casts some doubt on AFD theory and its ability to fully explain the relationship between acculturation gap and family conflict. Clearly more replication studies are required of this study as well as testing of Hwang's AFD theory to fully understand the relationship between acculturation gap and individual and familial functioning.

Objective three. Research evidence indicates that the acculturation process impacts European and non-European immigrants differently (Sondregger & Barrett, 2004; Yeh & Inose, 2003). Therefore the last objective of our study was to compare these two groups on the effects of the acculturation gap and to compare the pattern of relationships of the study variables. Specifically, it was hypothesized that non- European participants who experience acculturation gap would be associated with greater negative outcomes as compared to European participants who experience acculturation gaps. From the results obtained, we have achieved partial support for this hypothesis. Due to the small sizes in both groups, multiple mediational analyses could not be conducted. Therefore, the patterns of relationships that will be described below are based on correlational analyses and no causal relationships can be inferred.

Concerning European participants, heritage acculturation gap was negatively associated with risk-taking behaviour, effective communication with parents, congruent values and acceptance by parents. Mainstream acculturation gap was associated with decreased risk-taking behaviour and incongruent values. The finding that both mainstream and heritage acculturation gaps were associated with *decreased* risk-taking behaviour was unexpected. In other words, European participants reported that increased distance between them and their parents on acculturation level was associated with less participation in delinquent behaviours as adolescents. This indicates that relationship patterns with parents and peers may have played a significant role in the participants' delinquent activities. It would also suggest that both heritage and mainstream acculturation gaps served as protective factors against risk-taking behaviours for European participants. This is especially important in light of the correlation analyses that showed increased family conflict, decreased life satisfaction, increased rejection by parents and increased association with delinquent peers were associated with risk-taking behaviours.

The current study demonstrates that there are negative outcomes associated with risk-taking behaviours for European participants that were somehow mitigated by increased acculturation gap with parents. Perhaps having a mainstream orientation buffered the potentially negative effects of acculturation gap with parents, as well as the other negative outcomes associated with delinquency. That is, identifying with the Canadian culture may have provided access to resources, such as mainstream peers or therapy programs, which may have allowed them to deal with their family life and personal distress. Another speculation could be that participating in delinquent activities would jeopardize their relationship with people from the mainstream culture. For example, committing delinquent activities would

increase one's risk of losing support by mainstream individuals and being ostracized. And since there may be a disconnection with one's parents and heritage culture, being alienated by the mainstream culture as well would be very distressing. These explanations are purely speculative and require further inquiry. Clearly, more research is needed to clarify the relationship between acculturation gap and risk-taking behaviours in immigrant individuals.

With regard to non-European participants, a number of difficulties associated with heritage and mainstream acculturation gaps were identified. In particular, mainstream acculturation gap was associated with increased family conflict and decreased satisfaction with life and self-esteem. In contrast, heritage acculturation gap was only associated with increased family conflict. From these findings it appears that mainstream acculturation gap was associated with poorer outcomes than heritage acculturation gap. This may imply that being more mainstream oriented than one's parents and thus perhaps not being understood by them has a bigger impact on one's well-being than being less heritage oriented than one's parents and thus perhaps not understanding them. In other words, having a mainstream gap implies that parents may not accept the mainstream values, traditions or behaviours that their child has endorsed. Whereas heritage acculturation gap suggests that the children do not share the values and traditions of their heritage culture to the same extent as their parents. While not sharing the parents' cultural views may generate stress and conflict in the family, it is understandable that it does not have the same impact on the child's personal well-being as when the parents do not share the child's cultural views. Because this study was based on the perspective of the grown children, it is unclear how acculturation gap impacted the parent's perception of their relationship with their children. It would have been interesting to examine whether a heritage acculturation gap, that is when the child does not accept the parent's

cultural values, is associated with poorer outcomes for parents than having a mainstream acculturation gap. Therefore, future research studies should examine the acculturation gap experiences of both parents and children to gain a more comprehensive understanding of its impact on all family members.

While an acculturation gap for European participants may have not been associated with any of the dependent variables except for decreased risk-taking behaviour, both cultural gaps appeared to have a negative impact on the parenting relationships. For instance, heritage acculturation gap was associated with problematic communication, value conflict and perceived rejection by parents while mainstream acculturation gap was associated with value conflict. Similarly, both mainstream and heritage acculturation gap in non-European participants was associated with problematic communication and values conflict with parents. However, for non-European participants, slightly different results were obtained regarding acceptance by parents and peers depending on the culture where the gap was obtained. For instance, heritage acculturation gap was associated with perceived rejection by same-ethnic peers while mainstream acculturation gap was associated with perceived rejection by parents. These results suggest that the acculturation process can have a negative impact on relationships with parents for both European and non-European immigrants. Further inquiry is needed regarding how acculturation variables are associated with perceived rejection by peers for non-European participants. These results also speak to the need to continue to compare acculturation processes cross-culturally. Furthermore, it would be imperative to examine the quality of parent-child relationships in immigrant families and what aspects of these relationships are impacted as a result of acculturating to the host country.

General Implications of findings (theoretical, research, applied)

The reality of our society is that it is culturally diverse and consists of individuals who have drastically different religious practices and cultural traditions. Because of Canada's multicultural policy, immigrants are encouraged to continue to practice their traditions and raise their family based on their cultural values while in Canada. While most immigrants relocate to Western countries in the hopes of gaining a better quality of life for themselves and their family, research indicates that immigrant individuals and their families experience a number of adversities associated with adapting and acculturating to the host country.

The intention of this study was to gain an understanding of how the relationships with parents and peers can impact the acculturation process and the outcomes for immigrant individuals and their families. Understanding the implications of acculturation gap on individuals and families can inform clinicians who work with immigrant populations. Furthermore, learning how relationships with parents and peers can be impacted by the acculturation process can help clinicians to understand the experiences of immigrant families. Finally, having a comprehensive knowledge about the well-being and problematic adjustment issues of immigrant populations can allow government agencies and policy makers to integrate resources that can mitigate some of these difficulties for immigrant families.

Acculturation gap. Many research studies have either focused on a unidimensional acculturation process (e.g. high or low acculturation) (e.g. Buki et al., 2003; Dinh & Nguyen, 2006) or have found that gaps associated with only one culture (heritage or mainstream) was correlated with negative outcome (e.g. Asvat & Malcarne, 2008, Ho, 2010). Our results indicated that both types of gap were associated with negative outcomes. A similar result was found by Kim and colleagues (2009) in a group of Chinese Americans. When comparing

discrepant levels of acculturation between parents and adolescents, they found that both Chinese and American acculturation gap negatively impacted family processes (Kim, et al. 2009). Therefore, the finding that experiencing acculturation gap in both mainstream and heritage culture is associated with negative outcomes highlights the importance that feeling culturally disconnected from one's parents, no matter which culture, can result in poor family functioning and decreased well-being in children of immigrant families.

Risk taking behaviours. While there are a number of studies that have examined the relationship between individual acculturation level and risk-taking behaviour, to date we are only aware of one research study that has examined the relationship between acculturation gap and risk-taking behaviours of immigrant adolescents. Le and Stockdale (2008) found a positive relationship between acculturation gap and violent behaviour in a group of South East Asian adolescents (Le & Stockdale, 2008). However, peer delinquency explained a greater amount of variance on violent behaviour than acculturation gap or ethnic identity (Le & Stockdale, 2008). Furthermore, peer delinquency fully mediated the relationship between acculturation gap and violent behaviour (Le & Stockdale, 2008). However, this study did not examine relationship quality with parents, which according to our study plays a significant role in risk-taking behaviour. Clearly, more research is needed to understand the relationship between acculturation gap and risk-taking behaviours in immigrant populations.

In the current study, there was no significant relationship between acculturation gap and risk-taking behaviours for non-European participants. Unexpectedly, the risk-taking behaviour of European participants was found to be negatively correlated with heritage and mainstream acculturation gap. Interestingly, in these European participants acceptance by parents was negatively associated with risk taking behaviours, while peer delinquency and family conflict

were positively associated with risk-taking behaviour. This indicates that relationship patterns with parents and peers may have played a significant role in European participants' delinquent activities. This relationship pattern between the study variables and risk-taking behaviour highlights the differential affect of acculturation gap on European immigrants. While non-European participants had negative outcomes associated with acculturation gap, European participants experienced a positive outcome related to acculturation gap. Evidently, more research is needed to determine if the quality of relationships with parents and peers are better predictors of risk-taking behaviour in immigrants.

Acculturative family distancing (AFD) and perceived rejection. The results from this study indicate that both mainstream and heritage acculturation gaps were associated with greater family conflict and decreased satisfaction with life. While this result was expected, the main goal of this study was to inquire about the underlying mechanisms of why acculturation gap was associated with negative outcomes. What we found was that problematic communication with parents, incongruent values and perceived rejection by parents or peers greatly influences the effect of acculturation gap on maladjustment. In particular, the study found that acculturation gap was associated with problematic communication and incongruent values, which helps to clarify why gap is associated with negative outcomes. This finding also supports Hwang's (2006) AFD theory that acculturation gap is characterized by communication problems and value conflict with parents and associated with family dysfunction. While the AFD model has been tested on Asian American and Latino populations (Hwang, 2006; Hwang & Wood, 2009), the current study additionally recruited individuals from Europe, the Middle East, Africa, and South Asia. As a result, the AFD model appears to be supported in various ethnic backgrounds. However, more research is needed

with larger samples from various ethnicities to determine whether the AFD model can be generalized cross-culturally.

Perhaps even more significant is the finding that acculturation gap was associated with family conflict and satisfaction with life *because* individuals felt rejected by either their parents or peers. That is, we found that rejection was a stronger mediator than communication problems and value conflict, which poses some challenge for the AFD theory itself. Thus it is much more than parents and children having different cultural orientations that causes family conflict, but rather it is the children's perception that they are not understood or accepted for who they truly are that causes conflict between family members and decreased satisfaction with life. The information about rejection would be important for clinicians working with immigrant adolescents who experience problems at home or struggle with negative affect. For instance, in addition to providing clients strategies to cope with the discrepancies with their parents' acculturation, this study would suggest to inquire about the relationship quality with their parents and peers. This in turn may provide a more comprehensive understanding of their client's maladjustment. In particular, asking about whether the client felt understood or accepted by their parents or peers may provide additional topic for intervention or to assess the seriousness of the client's situation. The clinician can then in turn help the client and their family work together to resolve intergenerational conflict and find more effective ways to relate to one another. Conversation about these issues may elicit clarity about the reasons behind the difficulty that the client is experiencing.

Examining perceptions of rejection by parents and peers adds to the current literature on acculturation gap and adjustment in immigrant populations. In particular, the finding that acculturation gap predicts increased family conflict and decreased satisfaction with life

because immigrant adolescents feel rejected suggests a deeper psychological impact of the acculturation process that is related to adjustment. One could speculate that feelings of rejection may be impacted by the type of parenting style that is employed. For example, non-European parents tend to utilize a more authoritarian style and Asian parents in particular tend to employ a form of parenting that is more training oriented (Farver et al., 2007; Herz & Gullone, 1999; Huntsinger & Jose, 2009). These types of parenting tactics would likely be in stark contrast to the parenting techniques that their friends experience or that they see in the media. The combination of feeling culturally disconnected, which results in communication issues and conflicting value systems, and receiving a more strict parenting style may cause individuals to feel rejected by parents. Le and colleagues (2009) found that an unsupportive parenting style mediated the effect of mainstream acculturation gap and symptoms of depression. Thus, examining the effect of parenting style employed by immigrant parents on the well-being of their children during the acculturation process is warranted. In particular, future research should investigate whether parenting style moderates the effect of perceived rejection in immigrant families that have discrepant levels of acculturation. The clinical importance of examining interpersonal relations between parents and children are amenable to change. For example, a clinician working with immigrant families could greatly improve the relationship quality between parents and children by examining communication patterns and parenting style, which in turn could positively impact children's adjustment while acculturating to the host country.

The finding of rejection by same ethnic peers when there is a gap with the heritage culture is an interesting result. Specifically, not identifying with the same cultural values as one's parents was associated with perceived rejection by same-ethnic peers. This finding may

imply that the participants perceived these peers much like their parents – unwilling to participate or accept mainstream (Canadian) culture. For instance, same-ethnic peers may have been more likely to, or have been perceived by the participants to be more willing to endorse heritage cultural values. Since participants identified themselves as more mainstream oriented, they may have felt that peers from their ethnic culture were unable to accept or understand them. In contrast, the participants did not feel rejected by their mainstream peers. This may imply that the participants felt more accepted by those who endorsed the same cultural values and beliefs as them. Clearly, the results from the current study regarding the impact of rejection by peers during the acculturation process warrants further investigation.

Recent news articles and media coverage are providing accounts about the difficulties that young immigrant individuals experience while adjusting to life in Canada. One of the biggest concerns are the "honour killings" that have emerged, whereby girls from heritage backgrounds including Middle Eastern or South Asian areas are murdered (usually by male relatives) for not following cultural traditions or on suspicion of transgressions (Humphreys, 2010). The act of the honour killing is meant to rectify the shame that the family endured for the violations of cultural traditions by their family member. The most recent case described in the media was of an Ontarian teenager, Aqsa Parvez, who was murdered by her brother and father because of her increased acceptance of the Western culture and lack of participation in the family's Pakistani traditions (Cohen, 2010).Similarly, an Afghanistan mother from Montreal was charged for stabbing her daughter after she returned home late (Cohen, 2010). Sadly, other cases of honour killings have emerged across Canada. Dr. Muhammad, a psychiatrist at Memorial University who is an expert in the cases of honour killing estimates that in the past decade, approximately 12 honour killings have occurred in Canada (Proudfoot,

2010). Naturally, these reports cause concern for the well-being of immigrant youth living in Canada and warrant further investigation in order to protect our immigrant citizens.

Although honour killings are an extreme and relatively rare form of maladjustment in immigrant families, it does highlight the seriousness of conflicting cultural values that immigrant family members experience. As a result, research studies examining adjustment of immigrant populations are important because it not only provides information about their functioning as they adjust to Canada but also provides context when tragedies such as honour killings occur. Therefore, research studies that examine the acculturation process for immigrants provide useful information for clinicians, policy makers and immigrant families themselves.

Limitations of the Present Study

There are several limitations to the current study. First of all, all of the data collected were based on self-report rather than objective methods. Since self-report is susceptible to inaccuracies, it is possible that participants underreported or overreported some of the symptoms described in the measures. However, because many of the measures used in this study inquired about internal psychological states, self-report measurement is the best method to access this information in comparison to behavioural observations.

Additionally, participants were asked to rate each of their parents' level of acculturation rather than having parents complete the measures themselves. Thus the acculturation gap score is based on the individual's self-reported acculturation level and the perception of each of their parent's acculturation level. Asking children to perceive their parent's level of acculturation has been criticized in the literature because children have a tendency to underestimate their parents' level of acculturation (Birman, 2006; Merali, 2002). Thus a

stronger study methodology would have been to include both children and parents to complete the survey, rather than have the participants fill it out on their parents' behalf. This may have resulted in a more accurate measure of the parent's acculturation level. However, a number of studies continue to employ this method and it is one way to overcome the challenges of recruiting immigrant parents to participate in research studies (e.g. Asvat & Malcarne, 2008; Unger et al., 2009). Researchers have also acknowledged the importance of people's perceptions of their relationships (e.g. Rohner, 2005). It has also been noted that objective observers may fail to see rejecting behaviour or misperceive certain behaviours as rejecting while the individuals does not perceive it as such (Rohner, 2005). Therefore, it is important to acknowledge the importance of person's perceptions such as being rejected or having poor communication with their parents because that was the reality that they experienced and that likely guided their behaviours.

Another potential concerning factor is that participants were asked to answer the questionnaires based on their experiences as adolescents, thereby relying on the accuracy of their memories. It is possible that participants may have reported a distorted view of their actual experiences during their adolescence. As described earlier in the report, the current study was conducted in a relatively small Canadian city that has few immigrant families. Therefore, to recruit immigrant adolescents to participate in the study and obtain their parents' consent would have been incredibly challenging. As a result, asking participants to retrospectively answer the questionnaires and to recruit participants across Canada was a strategy to access immigrant populations from various ethnic groups. However, the possibility that participants would have difficulty recalling their experiences from adolescence was

identified. Therefore, an age limit for participants was set at thirty in order to decrease difficulty with recall and possible memory distortions.

Another issue that must be considered is the number of individuals that dropped out of this study. Approximately 36% of participants failed to complete the full survey, which is relatively high. Perhaps with the combination of the study being online and the length of the survey made individuals less willing to complete the questionnaire. Another possible reason for people failing to complete the survey is that they had difficulty understanding what was being asked of them. Many of the questionnaires were repetitive because they inquired about psychological processes about each of their parents and their peers. This method may have also caused some confusion. Although the researcher's contact information was provided at the beginning of the study, it is much easier to ask a question about a study with the researcher present than having to wait for an email response.

While the paper and pencil version of the questionnaire was available, the online method was promoted on Facebook in order to recruit immigrants and individuals from a variety of ethnic backgrounds across Canada. The advantage of using the online method for conducting research surveys is that participants can choose to complete the survey at their convenience and it gives researchers access to participants across a wide distance. However, future studies should utilize research sites that allow participants to save their survey so that they can return to it at a later time. This would also give participants the opportunity to contact researchers if questions arise. Unfortunately, because of the lack of data on participants who did not complete the survey, separate analyses could not be completed to determine if these participants were significantly different than those who completed the survey.

Another limitation of this study is the overall sample size that was recruited for this study. The statistical procedures that could have been employed in this study in order to better understand the relationship between the variables (e.g. SEM; multiple mediation analysis to compare non-European and European groups) required a larger sample. Furthermore, because of the unequal sample sizes between groups, it was impossible to compare specific populations on the study variables. For example, comparing gender or generational status on the variables of interest would have increased our knowledge about the impact of acculturation in these two sub-groups.

Although a significant effort was made to recruit number of people from different ethnic backgrounds, the large majority of participants were European and Asian. A relatively small sample of individuals from South Asia, Middle East, South/Central America and Africa participated in this study. Similarly, a significant majority of the participants were second generation and only a small minority of first generation immigrants participated. The downside of having majority of the sample as second generation and European is that the findings may have been diluted because many questionnaires concerned the acculturation process that these sub-groups may not have experienced. Furthermore, an immigrant from Europe adjusting to life in Canada likely has different experiences than immigrants who are from Asia, Africa, Latin America or Middle East. As described earlier, European individuals tend to experience less stress and maladjustment related to the acculturation experience in comparison to other ethnic groups (Sondregger et al., 2002; Yeh & Inose, 2004). Perhaps the reason for this is that European immigrants are better able to blend into Canadian society and more likely to endorse values similar to other Canadians. In contrast, non-European immigrants are more likely to be visible minorities and thus not only look different from the

majority of Canadians but also practice different traditions. Therefore, non-European immigrants may experience value conflict between their heritage and mainstream culture more frequently and experience other acculturation hassles more often than European immigrants.

The last limitation concerns how the AFD model was tested in this study. As stated earlier, the measure developed by Hwang and Wood (2009) to measure AFD is currently unavailable for public use. However, the measures included for the purpose of this study to assess communication with parents and value conflict were selected based on the description of these constructs by the authors who developed AFD (Hwang, 2006; Hwang & Wood, 2009). Nonetheless, given that the exact instrument used to validate the AFD model was not used, it is possible that our assessment of the AFD model is inaccurate.

Despite the limitations described above, a number of strengths are present in this study. While there is a wealth of studies examining acculturation of individuals and immigrant families, there are few studies that investigate how the acculturation gap impacts family functioning and individual adjustment. By measuring both mainstream and heritage acculturation gap we were able to determine if these two gaps differentially impacted individuals on variables assessing acculturation processes and adjustment. Secondly, by examining the relationship quality with significant persons in their lives, this study attempted to gain a deeper understanding of why acculturation gap is associated with negative outcomes for immigrant individuals and their families. From this objective we discovered that communication with parents, cultural values, and feeling rejected by parents and peers greatly impacts the outcomes associated with acculturation gap.

Another strength of the present study is that we confirmed the primary premise of the AFD model that ineffective communication and value conflict were associated with

acculturation, which was assumed but not tested by the authors (Hwang & Wood, 2009). In addition, we found that the AFD model predicted satisfaction with life, thereby extending the model's ability to explain the internalizing symptoms associated with the acculturation process. Lastly, this study extended the research on acceptance-rejection by examining its impact on immigrant populations. Currently there are few studies available that have investigated the impact of acceptance-rejection on immigrant families and individuals. However, the few available have found that high acceptance and low rejection is associated with positive outcomes for immigrant children (Kim et al., 2006; Kovacev & Shute, 2004).

Future Directions

Although the current study contributes to the current literature on the acculturation process of immigrant individuals, future research should take into account the limitations as described above. Firstly, researchers need to establish a more consistent way of measuring acculturation and acculturation gap. Currently, there are a number of ways that level of acculturation has been measure including number of years in the host country and language proficiency (e.g. Gonzales et al., 2006). There is also a lack of consistency in the instruments used to measure acculturation because there are competing theories about the acculturation process. For example, some measures (e.g. SL-ASIA) view acculturation as a unidimensional process whereby an increase in acculturation indicates a lower acculturation towards the heritage culture. In contrast, others instruments (e.g. VIA; ARMSA-II) employ a bidimsensional view of acculturation where orientation towards mainstream or heritage culture can occur independently of one another. Finally, other researchers have used the "matched" vs. "mismatched" approach to discrepancies in acculturation (e.g. Asvat & Malcarne, 2008; Farver et al., 2002; Lim et al., 2009). That is, both children and parents are

identified with practicing one of the four acculturation strategies (assimilation, integration, marginalization, and separation) and then compared with one another. The parent-child dyad are considered "matched" if they follow the same acculturation strategy and "mismatched" if they are different. This lack of consistency of measuring acculturation makes it difficult to understand findings across research studies. Therefore, researchers should investigate which method provides the most comprehensive assessment of acculturation in order to inform future research studies examining acculturation and acculturation gap.

Longitudinal studies about how the acculturation gap impacts immigrants adjusting to life in the host country and its impact on family relations would greatly improve our understanding of the acculturation process. Currently, there are few studies that have attempted to do this. Ying and Han (2007) conducted a three year longitudinal study about the impact of acculturation discrepancy on depressive symptoms in Southeast Asian adolescents. They found that acculturation gap predicted depressive symptomology three years later and that this relationship was mediated by family conflict (Ying & Han, 2007). However, more research is needed to support the findings obtained by Ying and Han. It would also be imperative to assess which factors buffer the negative impact of the acculturation gap for individuals and their families.

The research on acculturation gap has focused on the differing levels of acculturation between parents and children. However, an extension of the acculturation gap literature would be to examine this construct between immigrant spouses, especially when one spouse engages in sponsorship of their partner (see Merali, 2009). Often times, one spouse (usually the husband) arrives in the host country before their partner. After establishing themselves in the host country, the spouse begins a lengthy process (which can sometimes take years) of

sponsoring their partner to live with them. Clearly, the spouse that came earlier has the added advantage of having adjusted to, and learned the culture of, the host country more deeply than their partner. In contrast, the spouse who newly arrives to the host country would be beginning to learn these things. As a result, one could construe that an acculturation gap could likely occur between spouses as well, with the spouse who came earlier having a higher acculturation level than the spouse who came later. To the best of my knowledge, there is no research evidence currently available that examines whether acculturation gap occurs between immigrant spouses.

However, the research is beginning to emerge about how the acculturation process impacts the spousal relationship. Yet the difficulties that immigrant couples face once they arrive in the host country are abundant (Abraham, 2000; Ahmed, Ali & Stewart, 2005; Min, 2001). Of particular concern is the abuse and isolation that immigrant women experience when they join their husbands in the United States and Canada (Abraham, 200; Erez, Adelman & Gregory, 2009). There is evidence that there is some resistance by husbands for their wives to acculturate to the host country and that the frequency of abuse increases as women begin to adopt mainstream values (Hancock & Siu, 2009; Min, 2001). Since many immigrant couples come to Canada or the United States in order to raise a family, the quality of the marital relationship will likely impact the well-being of their offspring. Therefore, research examining how the acculturation process impacts immigrant spouses and whether the acculturation gap can be extended to spouses would be an important avenue to explore in order to gain a greater understanding of the well-being of our immigrant populations.

Conclusion

This research project was designed to try and fill the gaps in the literature examining the effects of acculturation gaps on immigrant adolescents and their families. The results from this study provided additional support for the negative outcomes associated with experiencing acculturation gaps with parents. Interestingly, this study demonstrated that both mainstream and heritage acculturation gap had a negative effect on personal and family outcomes.

This research study also found that as an entire model, four mediators accounted for the effect of acculturation gap on adjustment. Specifically, the relationship between acculturation gap and outcomes was accounted by the impact of acculturation gap on effective communication, congruent values, perceived rejection by parents and perceived rejection by peers. However, additional analyses demonstrated that rejection by parents and peers were the only mediators that had a significant effect on acculturation gap and outcome. Therefore, this establishes support for the notion that acculturation gap is associated with negative outcomes because of the effect of acculturation gap on rejection by parents and peers.

Finally, the research study examined differences in the patterns of relationships between the study variables for European and non-European participants. We found that non-European participants experienced more difficulties associated with the acculturation gap in comparison to their European counterparts. In contrast, European participants who experienced acculturation gaps with their parents were less likely to engage in risk-taking behaviours. Nonetheless, mainstream and heritage acculturation gaps in both groups was negatively associated with family functioning, which suggests that the acculturation process in immigrant groups negatively impacts the relationship between parents and children.

As previously discussed, the results obtained from this study highlight the complex relationship between acculturation gap and outcomes for immigrant individuals. In particular, the finding that rejection by parents and peers mediates the relationship between acculturation gap and adjustment is important because it suggests a deeper psychological impact of the acculturation process. Thus, perceived rejection by significant people may shed light on the underlying mechanisms of why acculturation is often associated with maladjustment for immigrant individuals. However, the results from the current study emphasize the need for research to continue in the area of acculturation gap and well-being of immigrant individuals. Gaining insight into the impact of the acculturation gap on individual and family functioning would be vital information for both clinicians and government agencies, who can then implement strategies to mitigate some of the harmful effects of the acculturation process.

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APPENDIX A

Cover Letter

Cover Letter [Lakehead University Letterhead]

Dear Potential Participant:

Thank you for your interest in this research study. I am a Master's student in Clinical Psychology at Lakehead University, and I am being supervised by Dr. Mirella Stroink. We are recruiting first and second generation immigrant participants, between the ages of 18 and 30, for our research study. First generation is defined as those who were born outside of Canada and began to reside in Canada after the age of six. Second generation is defined as people who were either born in Canada with at least one parent who is an immigrant to Canada, or who were themselves born outside of Canada but began to reside in Canada before the age of six. The purpose of this study is to examine how one's attitudes and behaviours toward the ethnic culture and mainstream Canadian culture impacts well-being. We are also interested in the role that parents, peers, and extended family members play in the above relationship.

If you choose to participate in this study, you will be given a number of questionnaires to fill out which ask about experiences that you may have had when you were an adolescent. It will take a maximum of one hour to complete the entire questionnaire package. The information you provide about yourself will be combined with information from other participants, and will be completely anonymous. No one will be able to identify your responses. Your participation is voluntary, and you can withdraw from the study at any time if you decided to participate. In order to protect your privacy, there is no need to include identifying information (e.g. name, address, etc.) in the questionnaires. There are no right or wrong answers to these questions, but please answer questions as honestly as you can. However, you may decline to answer any question. Should you decide to participate in this study, you will be given a consent form and a questionnaire package. There is no expected risk for harm to you through your participation in this study. You may keep this letter for your information.

This study has received approval from the Lakehead University Senate Research Ethics Board. The answers you provide in the questionnaires will be kept confidential and will not be shared with anyone. The information will be held in a secure place at Lakehead University for a period of five years. Your participation is completely voluntary. If you wish to withdraw at any time during the study, you are free to do so without consequence. The results will be shared with the Psychology Department at Lakehead University, and may be prepared for publication in an academic journal.

Upon completion of this research, your name will be placed in a draw to win one of three cash prizes. One cash prize is valued at $50, while the other two cash prizes are valued at $25. Your name will be used only for the purpose of the draw and will be kept separate from your questionnaire. Should your name be drawn for a prize, you will be contacted through email in order to arrange delivery of your prize. If you have any questions or concerns regarding the study or about your participation, you may contact me via email: *jbajwa@lakeheadu.ca*. Further questions or concerns can also be directed to Dr. Stroink

(*mstroink@lakeheadu.ca*) or the Lakehead Research Ethics Board (807) 343-8283. Your participation in study would be greatly appreciated. Thank you.

Sincerely,

Jasmine Bajwa, B.A.
Master of Arts Candidate, Clinical Psychology, Lakehead University

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Dr. Mirella Stroink, Ph.D.
Professor, Department of Psychology, Lakehead University
Telephone: (807) 346-7874 Email: mstroink@lakeheadu.ca

APPENDIX B

Informed Consent Form

Informed Consent Form

By providing your name and student number (if you are a Lakehead University or Confederation College student) [By clicking "yes" below at the bottom] on this form indicates that you agree to participate in a study on acculturation and well-being by Jasmine Bajwa and Dr. Mirella Stroink and that you understand the following:

1. All participants are volunteers and can withdraw at any time from the study without consequence, and may choose not to answer any question.
2. There is no anticipated risk of physical or psychological harm to participants involved in the study.
3. The information collected from participants will be anonymous and will be kept confidential and not be shared with anyone.
4. I understand that I must be older than 18 years of age to participate.
5. If you wish, you will receive a summary of the results of the study following the completion of the study.
6. The data will be held in a secure place a Lakehead University for a period of five years.
7. You will remain anonymous in any publication/public presentation of research findings.

I have received explanations about the nature of the study, its purpose, and its procedures.

_____
Full Name

_____
Date

_____
Lakehead University Student Number (if applicable)

_____
Confederation College Student Number (if applicable)

_____

Signature of Researcher Date

APPENDIX C

Entire Questionnaire Package

Demographic Questionnaire

Instructions: Please fill out the information below so that we can obtain some general information about the people who participated in our study.

Age: _____

Gender: _____ Male _____ Female

Generational Status: (please check one)

___ First Generation (Born outside of Canada or began residing in Canada after the age of 6)

___ Second Generation (Born in Canada with at least one parent who was born outside Of Canada or began residing in Canada before the age of 6)

Country of Birth: _____

If not born in Canada, Number of Years in Canada: _____

To the best of your knowledge, estimate your family's income:

___ under $10 000

___ $10 000 - $ 24 999

___ $25 000 - $49 999

___ $50 000 - $74 999

___ $75 000 - $99 999

___ $100 000 - $149 000

___ $150 000 - $174 999

___ over $175 000

Highest level of education completed: _____

Ethnic Background:

__ African/ Caribbean (e.g. Ethiopian, Sudanese, Haitian, Dominican)

__ Middle Eastern (e.g. Lebanese, Iranian, Israelian, Arabic, Turkish, Egyptian, etc.)

__ Asian (e.g. Chinese, Japanese, Korean, Filipino, Thai, etc.)

__ South Asian (e.g. India, Pakistan, Sri Lanka, Fiji, Bangladesh, etc.)

__ European (e.g. English, Dutch, French, Irish, Italian, Greek, German, Austrian, etc.)

__ Latino/Hispanic (e.g. Mexican, Brazilian, Portuguese, Spanish, Argentinean, etc.)

Parental Demographic Information

Instructions: Please fill out the following information about your mother and father in order to get some information about your family's background.

Mother:

Country of Birth: _____

Time spent living in Canada (approximate if you do not know exact number of years):

_____

Education Level (e.g. primary school, high school, college, university):

No formal education

Completed primary school

Completed middle school

Completed High School

College diploma/ Certificate Program

University Degree

Graduate Degree

Occupation: _____

Father:

Country of Birth: _____

Time spent living in Canada (approximate if you do not know exact number of years):

_____

Education Level (e.g. primary school, high school, college, university):

No formal education

Completed primary school

Completed middle school

Completed High School

College diploma/ Certificate Program

University Degree

Graduate Degree

Occupation: _____

General Instructions

In the following pages you will read a number of questions about experiences that you may have had during your adolescence, for example between the ages of 12 and 19. As you read the questions, try your best to answer the items as to how closely they applied to you when you were between the ages of 12 and 19.

CARE

In the items below, you will read about behaviours that people sometimes engage in. Please indicate ***how often*** you engaged in these activities when you were an adolescent ***(e.g. between the ages of 12-19)***.

	Never, or very rarely	Rarely	Sometimes	Often	Very Often
1. Tried/used drugs other than alcohol or marijuana	1	2	3	4	5
2. Missed class or work	1	2	3	4	5
3. Grabbed, pushed or shoved someone	1	2	3	4	5
4. Left a social event with someone you just met	1	2	3	4	5
5. Drove after drinking alcohol	1	2	3	4	5
6. Made a scene in public	1	2	3	4	5
7. Drank more than 5 alcoholic beverages [in one sitting]	1	2	3	4	5
8. Not studied for an exam or quiz	1	2	3	4	5
9. Drank alcohol too quickly	1	2	3	4	5
10. Disturbed the peace	1	2	3	4	5
11. Damaged/destroyed public property	1	2	3	4	5
12. Had sex without protection against pregnancy	1	2	3	4	5
13. Left tasks or assignments to the last minute	1	2	3	4	5
14. Hit someone with a weapon or object	1	2	3	4	5

	Never, or very rarely	Rarely	Sometimes	Often	Very Often
15. Got into a fight or argument	1	2	3	4	5
16. Failed to do assignments	1	2	3	4	5
17. Slapped someone	1	2	3	4	5
18. Not studied or worked hard enough	1	2	3	4	5
19. Punched or hit someone with fist	1	2	3	4	5
20. Smoked marijuana	1	2	3	4	5
21. Had sex with multiple partners	1	2	3	4	5
22. Mixed drugs and alcohol	1	2	3	4	5
23. Had sex without protection against sexually transmitted diseases	1	2	3	4	5
24. Involved in sexual activities without my consent	1	2	3	4	5
25. Played drinking games	1	2	3	4	5
26. Had sex with someone I just met or didn't know well	1	2	3	4	5
27. Rode in a vehicle when the driver was intoxicated	1	2	3	4	5

Peer Delinquency

Instructions: When you were an adolescent ***(e.g. between 12 and 19)***, in general, how many of your friends engaged in the following activities?

	None	**Few**	**Half**	**Most**	**All**
Took a car or motorcycle for a ride without the owner's permission?	1	2	3	4	5
Damaged, destroyed or marked up somebody else's property on purpose?	1	2	3	4	5
Forged a cheque or used fake money to pay for something?	1	2	3	4	5
Used or tried to use a credit card, bank card, or automatic teller card without permission?	1	2	3	4	5
Tried to cheat someone by selling them something that was not what you said it was or that was worthless?	1	2	3	4	5
Tried to buy or sell things that were stolen?	1	2	3	4	5
Tried to steal or actually stolen money or things worth over $100?	1	2	3	4	5
Gone into or tried to go into a building to steal or damage something?	1	2	3	4	5
Stolen or tried to steal a car or other motor vehicle?	1	2	3	4	5
Set fire on purpose and tried to set fire to a house, building, or car?	1	2	3	4	5
Hit someone with the idea of hurting them?	1	2	3	4	5
Thrown objects such as rocks or bottles at people?	1	2	3	4	5
Attacked someone with a weapon or with the idea of seriously hurting or killing them?	1	2	3	4	5
Have been or continue to be involved in gangs	1	2	3	4	5
Used a weapon or forced to make someone give them money or things?	1	2	3	4	5
Physically hurt or threatened to hurt someone to get them to have sex with them?	1	2	3	4	5
Drove a vehicle when they were intoxicated?	1	2	3	4	5
Sold illegal drugs to other people?	1	2	3	4	5

VIA

Many of these questions will refer to your heritage culture, meaning the culture that has influenced you most (other than the Canadian culture). It may be the culture of your birth, the culture in which you have been raised, or another culture that forms parts of your background. If there are several such cultures, pick the one that has influenced you the most (e.g. Irish, Chinese, Mexican, African). If you do not feel that you have been influenced by any other culture, please try to identify a culture that may have had an impact on previous generations of your family.

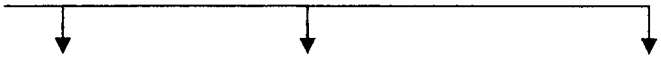
Instructions: Please answer each question as carefully as possible by circling one of the numbers to the right of each question to indicate your degree of agreement or disagreement. Remember to answer each question by keeping in mind how true it was while you were an adolescent (e.g., between the ages of 12-19). In addition to answering each question about yourself, you are also asked to answer the questions for each of your parents, if applicable. That is, how your mother and father behaved towards your heritage culture and Canadian culture when you were growing up. Mark each parent's answer under their appropriate column.

Please write your heritage culture in the space provided. _____

Please write your mother's heritage culture in the space provided _____

Please write your father's heritage culture in the space provided _____

ANSWER EACH QUESTION THREE TIMES



When I was between the ages of 12 and 19	**"Me"**					**"My Mother"**					**"My Father"**				
	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
This person often participated in the traditions of the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person often participated in the traditions of our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

When I was between the ages of 12 and 19:	"Me"					"My Mother"					"My Father"				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This person would be willing to marry a person from the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person would be willing to marry a person from our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person enjoyed social activities with people from the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person enjoyed social activities with people from our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person was comfortable interacting with people from the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person was comfortable interacting with people from our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person enjoyed entertainment (e.g. movies, music) from the Canadian culture	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person enjoyed entertainment (e.g. movies, music) from our Heritage culture	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person often behaved in ways that are typical of the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person often behaved in ways that are typical of our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

When I was between the ages of 12 and 19:	"Me"					"My Mother"					"My Father"				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It was important for this person to maintain or develop the practices of the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
It was important for this person to maintain or develop the practices of our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person believed in the values of the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person believed in the values of our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person enjoyed the jokes and humour of the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person enjoyed the jokes and humour of our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person was interested in having friends from the Canadian culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
This person was interested in having friends from our Heritage culture.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

PANAS

Instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and indicate how you ***generally felt*** when you were an adolescent ***(e.g. between the ages of 12 and 19)***.

	Never, or very rarely	**Rarely**	**Sometimes**	**Often**	**Very Often**
Interested	1	2	3	4	5
Distressed (NA)	1	2	3	4	5
Excited	1	2	3	4	5
Upset (NA)	1	2	3	4	5
Strong	1	2	3	4	5
Guilty (NA)	1	2	3	4	5
Scared (NA)	1	2	3	4	5
Hostile (NA)	1	2	3	4	5
Enthusiastic	1	2	3	4	5
Proud	1	2	3	4	5
Irritable (NA)	1	2	3	4	5
Alert	1	2	3	4	5
Ashamed (NA)	1	2	3	4	5
Inspired	1	2	3	4	5
Nervous (NA)	1	2	3	4	5
Determined	1	2	3	4	5
Attentive	1	2	3	4	5
Jittery (NA)	1	2	3	4	5
Active	1	2	3	4	5
Afraid (NA)	1	2	3	4	5

SWL

Below are five statements with which you may agree or disagree. Using the 1 - 5 scale below, indicate your agreement or disagreement with each item when you were an ***adolescent (e.g. between 12 and 19)***. Please be open and honest in your responding. The 5 point scale is as follows:

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
In most ways my life was close to my ideal.	1	2	3	4	5
The conditions of my life were excellent.	1	2	3	4	5
I was satisfied with my life.	1	2	3	4	5
At that point, I had gotten the important things I wanted in life.	1	2	3	4	5
If I could have lived my life over, I would have changed almost nothing.	1	2	3	4	5

Self-Esteem

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly disagree, circle **1**. If you disagree with the statement, circle **2**. If you are neutral, circle **3**. If you agree, circle **4**. If you strongly agree, circle **5.** Remember to answer how you felt about yourself when you were an adolescent ***(e.g. between the ages of 12 and 19).***

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
On the whole, I was satisfied with myself.	1	2	3	4	5
At times, I thought I was no good at all. (R)	1	2	3	4	5
I felt that I had a number of good qualities.	1	2	3	4	5
I was able to do things as well as most other people.	1	2	3	4	5
I felt that I did not have much to be proud of. (R)	1	2	3	4	5
I certainly felt useless at times. (R)	1	2	3	4	5
I felt that I was a person of worth, at least on an equal plane with others.	1	2	3	4	5
I wished that I could have had more respect for myself. (R)	1	2	3	4	5
All in all, I was inclined to feel that I was a failure. (R)	1	2	3	4	5
I took a positive attitude toward myself.	1	2	3	4	5

Rejection Questionnaire – Mother Version

The following items contain a number of statements describing the way mothers sometimes act toward their children. Read each statement carefully and think how well it describes the way your mother treated you when you were an adolescent (e.g. ***between the ages of 12 and 19***). Give your first impression and move onto the next item. Do not dwell on any item. There is no right or wrong answer to any statement, so be as honest as you can.

MY MOTHER:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Said nice things to me	1	2	3	4	5
Made it easy for me to tell her things that were important to me	1	2	3	4	5
Saw me as a big nuisance (R)	1	2	3	4	5
Seemed to dislike me (R)	1	2	3	4	5
Was really interested in what I did	1	2	3	4	5
Made me feel wanted and needed	1	2	3	4	5
Made me feel unloved (R)	1	2	3	4	5
Made me feel what I did was important	1	2	3	4	5
Made me feel rejected (R)	1	2	3	4	5
Let me know that I was not wanted (R)	1	2	3	4	5
Let me know that she loved me	1	2	3	4	5
Treated me gently and with kindness	1	2	3	4	5
Accepted me as who I was	1	2	3	4	5
Cared about what I thought and liked me to talk about it	1	2	3	4	5
Often misunderstood me (R)	1	2	3	4	5
Made me feel that I did not belong (R)	1	2	3	4	5

Rejection Questionnaire – Father Version

The following items contain a number of statements describing the way fathers sometimes act toward their children. Read each statement carefully and think how well it describes the way your father treated you when you were an adolescent (e.g. ***between 12 and 19 years old***). Give your first impression and move onto the next item. Do not dwell on any item. There is no right or wrong answer to any statement, so be as honest as you can.

MY FATHER:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Said nice things to me	1	2	3	4	5
Made it easy for me to tell him things that were important to me	1	2	3	4	5
Saw me as a big nuisance (R)	1	2	3	4	5
Seemed to dislike me (R)	1	2	3	4	5
Was really interested in what I did	1	2	3	4	5
Made me feel wanted and needed	1	2	3	4	5
Made me feel unloved (R)	1	2	3	4	5
Made me feel what I did was important	1	2	3	4	5
Made me feel rejected (R)	1	2	3	4	5
Let me know that I was not wanted (R)	1	2	3	4	5
Let me know that he loved me	1	2	3	4	5
Treated me gently and with kindness	1	2	3	4	5
Accepted me as who I was	1	2	3	4	5
Cared about what I thought and liked me to talk about it	1	2	3	4	5
Often misunderstood me (R)	1	2	3	4	5
Made me feel that I did not belong (R)	1	2	3	4	5

Rejection Questionnaire – Same ethnic peers version

The following items contain a number of statements describing the way that peers sometimes act toward their friends. Read each statement carefully and think how well it describes the way that your ***peers from your ethnic background*** treated you when you were an adolescent (e.g. ***between the ages of 12 and 19***). Give your first impression and move onto the next item. Do not dwell on any item. There is no right or wrong answer to any statement, so be as honest as you can.

MY SAME-ETHNIC PEERS:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Said nice things to me	1	2	3	4	5
Made it easy for me to tell them things that were important to me	1	2	3	4	5
Saw me as a big nuisance (R)	1	2	3	4	5
Seemed to dislike me (R)	1	2	3	4	5
Were really interested in what I did	1	2	3	4	5
Made me feel wanted and needed	1	2	3	4	5
Made me feel unloved (R)	1	2	3	4	5
Made me feel what I did was important	1	2	3	4	5
Made me feel rejected (R)	1	2	3	4	5
Let me know that I was not wanted (R)	1	2	3	4	5
Let me know that they loved me	1	2	3	4	5
Treated me gently and with kindness	1	2	3	4	5
Accepted me as who I was	1	2	3	4	5
Cared about what I thought and liked me to talk about it	1	2	3	4	5
Often misunderstood me (R)	1	2	3	4	5
Made me feel that I did not belong (R)	1	2	3	4	5

Rejection Questionnaire – Different Ethnic Peers Version

The following items contain a number of statements describing the way that peers sometimes act toward their friends. Read each statement carefully and think how well it describes the way that your ***peers from a <u>different</u> ethnic background*** treated you when you were an adolescent (e.g. ***between the ages of 12 and 19***). Give your first impression and move onto the next item. Do not dwell on any item. There is no right or wrong answer to any statement, so be as honest as you can.

<u>MY DIFFERENT-ETHNIC PEERS:</u>	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Said nice things to me	1	2	3	4	5
Made it easy for me to tell them things that were important to me	1	2	3	4	5
Saw me as a big nuisance (R)	1	2	3	4	5
Seemed to dislike me (R)	1	2	3	4	5
Were really interested in what I did	1	2	3	4	5
Made me feel wanted and needed	1	2	3	4	5
Made me feel unloved (R)	1	2	3	4	5
Made me feel what I did was important	1	2	3	4	5
Made me feel rejected (R)	1	2	3	4	5
Let me know that I was not wanted (R)	1	2	3	4	5
Let me know that they loved me	1	2	3	4	5
Treated me gently and with kindness	1	2	3	4	5
Accepted me as who I was	1	2	3	4	5
Cared about what I thought and liked me to talk about it	1	2	3	4	5
Often misunderstood me (R)	1	2	3	4	5
Made me feel that I did not belong (R)	1	2	3	4	5

Parent-Child Communication

Instructions: The following items are types of communication that children have with their parents. Use the scale below to indicate how closely the item reflects the communication you had between your mother and father when you were an adolescent (***e.g. between the ages of 12 and 19***). Make sure to answer each question **twice**, once for your mother and the other for your father.

ANSWER EACH QUESTION TWICE

	MOTHER					*FATHER*				
	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
I could discuss my beliefs with my mother/father without feeling restrained or embarrassed.	1	2	3	4	5	1	2	3	4	5
Sometimes I had difficulty believing everything my mother/father told me. (R)	1	2	3	4	5	1	2	3	4	5
My mother/father was always a good listener	1	2	3	4	5	1	2	3	4	5
I was sometimes afraid to ask my mother/father for what I wanted. (R)	1	2	3	4	5	1	2	3	4	5
My mother/father had a tendency to say things that should be left unsaid. (R)	1	2	3	4	5	1	2	3	4	5
My mother/father could tell how I was feeling without asking.	1	2	3	4	5	1	2	3	4	5
I was satisfied with how my mother/father and I talked together.	1	2	3	4	5	1	2	3	4	5
If I was in trouble, I could tell my mother/father.	1	2	3	4	5	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I openly showed affection to my mother/father	1	2	3	4	5	1	2	3	4	5
When we are having a problem, I often gave my mother/father the silent treatment. (R)	1	2	3	4	5	1	2	3	4	5
I was careful about what I said to my mother/father. (R)	1	2	3	4	5	1	2	3	4	5
When talking with my mother/father, I often said things that would be better left unsaid. (R)	1	2	3	4	5	1	2	3	4	5
When I asked questions, I got honest answers from my mother/father.	1	2	3	4	5	1	2	3	4	5
My mother/father tried to understand my point of view.	1	2	3	4	5	1	2	3	4	5
There were topics I avoided discussing with my mother/father. (R)	1	2	3	4	5	1	2	3	4	5
It was easy for me to discuss problems with my mother/father.	1	2	3	4	5	1	2	3	4	5
It was very easy for me to express my true feelings to my mother/father.	1	2	3	4	5	1	2	3	4	5
My mother/father nagged/bothered me. (R)	1	2	3	4	5	1	2	3	4	5
My mother/father insulted me when she/he was angry with me. (R)	1	2	3	4	5	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I don't think I could have told my mother/father how I really felt about some things. (R)	1	2	3	4	5	1	2	3	4	5
I often had difficulty communicating with my mother/father because we spoke a different language. (R)	1	2	3	4	5	1	2	3	4	5
My mother/father and I spoke the same language when we communicated.	1	2	3	4	5	1	2	3	4	5
Sometimes my mother/father and I misunderstood each other because I preferred to speak in English and she/he preferred to speak in our native language (R)	1	2	3	4	5	1	2	3	4	5

Family Conflicts Scale

Instructions: For each item, indicate how often the following occurred between you and your family when you were an adolescent (***e.g. between the ages of 12 and 19***):

How often did your family:	**Never, or very rarely**	**Rarely**	**Sometimes**	**Often**	**Very Often**
Made too many demands on you	1	2	3	4	5
Argued with you.	1	2	3	4	5
Let you down.	1	2	3	4	5
Made you feel tense.	1	2	3	4	5
Criticized you.	1	2	3	4	5
Got on your nerves.	1	2	3	4	5

ICI

Instructions: In the following questions, you will read about a variety of issues that parents and children may or may not agree on. In the items below, indicate your level of agreement or disagreement between you and your parents with each issue. Remember to answer the items as they pertained to you when you were an adolescent (e.g. ***between the ages of 12 and 19***).

When I was younger, my parents and I had *similar* opinions about:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
The amount of communication I had with my parents.	1	2	3	4	5
My desire for greater independence and autonomy.	1	2	3	4	5
Following cultural traditions	1	2	3	4	5
Learning our heritage language	1	2	3	4	5
The expectations based on being male or female	1	2	3	4	5
The expectations based on birth order	1	2	3	4	5
Family relationships being too close	1	2	3	4	5
Family relationships being too distant	1	2	3	4	5
How much time to spend with the family	1	2	3	4	5
How much to help around the house	1	2	3	4	5
How much time to help out with the family business	1	2	3	4	5
How much time to spend on studying	1	2	3	4	5
How much time to spend on recreation	1	2	3	4	5
How much time to spend on sports	1	2	3	4	5
How much time to spend on practicing music	1	2	3	4	5

When I was younger, my parents and I had *similar* opinions about:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
The importance of academic achievement	1	2	3	4	5
The emphasis on materialism and success	1	2	3	4	5
Which school to attend	1	2	3	4	5
What to major in college/university	1	2	3	4	5
Which career to pursue	1	2	3	4	5
Being compared to others	1	2	3	4	5
When to begin dating	1	2	3	4	5
Whom to date	1	2	3	4	5
Whom to marry	1	2	3	4	5
What career you should pursue.	1	2	3	4	5
Whether you should pursue a University education.	1	2	3	4	5
Their level of involvement in your personal life.	1	2	3	4	5
Spending time alone with the opposite sex.	1	2	3	4	5
Having sex before marriage	1	2	3	4	5
The amount of involvement in religious practice.	1	2	3	4	5
Engaging in social drinking behaviours.	1	2	3	4	5

APPENDIX D

Debriefing Letter

Debriefing Letter [Lakehead University Letterhead]

Dear Participant:

Thank you for your participation in this study. Families and individuals who immigrate from different countries or children who are offspring of immigrants often experience difficulty accommodating both their ethnic and Canadian culture. The process in which individuals adjust to a new country is termed acculturation. Often times, children acculturate faster than their parents, this is termed acculturation gap. Your responses on this survey will help us understand whether this gap may cause some people to experience internalizing symptoms (such as poor self-esteem, negative emotions, and life satisfaction) or externalizing symptoms (such as engaging in risky behaviours) when they were younger. We were also interested in whether feeling rejected by peers and parents, which may be caused by the acculturation gap, increases people's likelihood of internalizing and externalizing symptoms. Studies have shown that having a small acculturation gap is a protective factor from a variety of negative outcomes.

Additional questionnaires included in this survey will be used to examine whether acculturation gap is related to cultural value conflict and breakdowns in communication. Research indicates that both dimensions occur frequently in immigrant families, and we are hoping to determine whether acculturation gap impacts the development of cultural value conflict and communication breakdowns. We anticipate that increased acculturation gap results in increased cultural value conflict and communication problems between parents. Furthermore, we will investigate whether value conflict and communication problems, in addition to rejection, influences the relationship between acculturation gap and internalizing-externalizing symptoms.

As a result of your participation in this study, you have the option of entering your name into a draw to win one of three prizes: one prize worth $50 and 2 prizes worth $25. Please provide your name and email address on the next page if you would like your name entered for the draw. You will be contacted via email if your name is drawn. If you have any questions or concerns about the study, please feel free to contact myself or Dr. Stroink at the e-mail addresses indicated on this page or you can contact the Lakehead University Research Ethics Committee at (807) 343-8283. We would be happy to provide you with more information on this line of research. Once this study has finished, you can ask to receive a summary of results. Once again, thank you very much for your time and participation.

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