2013

Immigrant and non-immigrant youth in Canada: Cultural orientation, ethnicity of friends, and life satisfaction among four ethnic groups

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IMMIGRANT AND NON-IMMIGRANT YOUTH IN CANADA: CULTURAL
ORIENTATION, ETHNICITY OF FRIENDS, AND LIFE SATISFACTION AMONG
FOUR ETHNIC GROUPS

By

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A Thesis
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the Requirements for
the Degree of Master of Arts
at the University of Windsor

Windsor, Ontario, Canada

2013

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ABSTRACT

The present study investigated the relation between cultural orientation and life satisfaction, as well as differences in friendship groups, among immigrant and non-immigrant youth from four ethnic groups. Participants ($N = 156$) included immigrant and non-immigrant youth residing in Canada of Arab ($n = 39$), East Asian ($n = 26$), South Asian ($n = 27$), and European ($n = 64$) ethnic background. Participants completed an online survey, including self-report measures and qualitative items requiring written responses. Results indicated that greater heritage culture orientation predicted greater private life satisfaction, and number of related friends mediated this relationship. Further, there were differences based on immigrant generation and ethnic group for types of friendships, as well as types of support sought from different groups of friends. Additional findings and study implications are discussed.

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Chapter 1

INTRODUCTION

At the time of the last census in 2006, the proportion of foreign-born population in Canada was the highest it has been in 75 years at 19.8% (Statistics Canada, 2007). Among Western countries, this is the second highest proportion of foreign-born population and is considerably higher than the United States' (U.S.) foreign-born population at 12.5% (Statistics Canada, 2007). These statistics indicate that the demographics of Canada are changing rapidly. As the number of immigrants continues to rise, it is important for researchers to understand the issues that individuals face as new immigrants, as well as the factors that promote success in their adaptation.

The purpose of the present study was to examine the role of social support from friends as it relates to cultural orientation and life satisfaction for immigrant and non-immigrant youth from four ethnic groups (i.e., Arab Canadians, East Asian Canadians, South Asian Canadians, and European Canadians). In order to clarify the role of different groups of friends, the current study measured support from same-ethnicity friends, cross-ethnicity friends, and friends who are also relatives separately. Types of perceived friend support were examined as potential mediators in the relation between cultural orientation and domains of life satisfaction.

This introduction will begin with a general overview of acculturation and issues regarding immigrant generations. Next, there will be a review of the literature on social support, including how sources of support function differently. Finally, a rationale for the current study will be presented, followed by the proposed hypotheses.

Chapter II

REVIEW OF LITERATURE

Acculturation

Acculturation refers to cultural and psychological changes that occur as a result of contact between cultural groups (Berry, 2005). Acculturation involves changes at the group level, including changes in social structures, institutions, and cultural practices, as well as changes at the individual level, including changes in one's behaviours and attitudes (Berry, 2005). Psychological acculturation refers to the ways in which individuals experiencing cultural transitions integrate the two cultures into their lives (Birman, Trickett, & Vinokurov, 2002). According to Berry's (1997; 2005) model, acculturation is best understood as a two-dimensional process, which addresses two issues. First, do individuals prefer to maintain their heritage culture and identity? Second, do individuals prefer to have contact with other cultural groups and become involved in the host culture? These processes are conceptually distinct and can vary independently of one another (Ryder, Alden, & Paulhus, 2000). Berry suggests that the strategies used by immigrants to acculturate can be categorized as one of four strategies using these two questions. Individuals who do not want to maintain their heritage culture and seek frequent interaction with other cultures are labelled as practicing an assimilation acculturation orientation. Individuals who value the maintenance of their heritage culture and avoid interaction with other cultures are labelled as practicing a separation acculturation orientation. An integration acculturation orientation involves the acceptance of both cultures, and a marginalization acculturation orientation involves the rejection of both cultures (Berry, 1997; 2005). Research consistently indicates that the

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best psychological and sociocultural adaptation outcomes are seen among those with an integration acculturation orientation; that is, those who value both heritage and host cultures achieve better adaptation and experience less stress (e.g., Berry, Kim, Minde, & Mok, 1987; Donà & Berry, 1994; Kosic, Kruglanski, Pierro, & Mannetti, 2004; Nguyen & Benet-Martínez, 2013; van de Vijver, Helms-Lorenz, & Feltzer, 1999; Ward & Rana-Deuba, 1999). In contrast, those with a marginalization acculturation orientation experience the least favourable adaptation outcomes, and those with assimilation and separation acculturation orientations experience intermediate levels of adaptation and stress (e.g., Berry et al., 1987; Kosic et al., 2004). It should be noted, however, that the processes of acculturation and adaptation are highly variable; there are large cultural and individual differences in terms of both acculturation orientations as well as successful adaptation (Berry, 2005).

Throughout the literature, the term acculturation is used in multiple ways. For example, acculturation is often used interchangeably with assimilation, despite being conceptually unique (Sam, 2006). For the purposes of this literature review and current study, I will use the term *acculturation* according to the definition intended by Berry (2005), as mentioned above. I will use the term *cultural orientation* to refer to the operationalization of acculturation. Acculturation is an ongoing, variable process (Berry, 2006), whereas cultural orientation is based on a measurement taken at a point in time.

Just as acculturation is conceptualized in a number of ways, it is also operationalized in a number of different ways. Within the literature, there are measures that operationalize acculturation as unidimensional or bidimensional (e.g., Nguyen, Messé, & Stollack, 1999; Ryder et al., 2000). The unidimensional model of acculturation

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is based on the assumption that acculturation changes take place on a single continuum, on which individuals are more or less assimilated to the host culture. The bidimensional model, such as Berry's (1997; 2005) model described above, is based on the assumption that changes take place on two, relatively independent continuums, on which individuals are oriented to different degrees to both host and heritage cultures. Recent research has shown the bidimensional model to be superior to unidimensional models, and has highlighted the importance of assessing host and heritage culture orientation independently. For example, a number of studies have found differential effects for host and heritage cultural orientations (e.g., Birman, 1998; Birman et al., 2002; Motti-Stefanidi, Pavlopoulos, Obradović, & Masten, 2008; Nguyen et al., 1999; Paterson, 2008; Paterson & Hakim-Larson, 2012). It has been suggested that orientation to different cultures is differentially related to adaptation across life domains (Birman et al., 2002). In other words, different acculturative strategies may work best in different contexts. For example, a study of Soviet Jewish refugee adolescents in the northeast U.S. indicated that greater orientation to American culture was associated with perceived support from American peers and higher academic grades, and greater orientation to Russian culture was associated with perceived support from Russian peers (Birman et al., 2002). The authors theorized that this result indicated that American culture orientation was more advantageous in terms of adaptation outcomes in contexts that demand an American orientation, such as in school and with American peers. In contrast, Russian culture orientation was more advantageous in contexts that demand familiarity with Russian culture, such as with Russian peers (Birman et al., 2002).

Abu-Laban and Abu-Laban (1999) suggested that adolescents have two major areas of their lives: the private life domain, which includes family and home life, and the public life domain, which includes school, friends, and community life. Based on this work, a study conducted with Arab Canadian youth indicated that a positive Arab culture orientation was related to greater life satisfaction within the family domain, and a positive European Canadian culture orientation was related to greater life satisfaction within the school domain (Paterson, 2008; Paterson & Hakim-Larson, 2012). These results are consistent with expectations given that private life satisfaction, such as within the family domain, is likely to be most influenced by the extent to which youth are maintaining their heritage culture, and public life satisfaction, such as within the school domain, is likely to be most influenced by the extent to which youth are involved in the host culture.

Another concept related to acculturation is ethnic identity. Ethnic identity has been described by Phinney (1996) as a construct that includes "a commitment and sense of belonging to one's ethnic group, positive evaluation of the group, interest in and knowledge about the group, and involvement in activities and traditions of the group" (Phinney, 1996, p. 145). Consistent with studies of acculturation, where the best adaptation outcomes are seen among those who are positive about both host and heritage cultures, a strong ethnic identity is thought to promote psychological well-being and act as a protective factor in the prevention of depression within the acculturation process (e.g., Berry, Phinney, Sam, & Vedder, 2006b). However, it is important to understand differences in acculturation and adaptation based on immigrant generation.

Immigrant Generation

Experiences of acculturation and adaptation differ between and within immigrant generations. In general, individuals born outside of a host nation are considered first-generation immigrants, whereas individuals born in a host nation with at least one parent born outside of a host nation are considered second-generation immigrants, and individuals born in a host nation with both parents born in a host nation are considered third-generation immigrants. There seem to be differences among immigrant generations for a number of outcomes such as stress, locus of control (Padilla, Alvarez, & Lindholm, 1986), self-esteem (Driscoll, Russell, & Crockett, 2008), independence in decision-making (Hamilton, 2010), rates of psychiatric disorders (e.g., Alegria, Sribney, Woo, Torres, & Guarnaccia, 2007; Ali, 2002; Grant et al., 2004; Williams et al., 2007), school achievement, and behavioural problems (Harris, Harker, & Guo, 2003; Driscoll et al., 2008). Although differences on variables such as those mentioned above have been shown repeatedly among immigrant generations, the direction of the differences has not always been consistent. Despite immigration being a seemingly stressful process, first-generation immigrants often seem to fare better than later-generation immigrants as described further below.

Throughout the literature, there is mention of the *immigrant health paradox* or *immigrant paradox*. Broadly, this term refers to the finding that first-generation immigrants often adapt better than their national-born (i.e., second-generation, third-generation, and beyond) peers despite poorer socioeconomic status (e.g., Sam, Vedder, Liebkind, Neto, & Virta, 2008). Researchers have found that first-generation immigrants experience lower rates of psychiatric disorders (Alegria et al., 2007; Williams et al.,

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2007), including depression (Harker, 2001) and anxiety disorders (Grant et al., 2004), fewer suicide attempts (Peña et al., 2008), and greater positive well-being (Harker, 2001). In Canada, researchers have found that immigrant adults and adolescents experience lower rates of alcohol dependence (Ali, 2002) and drug use (Hamilton, Noh, & Adlaf, 2009), and immigrant children have been shown to have lower levels of emotional and behavioural problems, despite being more likely to live in economically disadvantaged families (Beiser, Hou, Hyman, & Tousignant, 2002). Compared to first-generation immigrants, second-generation immigrants may also experience greater acculturative stress (Park, 2009), which is the conflict that occurs when individuals experience problems due to the acculturative process, often related to incongruent cultural values and practices, language difficulties, and discrimination (Gil, Vega, & Dimas, 1994; Williams & Berry, 1991).

Researchers have attempted to account for this paradox based on the presence of protective factors, including parental supervision, religious practices, and social support, for first-generation individuals (Harker, 2001). In particular, Harris and colleagues (2003) found that in the United States, first-generation adolescents had higher school achievement and fewer behavioural problems, as well as more first-generation and same-ethnicity friends, than second- and later-generation individuals. The authors argue that that this is evidence of "selective acculturation." In essence, Harris and colleagues (2003) argue that first-generation, same-ethnicity friends reinforce cultural identities and values, and act as a protective factor against assimilating problem behaviours.

In contrast, a number of researchers have failed to replicate the immigrant paradox, and have found no differences among generations (e.g., Brown, Meadows, &

Elder, 2007; Sam et al., 2008). A number of other studies have found effects that directly oppose the paradox; that is, first-generation immigrants were found to adapt less well than their national-born peers (e.g., Fandrem, Sam, & Roland, 2009; Hamilton et al., 2009; Levecque, Lodewyckx, & Vranken, 2007; Oppedal & Røysamb, 2004). Thus, the immigrant paradox remains an elusive and controversial finding in the immigrant adaptation literature.

Researchers have attempted to account for the immigrant paradox with a number of theorized protective factors. In addition, one important contextual factor is the reason for immigration. Research suggests that the reason for immigration can contribute, both positively and negatively, to levels of adaptation and acculturative stress (Jamil, Nassar-McMillan, & Lambert, 2007). For example, research has shown that involuntary migrants, such as refugees, experience considerably greater acculturative stress compared to voluntary migrants (Berry et al., 1987). Further, reason for immigration seems to have an immediate effect not only on immigrants themselves, but it may also have an effect on succeeding generations (Nassar-McMillan & Hakim-Larson, 2003). In addition to the reason for immigration, attitude toward immigration may have an effect on adaptation outcomes. For example, in a sample of Vietnamese American youth, those who had high expectations of immigration prior to leaving Vietnam reported fewer symptoms of anxiety and depression after settling in the United States (McKelvey, Mao, & Webb, 1993). Similarly, a study of first-generation Indian immigrants in Canada indicated that if recalled expectations of immigration were considered met, individuals were more satisfied with their lives than those who expected more from immigration (Vohra & Adair, 2000). Thus, depending on the circumstances surrounding their immigration,

individuals may have different reactions to relocation, which will likely affect their acculturation and adaptation to the host culture. Another factor that has the potential to affect acculturation and adaptation is social support.

Social Support

Social support is a broad concept and can be defined in multiple ways. For the purposes of this study, social support refers to the perceived effect that social networks have on an individual, and the perception that one's needs for support, information, and feedback are satisfied (Procidano & Heller, 1983). Just as social support has a positive effect on individuals' well-being in general (e.g., Cohen & Wills, 1985; Turner, 1981), researchers have found similar effects for immigrants' adjustment (e.g., Chataway & Berry, 1989; Edwards & Lopez, 2006; Jasinskaja-Lahti, Liebkind, Jaakkola, & Reuter, 2006; Potochnick & Perreira, 2010). However, immigrants may have lower levels of social support than their native-born peers. For example, Oppedal and Røysamb (2004) found that first- and second-generation immigrant youth were more likely to have lower levels of social support than national youth in Norway. Further, lower levels of social support can result in poorer outcomes for immigrants; a study of multicultural international students in the U.S. indicated that lower levels of social support were associated with greater acculturative stress levels (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004). As well, a study of adult Indian immigrants in Canada indicated that lower levels of perceived social support were associated with lower levels of life satisfaction (Vohra & Adair, 2000). Given that social support may act as a buffer against the effects of stress (Cohen & Wills, 1985), it is particularly important that immigrants have adequate social support. As discussed further below, the effect of social support

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may also differ depending on the type of support and the source of support as well as the overall amount of support.

Previous studies have shown both a mediating and moderating role of social support on the relation between cultural orientation and adaptation (e.g., Oppedal, Røysamb, & Sam, 2004; Shen & Takeuchi, 2001). In a mediation model, the independent variable (cultural orientation) accounts for change in the mediator (social support), which in turn accounts for change in the dependent variable (adjustment; Holmbeck, 1997). That is, social support explains how cultural orientation affects adjustment. Using a sample of immigrant and national youth in Norway, Oppedal and colleagues (2004) found school classroom support and family support to be significant mediators of the relation between host and heritage culture orientations, respectively, and mental health.

In a moderation model as described by Holmbeck (1997), the moderator (social support) interacts with the independent variable (cultural orientation) and thus has an impact on the level of the dependent variable (adjustment). That is, according to this hypothesis, high social support more effectively buffers against high acculturation stress and leads to fewer adjustment problems than if an individual had low social support. Using a sample of Mexican American college students, Crockett and colleagues (2007) found evidence for family and friend support as moderators of the relationship between cultural orientation and depression/anxiety symptoms. In addition to differences between family and friend support, it is also important to assess how different support networks affect individuals differently.

Host versus heritage networks. There have been a few studies on the effect of perceived support from host and heritage networks. Host networks refer to social support networks made up of people from the host society, whereas heritage networks usually refer to support networks made up of people in an immigrant's country of origin, as well as family, same-ethnicity friends, and ethnic communities in a host country (Jasinskaja-Lahti et al., 2006). In a study of adults from three immigrant groups in Finland, Jasinskaja-Lahti and colleagues (2006) found that both host and heritage networks are important for psychological adaptation. The authors found that host networks had a significant main effect on psychological well-being, but that heritage networks increased psychological well-being only when immigrants were subject to discrimination. In general, findings regarding the importance of support from members of host versus heritage culture have been mixed. Some research seems to support the importance of links to heritage culture (Noh & Kaspar, 2003). However, other research indicates the importance of links to the host culture (Garcia, Ramirez, & Jariego, 2002; Jasinskaja-Lahti et al., 2006), and other research points to the importance of links to both host and heritage cultures for the most successful adaptation (Berry, Phinney, Sam, & Vedder, 2006a). In general, it is likely that both heritage network support and host network support are important for immigrants, and which is most important may depend upon the context and whether or not the immigrants are experiencing discrimination.

It is noteworthy that due to advances in technology, immigrants are now able to communicate with members of their heritage network in their country of origin more easily than ever. Indeed, one study found that international students used email and instant messaging mainly to keep in contact with family and friends in their country of

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origin (Kim & McKay-Semmler, 2013). Another study, also conducted with international students in the U.S., found that use of social network services helped to decrease anxiety in the new culture by providing a connection to students' families and friends (Lim & Meier, 2012). Thus, in the modern era, immigrants may have greater opportunities to communicate with individuals in their country of origin, and therefore may have more transnational ties and friendships.

Family versus friend support. Family and friends provide different types of support, as indicated by Moilanen and Raffaeli's (2009) study of ethnically diverse college students in the southern United States. Moilanen and Raffaeli (2009) found that despite differences between ethnicities when asked if parents or friends are more supportive (i.e., Asian and European Americans found friends to be more supportive, and Latino Americans found friends and parents to be equally supportive), all participants reported that friends and parents offer different types of support. The authors found that participants believed parents provided greater instrumental help and affection, and friends provided greater intimacy and companionship (Moilanen & Raffaeli, 2009).

There has been considerable research conducted on the effect of perceived family support for immigrant adolescents and young adults. Past research on Mexican American adolescents and young adults has shown that perceived family support is related to lower perceived distress and greater life satisfaction (Castillo, Conoley, & Brossart, 2004; Edwards & Lopez, 2006). In a study conducted with 148 Mexican American college students, Crockett and colleagues (2007) found that parental support moderated the effect of acculturative stress on anxiety and depression; that is, for those with low parental support, increased acculturative stress was associated with increased anxiety and

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depression, but for those with high parental support, increased acculturative stress was not associated with increased anxiety and depression. In addition, Crocket and colleagues (2007) found that friend support moderated the effect of acculturative stress on anxiety.

Among Latino American adolescents and young adults, research has shown that perceived family support is associated with reduced risk of depressive symptoms and anxiety, and increased well-being (Potochnick & Perreira, 2010; Rodriguez, Mira, Myers, Morris, & Cardoza, 2003). In a study of Latino American college students in the southwestern United States, Rodriguez and colleagues (2003) found that friend support predicted well-being, and friend support but not family support was associated with lower psychological distress. In addition, a study conducted with Arab Canadian youth indicated that perceived family support mediated the effect of positive attitude toward Arab culture on satisfaction with one's family life, but perceived support from friends did not mediate the effect of positive attitude toward European Canadian culture on satisfaction with school life (Paterson, 2008; Paterson & Hakim-Larson, 2012).

Past studies have not always been clear regarding whether family support refers to family as a whole or to a subset of the family, such as parents. This is significant because in many cultures, extended family is considered to be a resource for social interaction and support. In families where extended family and kin relations are valued, youth may focus most of their peer relationships on siblings and cousins (Bradford Brown & Mounts, 2007). Sometimes adolescents create close friendships with siblings and cousins because access to friends is restricted by parents, as has been found among some Latino American youth, and especially among girls (Azmita, Ittel, & Brenk, 2006). However, sometimes

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such relationships are made by choice. A study of 75 first- and second-generation

Mexican American adolescents indicated that relationships with peers were perceived as

more complicated and less stable than bonds with siblings and cousins (Stanton-Salazar

& Spina, 2005). In addition, the authors found that a number of the adolescents derived

support and companionship from siblings and cousins, particularly during times of

emotional turmoil (Stanton-Salazar & Spina, 2005). Therefore, for some individuals,

measures of family support may be inadvertently measuring aspects of friend support,

and vice versa.

As discussed above, considerable research has been conducted on factors relating

to immigrants' families. For example, in addition to the studies mentioned above,

researchers have studied parent-child relationships (e.g., Smith, Lalonde, & Johnson,

2004; Updegraff, Killoren, & Thayer, 2007), sibling relationships (e.g., Updegraff,

McHale, Whiteman, Thayer, & Delgado, 2005; Voorpostel & Schans, 2011),

intergenerational conflicts (e.g., Chong, 2007; Chung, 2001; Lee & Liu, 2001), and the

effect of parenting styles (e.g., Driscoll et al., 2008; Pong, Hao, & Gardner, 2005). The

literature on immigrants' friendships is comparatively lacking when contrasted with the

vast amount of research devoted to families. Further, the area where friendship networks

and extended families overlap has been given very little attention thus far.

Ethnicity of friends. Some research has shown that immigrant youth differ from

national youth in both quantity and quality of friendships with same-ethnicity and cross-

ethnicity peers. There is evidence that immigrants often choose to befriend individuals

who are of their own ethnicity (Abu-Laban & Abu-Laban, 1999; Berry et al., 2006b).

Berry and colleagues (2006b) conducted an international study of immigrant and non-

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immigrant youth, which took place in 13 countries, including Canada. Interestingly, Berry et al. (2006b) found that both immigrant and non-immigrant youth had more social contacts with peers from their own ethnic group.   Conversely, Harris and colleagues (2003) found that, compared to second- or later-generation youth, first-generation youth were more likely to have first-generation and same-ethnicity friends. It is noteworthy that both Berry et al.'s (2006b) and Harris et al.'s (2003) studies were conducted with immigrant and non-immigrant multicultural youth, rather than with individual ethnic group(s). In a study of Vietnamese immigrant youth, Chan and Birman (2009) found no difference between the number of same-race versus cross-race friends for their combined first- and second-generation sample; however, they did not have a comparison group. A non-immigrant comparison group is important because it provides context to interpret the results. Comparing immigrants with non-immigrants, or contrasting results by immigrant generation is common practice in contemporary research (e.g., Berry et al., 2006b; Harker, 2001; Levecque et al., 2007; Oppedal & Røysamb, 2004; Peña et al., 2008).

Studies investigating the effect of same-ethnicity versus cross-ethnicity peer support have supported the theory that orientations toward different cultures are differentially related to adaptation across separate contexts of adolescents' lives (Birman et al., 2002). Greater heritage culture orientation is associated with a greater number of same-race/ethnicity friendships (Tran & Lee, 2011) and greater perceived support from same-race/ethnicity peers (Birman et al., 2002; Chan & Birman, 2009). In contrast, greater host culture orientation is associated with greater perceived support from cross-race/ethnicity peers (Birman et al., 2002; Chan & Birman, 2009). As mentioned previously, a study of Soviet Jewish refugee adolescents indicated that greater orientation

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to American culture predicted perceived support from American peers and higher academic grades, whereas greater orientation to Russian culture predicted perceived support from Russian peers (Birman et al., 2002). Likewise, a study of Vietnamese adolescents suggested that greater American and Vietnamese orientation predicted greater perceived social support from cross-race and same-race peers, respectively (Chan & Birman, 2009).

The studies conducted by Birman and colleagues (2002) and Chan and Birman (2009) both utilized modified versions of the Social Support Microsystems Scale (Seidman et al., 1995). Birman and colleagues (2002) modified the original instructions, which ask about support from identified individuals, such as mother and neighbour, to ask about support from parents, Russian peers, and American peers. Similarly, in Chan and Birman's (2009) study of Vietnamese immigrant adolescents, the measure was modified to ask about support from "close Vietnamese friends," "non-Asian friends," and "Asian friends" (Chan & Birman, 2009). In both of these cases, however, the use of broad groupings does not provide information about individuals or even microsystems, as was intended in the original measure. Additionally, the modifications do not allow for comparison outside of these specific groups, and give no indication of perceived support from a wider array of ethnicities.

In addition to studies assessing specific ethnicities of friends, research has also examined the effect of socializing with other cultural groups. There is some evidence that socializing with other cultural groups is beneficial for immigrant adolescents and young adults. A study of adolescent Asian Americans suggested that greater cross-race friendships were related to increased social competence (Tran & Lee, 2011). As well, a

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study of multicultural international students in the U.S. indicated that socializing with both Americans and non-Americans was associated with higher levels of perceived social support and less acculturative stress, compared with those who socialized with either Americans or non-Americans primarily (Poyrazli et al., 2004). Using a non-immigrant, multicultural sample of children in the U.S., similar results have been found: more cross-racial/ethnic friendships were associated with increased perceived peer support (Kawabata & Crick, 2011).

Studying specific ethnic groups

Although there is minimal past research comparing friendships among different ethnic groups, there is some evidence that ethnic group may make a difference in same-ethnicity friendships. For example, there is some evidence that those from collectivist cultures, for whom family is prioritized, may be more likely to have an overlap in family and friends (Seginer, Shoyer, Hossessi, & Tannous, 2007). According to Hofstede, Hofstede, and Minkov's (2010) analysis of cultural differences, most of the ethnicities included in the current study are considered collectivist societies; the exception are those from some European nations. Although some countries in Europe (e.g., Russia, Romania, Portugal) are considered collectivist societies, many others are not. Thus, the results for a European sample may depend on the specific countries that individuals hail from.

The ethnic groups included in the current study differ in terms of their cultural values, traditions, and beliefs. Nonetheless, there are some similarities among the three ethnic minority groups (i.e., Arab, East Asian, and South Asian). As mentioned, all three of these cultures are considered to be collectivistic cultures where family is generally valued (Hofstede et al., 2010). In addition, individuals from any one of the ethnic

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minority groups are more likely to have experienced discrimination given that they are not a part of the ethnic majority in Canada.

Individuals of East Asian, South Asian, or Arab heritage may differ from each other and from those of European heritage in important ways. Individuals of East Asian descent, for example, may be less likely to explicitly ask for emotional support from close others compared to individuals of European heritage (Kim, Sherman, & Taylor, 2008). This finding may indicate that individuals of East Asian heritage are less likely to utilize social support in general. Conversely, individuals of South Asian descent, especially those from India, are often able to speak English better than many other immigrant groups, which may ease their adaptation to Canadian culture (Vohra & Adair, 2000). This finding may indicate that individuals of South Asian heritage (i.e., especially first-generation South Asian immigrants compared to first-generation immigrants from other cultures) have an easier time establishing cross-ethnicity friendships. Lastly, the traditional core values of Arab culture are collectivism and paternalism (Hakim-Larson, Kamoo, Nassar-McMillan, & Porcerelli, 2007). Extended family is valued as the dominant family structure, and one's own kin are often thought of as being worthy of the most attention and of being confided in (McGoldrick, Giordano, & Garcia-Preto, 2005; Nassar-McMillan & Hakim-Larson, 2003). Although this trend appears to be changing, Arab children are encouraged to maintain close ties with their families (McGoldrick et al., 2005). In addition, extended family networks are viewed as important sources of support during times of stress for Arab individuals (Hakim-Larson et al., 2007). Combined, Arab cultural values may indicate a greater propensity to consider family members as friends.

Purpose of the Present Study

The purpose of this study was to investigate the relation between cultural orientation and different domains of life satisfaction among immigrant and non-immigrant youth from four ethnic groups. In addition, this study examined the mediating role of different types of friend support (e.g., from same-ethnicity friends and friends who are also relatives) on the relation between cultural orientation and life satisfaction. The present study also explored the effect of the number of same-ethnicity friends and related friends for individuals by immigrant generation, and investigated if same-ethnicity friends and related friends acted as a moderator in the relation between generation status and life satisfaction. Additionally, the present study included qualitative items in order to attempt to clarify the types of support received from same-ethnicity, cross-ethnicity, and related friends.

Only a few studies to date have assessed the number of same-ethnicity and cross-ethnicity friends among immigrant youth (Chan & Birman, 2009; Harris et al., 2003; Tran & Lee, 2011), and even fewer studies have assessed perceived support of same-ethnicity and cross-ethnicity friends among immigrant youth (Birman et al., 2002; Chan & Birman, 2009). Further, among the literature reviewed for the current research, no studies were found that assessed the effect of perceived support from related friends for immigrant youth. Thus, this area is still considered largely exploratory.

Research Questions and Hypotheses

Based on the literature presented above, the current study addressed the following research questions and hypotheses:

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Research Question #1: Is culture orientation related to life satisfaction in various domains (i.e., private and public domains) after controlling for possible covariates?

Previous research indicates that parents influence heritage culture retention and peers encourage exploration of the host culture (Oppedal et al., 2004). Likewise, research suggests that adolescents have two major areas of life: the private life sphere, which includes family and home life, and the public life sphere, which includes school and friends (Abu-Laban & Abu-Laban, 1999). Further, host culture orientation and heritage culture orientation seem to be related to different domains of life satisfaction (Paterson, 2008; Paterson & Hakim-Larson, 2012). Paterson and Hakim-Larson (2012) found that, among Arab Canadian youth, positive Arab culture orientation was associated with greater life satisfaction within the family domain, and positive European Canadian culture orientation was associated with greater life satisfaction within the school domain. Based on these findings, the hypotheses below were examined in a sample of immigrant and non-immigrant Canadian youth from four ethnic groups (i.e., South Asian Canadians, East Asian Canadians, Arab Canadians, and European Canadians). Key demographic variables were examined and controlled for as covariates if they were related to an outcome variable.

Hypothesis 1a. After controlling for covariates, heritage culture orientation will predict life satisfaction in the private domain with a positive relation between heritage culture orientation and life satisfaction in the private domain.

Hypothesis 1b. After controlling for covariates, host culture orientation will predict life satisfaction in the public domain with a positive relation between host culture orientation and life satisfaction in the public domain.

Research Question #2: Does support from different types of friends mediate the relation between culture orientation and life satisfaction?

Previous research suggests a mediating role of social support on the relation between cultural orientation and mental health/well-being (e.g., Oppedal et al., 2004; Paterson, 2008; Paterson & Hakim-Larson, 2012; Shen & Takeuchi, 2001). Paterson and Hakim-Larson (2012) found that family and friend support had different roles as mediators: family support mediated the relation between positive Arab (heritage) culture orientation and greater satisfaction with one's family; however, friend support did not mediate the relation between positive European Canadian (host) culture orientation and greater satisfaction with school life. In order to further examine the mediating role of social support specifically from friends the hypotheses below were examined when main effects were found.

Hypothesis 2a. Social support from same-ethnicity friends will mediate the effect of heritage culture orientation on life satisfaction in the private domain.

Hypothesis 2b. Social support from cross-ethnicity friends will mediate the effect of host culture orientation on life satisfaction in the public domain.

Hypothesis 2c. Social support from related friends will mediate the effect of heritage culture orientation on life satisfaction in the private domain.

Hypothesis 2d. Social support from non-related friends will mediate the effect of host culture orientation on life satisfaction in the public domain.

Research Question #3: What differences among immigrant generations are present in the number of same-ethnicity friends and related friends, and the importance of same-ethnicity friends and related friends?

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Berry and colleagues' (2006b) international study of immigrant and non-immigrant youth indicated that both immigrants and non-immigrants have more friends who are of their own ethnicity. Conversely, research has indicated that first-generation immigrant youth may have more same-ethnicity friends compared to second- or later-generation youth (Harris et al., 2003). In addition, some researchers have suggested that immigrant youth may be more likely to create close friendships with relatives, such as siblings or cousins (Azmita et al., 2006; Bradford Brown & Mounts, 2007; Stanton-Salazar & Spina, 2005); however, empirical studies regarding such friendships seem to be lacking. Although one may expect that perceived support from same-ethnicity and related friends would be important for first-generation immigrants, this particular area of research does not seem to have been addressed in the literature so far. Thus, the following exploratory hypotheses were examined in the current study. Key demographic variables were examined and controlled for if they were related to an outcome variable.

Hypothesis 3a. First-generation immigrants will have more same-ethnicity friends than second-generation or later-generation immigrants.

Hypothesis 3b. First-generation immigrants will have more related friends than second-generation or later-generation immigrants.

Hypothesis 3c. Perceived support from same-ethnicity friends will be more important for life satisfaction for first-generation immigrants compared to second-generation or later-generation immigrants.

Hypothesis 3d. Perceived support from related friends will be more important for life satisfaction for first-generation immigrants compared to second-generation or later-generation immigrants.

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Chapter III

METHOD

Design

The present study was a survey that was conducted online. For the main hypotheses, the independent variables were host and heritage culture orientation. The dependent variable was life satisfaction. Other variables considered in the analyses were: number of same-ethnicity and related friends, perceived discrimination, family values, and ethnic composition of neighbourhood. Subsequent analyses assessed differences among immigrant generations for quantity of same-ethnicity and related friendships. Lastly, qualitative items added additional information about perceived support from same-ethnicity, cross-ethnicity, and related friends. Differences among immigrant generations and ethnic groups were assessed.

Participants

The initial sample included 207 participants. After data cleaning, the final sample used in analyses was composed of 156 individuals (123 females and 33 males). The average age of participants was 20.23 years ($SD = 1.65$, range 17-25). Much of the research within the literature has been conducted with immigrants from specific ethnic groups, often with a non-immigrant comparison group. Likewise, the current research included individuals from four ethnic groups, each made up of both immigrants and non-immigrants. The four Canadian ethnic groups included South Asian Canadians, East Asian Canadians, Arab Canadians, and European Canadians. These groups were chosen because they are among the largest ethnic groups both in Canada and in Windsor, Ontario

(Statistics Canada, 2006a; 2006b). In addition, these groups are from a wide range of geographic backgrounds and made for interesting comparisons.

Although some studies have successfully found group differences by immigrant generation with a multicultural sample (e.g., Berry et al., 2006b; Harris et al., 2003; Oppedal et al., 2004), generally these types of studies recruit much larger samples than were possible for the current study. However, in the current study, differences by immigrant generation collapsing across ethnic groups were assessed in addition to differences by ethnic group.

Within each ethnic group, participants were first-generation, second-generation, and third- or later-generation immigrants (see Table 1 for the breakdown of group sample sizes). For the purposes of this study, first-generation immigrants were individuals born outside of Canada; second-generation immigrants were individuals born in Canada with at least one parent born elsewhere; third-generation immigrants were individuals born in Canada with both parents born in Canada. This definition of generation status has been used frequently in studies of immigrant acculturation and adaptation (e.g., Beiser et al., 2002; Hamilton, 2010; Harker, 2001; Williams et al., 2007). Individuals were considered as belonging to each ethnic group based on self-identification as a member of that group.

As indicated in Table 1, the current study sample was not equally distributed across immigrant generation and ethnic group. Nearly all of the third- or later-generation immigrants were European Canadians, and nearly all of the first-generation immigrants were non-European Canadians. This is a caveat for the results and the conclusions that can be drawn from them and will be described further in the discussion as a limitation.

Participants were recruited through the University of Windsor Psychology

Table 1

Study Design with Sample Sizes (N = 156)

		Ethnic groups			
		Arab (n =39)	South Asian (n =26)	East Asian (n =27)	European (n =64)
	1	17	14	11	3
Generation	2	22	9	15	22
	3+	0	3	1	39

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Participant Pool ($n = 135$) as well as through various student and community organizations ($n = 21$) in the Windsor community. These 'community' participants were also recruited through snowball sampling. See Table 2 for a participant demographic breakdown.

Measures

Presented in Table 3 is a list of all of the measures used in the current study and the variable names used in subsequent tables. The mean scores and standard deviations calculated for each measure are listed along with the range of scores possible for each variable or scale.

Demographics. Participants completed a demographics questionnaire, which included questions regarding participants' age, gender, and ethnicity, as well as a series of questions regarding immigrant generation, place of birth, and parents' places of birth (see Appendix A). This measure was adapted from a study conducted by Paterson (2012), except for the items assessing participants' religion and neighbourhood ethnic composition, which were taken from Berry and colleagues' (2006b) international study of immigrant youth.

Vancouver Index of Acculturation. Cultural orientation was measured using the Vancouver Index of Acculturation (VIA; Ryder et al., 2000). This measure assesses the two dimensions of acculturation (i.e., heritage culture orientation and host culture orientation) independently. It was developed for use with multiple ethnic groups in Canada.

The VIA consists of items from 10 domains (e.g., traditions, behaviours, values, and social activities), with a heritage and host item for each domain. Participants

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Table 2

Frequencies and Percentages of Demographic Variables (N = 156)

	n (%)
Ethnic Group	
Arab	39 (25.0)
East Asian	27 (17.3)
European	64 (41.0)
South Asian	26 (16.7)
Generation	
1st generation	45 (28.8)
2nd generation	68 (43.6)
3rd generation and later	43 (27.6)
Religion	
No religion	28 (17.9)
Christian	74 (47.4)
Muslim	35 (22.4)
Hindu	9 (5.8)
Sikh	6 (3.8)
Buddhist	4 (2.6)

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Table 3

List of Measures with Variable Name, Range of Scores, Means, and Standard Deviations (N = 156)

	Variable Name	Range of Possible Scores (Range of Actual Scores)	*M*	*SD*
Cultural Orientation				
Vancouver Index of Acculturation (Ryder et al., 2000)				
Heritage Culture Orientation	VIA_her	1-9 (1.80-9.00)	6.86	1.39
Host Culture Orientation	VIA_host	1-9 (4.20-9.00)	7.22	0.98
Life Satisfaction				
Multidimensional Student Life Satisfaction Scale (Huebner, 1994)	MSLSS	1-6 (2.77-5.80)	4.66	0.61
Private Life Satisfaction	Private	1-6 (3.25-6.00)	5.07	0.58
Public Life Satisfaction	Public	1-6 (2.96-6.00)	4.58	0.63

Table 3 *(continued).*

	Variable Name	Range of Possible Scores (Range of Actual Scores)	*M*	*SD*
Friend Data				
Participants asked to nominate up to 10 friends		1-10 (2.00-10.00)	8.48	2.35
Proportion of same-ethnicity friends	Same_eth	0-1 (0.00-1.00)	0.55	0.34
Proportion of related friends	Related	0-1 (0.00-1.00)	0.17	0.22
Perceived Discrimination				
Discrimination Scale (Berry et al., 2006)	Discrim	1-5 (1.00-4.67)	1.85	0.86
Values				
Family Obligations (Berry et al., 2006)	Family_oblig	1-5 (1.80-4.90)	3.58	0.63
Adolescent Rights (Berry et al., 2006)	Adol_right	1-5 (1.00-5.00)	3.85	0.99
Neighbourhood Ethnic Composition				
Neighbourhood Ethnic Composition (Berry et al., 2006)[a]	Neighbour	1-5 (1.00-5.00)	2.66	1.12

Note. [a] Lower values indicate that most people in neighbourhood are not the same ethnicity as the participant; higher values indicate that most people are the same ethnicity as the participant.

responded to each item on a 9-point Likert-type scale (1 = *strongly disagree*, 9 = *strongly agree*). This method resulted in two scores: heritage culture identification and host culture identification. A heritage subscore was computed by creating an average score based on all of the heritage items; likewise, a host subscore was computed by creating an average score based on all of the host items. In either case, higher scores are indicative of greater identification with that culture.

The VIA heritage and host culture identification subscales can be used with a median split technique to allow for classification of participants into Berry's four acculturation strategies (i.e., assimilation, integration, separation, and marginalization; e.g., Berry & Sabatier, 2010). In the current study, 44 participants adopted a marginalization strategy, 32 adopted an assimilation strategy, 32 adopted a separation strategy, and 48 participants adopted an integration strategy. However, given the issues regarding using a median split (see Field, 2009) it is difficult to say how meaningful these values are. The medians in this case were rather high (i.e., 6.9 and 7.3 for heritage and host culture orientation, respectively), so it is likely that there are some individuals in the marginalization, assimilation, and separation categories that actually have fairly positive attitudes toward one or both cultures. These calculations were made for descriptive purposes only; the continuous heritage and host culture orientation variables were used in all subsequent analyses.

Research by Ryder et al. (2000) yielded Cronbach's alphas of .91 and .87 for heritage and host culture orientation, respectively. Similar results were found in the current study. The internal consistency scores were .89 and .80 for heritage and host culture orientation, respectively.

Multidimensional Student Life Satisfaction Scale. Life satisfaction was measured using the Multidimensional Student Life Satisfaction Scale (MSLSS; Huebner, 1994). The MSLSS consists of 40 items, including 10 reverse-keyed items. The items can be used to form a global life satisfaction score or can be broken down to form five domains of life satisfaction: family, school, friends, self, and living environment. Each item is scored on a 6-point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*; Huebner, Laughlin, Ash, & Gilman, 1998). A global life satisfaction score was obtained by summing the items and dividing by the total number of items. Domain scores were obtained by summing the relevant items from each domain and dividing by the number of items included in the domain. Negatively-keyed items were reversed-coded so that higher scores are indicative of greater life satisfaction.

For the purposes of this study, a composite of the school, friend, and living environment satisfaction scores were used as a measure of public life satisfaction, and a composite of the family and self satisfaction scores were used as a measure of private life satisfaction, based on results found by Paterson (2008).

Past research (Huebner, 1994) has indicated adequate internal consistency for the global life satisfaction score (Cronbach's alpha = .92), as well as for each of the life satisfaction domain scores (Cronbach's alphas ranged from .82 to .85). Similar results were found in the present study. Internal consistency for global life satisfaction was .92, and values ranged from .83 to .93 for the domain scores. As well, internal consistency for private and public life satisfaction was .89 and .90 in the present study, respectively.

Social Support Microsystems Scales. Perceived social support from same-ethnicity, cross-ethnicity, related, and non-related friends was measured using a modified

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version of the Social Support Microsystems Scales (SSMS; Seidman et al., 1995). The SSMS was developed by Seidman and colleagues by modifying the Social Support Rating Scale (SSRS; Cauce, Felner, & Primavera, 1982). The original SSMS identifies providers of support (e.g., mother, sibling, neighbours, etc.) and asks three questions about each provider. Respondents are asked to rate each person's helpfulness "when I have a personal problem" and "when I need money and other things," and to indicate how much "I have fun with this person." Respondents rate each item using a 3-point Likert-type scale (1 = *not at all*, 3 = *a great deal*). Total scores for each provider of support are obtained by summing the three items referring to that provider, where higher scores are indicative of greater perceived support.

As mentioned, modified versions of the SSMS have been used in past research similar to the current study (e.g., Birman et al., 2002; Chan & Birman, 2009). The present study utilized a further modification of the SMSS with permission from the measure authors: participants were asked to identify up to 10 friends, and the three support questions for each individual friend that was identified. Average scores were then created for perceived support from same-ethnicity, cross-ethnicity, related, and non-related friends based on types of friends identified.

In the present study, the proportion of friends identified as same-ethnicity, cross-ethnicity, related, and non-related were used as proxy measures of social support. Proportions were used rather than total number of different types of friends identified because participants were not required to identify 10 friends, so sometimes individuals identified fewer than 10 friends. Therefore, using the frequency count would likely provide inaccurate estimates of the number of friends individuals had (i.e., 2/10 friends is

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quite different from 2/4). The social support questions were only asked in relation to the specific friends that were nominated, which makes the information arguably more accurate than predefined groups (e.g., same-ethnicity friends) that have been used in the past. However, if participants did not identify a friend who was related to them, for example, then there was no social support score for related friends for that individual. Thus, there was too much missing data for the social support variables to be used in the main analyses.

In the present study, participants identified an average of 8.48 friends ($SD = 2.35$), with a range from 2-10. Proportion of same-ethnicity friends was calculated based on the number of same-ethnicity friends an individual identified, divided by the total number of friends each individual identified. Likewise, proportion of related friends was the number of related friends divided by the number of total friends. Because of the way these were calculated, proportion of same-ethnicity friends and proportion of cross-ethnicity friends were directly inverse, as were the proportions of related and non-related friends. The proportion values for each of the friendship variables (i.e., same-ethnicity, cross-ethnicity, related, and not related) ranged from 0-1.

In past research, the original SSMS indicated adequate internal consistency using the predefined providers of support (Cronbach's alpha ranged from .74 to .81; Seidman et al., 1995). Based on the data collected in the present study, the internal consistency for the three social support items across all providers of support was .90. Given that all the providers of support in the current study were individuals identified as 'friends', internal consistency was computed as a single score. Social support scores for specific groups of friends were not used in any analyses, and internal consistency scores were not calculated.

Perceived discrimination. Perceived discrimination has the potential to affect the types of friendships that individuals make. In fact, Nauck (2001) found that perceived discrimination was associated with a lower proportion of interethnic (i.e., cross-ethnicity) friends among migrant youth in Germany and Israel. Thus, perceived discrimination was controlled for as a covariate in the present study, and was measured using a scale developed by Berry and colleagues (2006b). Respondents were asked to rate the degree to which they have been treated unfairly because of their ethnicity (e.g., "I have been teased or insulted because of my ethnic background"). Each item is scored on a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). An overall mean score was calculated, where higher scores are indicative of higher perceived discrimination. The scale used by Berry and colleagues (2006b) contained 9 items; four of these items assessed the perceived frequency of being treated unfairly by specified individuals (e.g., "teachers" and "other students"). These items were modified for the current study to refer to past school experiences, so that the items were relevant for all participants, including those not currently attending school. Berry and colleagues (2006a) found that, among immigrant youth, the perceived discrimination scale yielded a Cronbach's alpha of .83. In the present study, Cronbach's alpha for the discrimination scale was .92.

Family relationship values. Values regarding family relationships are an important aspect of culture. These values may be likely to change depending on where individuals are in the acculturative process. In addition, more traditional value systems may be related to different friendship patterns. Thus, family relationship values were treated as a covariate in the present study and were measured using a scale developed by

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Berry and colleagues (2006b). The 14-item family relationship values measure is broken down into two subscales: ten items make up the *family obligations* subscale, and four items make up the *adolescents' rights* subscale. Respondents were asked to rate the degree to which they agreed with the statements (e.g., "Children should obey their parents;" "When a girl reaches the age of 16, it is all right for her to decide whom to date."). Each item was scored on a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). A mean score was calculated for each of the subscales, where higher scores are indicative of greater agreement with the value statements. In the study conducted by Berry and colleagues (2006b), the family obligations subscale yielded Cronbach's alphas of .72 for both immigrant and national youth; the adolescents' rights subscale yielded Cronbach's alphas of .78 and .75 for immigrant and national youth, respectively. In the present study, the family obligations subscale yielded a Cronbach's alpha of .79, and the adolescents' rights subscale yielded a Cronbach's alpha of .86.

Qualitative questions. In addition to the measures discussed above, participants were asked to complete qualitative items regarding their friendships. These questions were designed to assess the quality of support received from same-ethnicity, cross-ethnicity, and related friends. Participants were asked to rate same-ethnicity, cross-ethnicity, and related friends' support overall, using the same response options as the SSMS.

Participants were also asked to describe the kinds of support they receive from each group of friends using as much detail as possible and to refer to the friends that they identified with nicknames earlier in the study, where applicable. Text responses were analyzed using an exploratory process of open coding (Strauss & Corbin, 1998). Open

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coding was used to uncover, identify, and develop concepts within narrative text (Strauss & Corbin, 1998). Narrative responses were first analyzed for categories, which allowed codes to be derived from the data rather than a priori. Each narrative was read and coded for concepts that came up repeatedly. In the current study, the seven identified codes were predominantly types of support, which was expected based on the questions asked.

Of the 156 participants included in the quantitative analyses, 14 left all of the qualitative items that involved completing text responses blank and were therefore not included in these analyses or assessment of reliability. Prior to analyses, a second rater coded approximately one-third of the data ($n = 48$) using the seven codes that were derived from the data. Total percent agreement between raters for all items was 96.63%, and ranged from 89.6% to 100% by item. These values do not account for chance agreement; therefore, kappa values were calculated for each item. Kappa is a statistic measure of inter-rater reliability that takes into account chance agreement (Cohen, 1960). Kappa values ranged from 0.556 to 1.000 for all items. According to Fleiss's (1981) guidelines, kappa values of .40-.75 are considered fair to good, and values above .75 are considered excellent.

Procedure

After obtaining ethics clearance from the University of Windsor Research Ethics Board, the study was accessible for eligible students via the psychology participant pool. In addition, emails were sent to several community organizations and the study was advertised online in order to recruit an adequate sample of eligible participants. Community participants were also encouraged to forward the study's web address to other eligible participants—a process known as the snowball method of recruitment.

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All participants completed the proposed study online at their own convenience. Conducting research online has several benefits including lower cost, reduced response time, and ease of data entry (Granello & Wheaton, 2004; Kraut et al., 2004). In addition, studies have shown that participants who complete surveys using the internet score lower on measures of social desirability, compared to those filling out pen and paper surveys (Joinson, 1999). Furthermore, research has indicated that methods of measurement (i.e., online versus pen and paper surveys) yield comparable results (Davidov & Depner, 2011; Ritter, Lorig, Laurent, & Matthews, 2004).

After completing the informed consent form, participants completed the measures listed above. The consent form provided information regarding the general procedures and length of the study, the risks involved, the benefits of participation, and provided participants with the researcher's contact information in case they had any questions or concerns regarding the study (see Appendix B and C for consent form for participant pool and community participants, respectively). Participants in the psychology participant pool received 1 bonus point for 60 minutes of participation if they were registered in the pool and enrolled in one or more eligible courses. Participants recruited from the community were given the opportunity to enter their email address in a draw to win a $50 gift certificate to amazon.ca. Of the community participants, 18 provided their name and email. A random draw was conducted and the winning individual was contacted via email.

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CHAPTER IV

RESULTS

Preliminary analyses were conducted to examine missing data. Assumptions

specific to regression analyses and ANOVA were assessed prior to testing of hypotheses.

Hierarchical regression analyses and one-way ANOVAs were conducted to test the main

hypotheses. Additional exploratory analyses were also conducted. All analyses were

conducted on IBM Statistical Package for the Social Sciences (SPSS) Version 20.0 for

Windows.

Preliminary Analyses

Data screening. A total of 207 participants opened the online survey link.

Before running analyses, the data were examined to assess incomplete and missing data.

Four protocols were designated as "incomplete" by the web survey, indicating that these

participants closed the survey window prior to completing the survey. Each of these four

participants completed less than half of the survey and were therefore removed from

analyses. Additionally, two participants failed to nominate any friends and one person

failed to identify their immigrant generation. Because these were considered main

variables for analyses, these individuals were removed from analyses. As well, one

individual completed the study in Cambridge, Massachusetts and was subsequently

removed from analyses so that all participants would be from Canada.

There were two questions embedded in the online survey that involved asking

participants to select a specific response in order to make sure that they were reading

questions prior to answering and were not just selecting a response randomly or based on

a response bias. Forty individuals selected incorrect responses to these questions and

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were subsequently removed from analyses. Subsequently, three participants were removed from analyses because they were considered multivariate outliers, which will be discussed in the section below.

Missing data were analyzed and missing data appeared to be completely at random (i.e., MCAR tests were not significant). Individual missing items were dealt with by making average scores made up of the remaining items, such as an overall score for the Multidimensional Student Life Satisfaction Scale. This method is referred to as the person-mean imputation method, and is a preferred method when there is little missing data (i.e., more than half of data is present; Hawthorne & Elliot, 2005). No participant had fewer than 75% of items completed for any of the scores that were derived.

Assumptions for regression analyses. Assumptions specific to regression analyses and ANOVA were tested prior to testing the main hypotheses. Assumptions for regression analyses are: adequate sample size, absence of outliers and influential observations, absence of multicollinearity and singularity, normality, linearity, homoscedasticity of errors, and independence of errors (Tabachnick & Fidell, 2013). To test these assumptions, a linear regression was conducted on the 159 participants with the following variables entered as predictors: heritage culture orientation, host culture orientation, generation status, proportion of same-ethnicity friends, proportion of related friends, and mean life satisfaction. Participant ID was used as the dependent variable. Outliers on the criterion variable were tested using standardized residuals. Two values were more than 2.5 standard deviations away from the mean, and these participants were excluded from subsequent analyses. One participant had a Mahalanobis distance value greater than the critical value of 22.458 (*df* = 6), and this participant was subsequently

removed from all analyses. To test influential observations Cook's Distance was used.

No values were greater than 1 and therefore no influential observations were indicated.

Thus, 156 participants were included in the analyses, and this sample is considered

adequate for regression analyses (Tabachnick & Fidell, 2013).

Multicollinearity occurs when two variables are highly correlated, and singularity

occurs when two variables are redundant; that is, one predictor can be predicted by other

predictors (Tabachnick & Fidell, 2013). Several indicators of multicollinearity were

examined and this assumption appeared to be met. No correlations between predictor

variables were larger than $r = .80$, except for the case of the subscales of the MSLSS

being very related to the original MSLSS (see Table 4). Although it is not unexpected

that the subscales be quite related to the original measure, multicollinearity is not affected

in this case because these variables (i.e., the original MSLSS, private life satisfaction

subscale, and public life satisfaction subscale) were never used as predictors in the same

analysis. As well, variance inflation factors (VIF) were less than 10, and tolerance values

were less than 1. Therefore, multicollinearity was not present.

To assess normality, linearity, and homoscedasticity of errors, the residuals

scatterplot between predictor variable scores and errors of predictions was examined.

These assumptions appeared met, as the residual scatterplot of the predictor was

rectangularly/ovally distributed with a concentration of scores along the centre. In

addition, univariate normality was assessed based on histograms as well as values for

skewness, kurtosis, and the Shapiro-Wilk test for normality. Importantly, the primary

outcome variable (i.e., life satisfaction) was normally distributed based on all of these

factors. Most of the predictor variables were normally distributed based on histograms,

Table 4

Zero Order Correlations between Variables (N = 156)

	1	2	3	4	5	6	7
1. VIA_her	-						
2. VIA_host	**.172***	-					
3. MSLSS	**.209***	.120	-				
4. Private	**.188***	.097	**.771***	-			
5. Public	.139	.081	**.934***	**.732***	-		
6. Same_eth	.087	.076	.011	-.095	-.024	-	
6. Related	**.176***	-.120	-.054	-.083	-.092	.152	-

Note. VIA_her = Heritage Culture Orientation; VIA_host = Host Culture Orientation;

MSLSS = Global Life Satisfaction; Private = Private Life Satisfaction; Public = Public

Life Satisfaction; Same_eth = Proportion of Same-Ethnicity Friends; Related =

Proportion of Related Friends.

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

skewness and kurtosis; exceptions were variables for proportion of same-ethnicity friends and proportion of related friends. The proportion of same-ethnicity friends variable demonstrated kurtosis; the value indicated that it was somewhat platykurtic (i.e., a flatter distribution than expected), however the value was still in the acceptable range. The proportion of related friends variable was positively skewed and leptokurtic (i.e., a more peaked distribution than expected), because of a considerable number of zero scores. Transformations were assessed, but they did not correct the normality issues, so the data were left in their original form.

Lastly, the assumption of independence of errors indicates that errors of prediction should be independent of one another. Given that this was a web survey, IP addresses were assessed to determine if any two were the same, and if they took place close in time to one another. This did happen on one occasion, and in this case both participants were recruited through the participant pool, so it is difficult to say why this would have occurred (i.e., it was not the result of the snowball recruitment technique utilized in the community sample). Nonetheless, based on this instance, as well as the infrequent use of snowball recruitment, some caution should be used concerning whether or not independence of errors can be assumed. However, the Durbin-Watson test, which measures one type of independence of errors, yielded a statistic of 1.958, which is within the range of acceptable values.

Assumptions for ANOVA. The third research question sought to assess differences in number of same-ethnicity and related friends based on generation status. Therefore, the assumptions specific to one-way ANOVAs were tested. These include: normality, homogeneity of variance, and independence of observations (Tabachnick &

Fidell, 2013). As mentioned, univariate normality was assessed based on histograms as well as values for skewness, kurtosis, and the Shapiro-Wilk test for normality. Variables for proportion of same-ethnicity friends and proportion of related friends were quite skewed and not normally distributed. Transformations did not correct this, so the data were left in the original form. ANOVA is generally considered to be robust against violations of normality; yet, the results of these ANOVAs may still need to be interpreted with caution.

The assumption of homogeneity of variance was also assessed. Levene's test indicated that the assumption was violated when proportion of same-ethnicity friends was used as an outcome, but not when proportion of related friends was used as an outcome. Tabachnick and Fidell (2013) note that violations of homogeneity of variance may decrease power, but it is unlikely to be problematic in other ways so long as group sizes are approximately equal and variances between groups do not differ greatly, which is true in this case. The third assumption of ANOVA, independence of observations, has been discussed in the previous section.

Covariates. Correlations between key demographic variables (i.e., age, gender, generation status, ethnic composition of neighbourhood, perceived discrimination, beliefs regarding family obligations, and beliefs regarding adolescent rights) and outcome variables (i.e., overall life satisfaction, public life satisfaction, private life satisfaction, proportion of friends who are the same-ethnicity, and proportion of friends who are related) were examined to determine which variables would be statistically controlled for in each analysis (see Table 5). As well, associations between the outcome variables and ethnic group were assessed using ANOVAs. Ethnic group was not associated with

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Table 5

Zero Order Correlations of Demographic Variables with Culture Orientation, Life Satisfaction, and Number of Friends (N = 156)

	VIA_her	VIA_host	MSLSS	Private	Public	Same_eth	Related
Age	-.077	.073	.004	-.045	-.002	**.178***	.042
Gender	.077	.043	-.059	-.029	-.028	.095	.099
Generation	-.125	**.295****	-.005	-.025	-.001	**.284****	-.103
Neighbour	-.136	**.199***	-.028	-.103	-.011	**.394****	.027
Discrim	-.019	**-.282****	**-.305****	**-.219****	**-.336****	**-.268****	**.171***
Fam_oblig	**.300****	-.093	**.241****	.117	.104	.043	.116
Adol_right	**-.190***	**.235****	-.024	.025	-.001	.137	-.128

Note. VIA_her = Heritage Culture Orientation; VIA_host = Host Culture Orientation; MSLSS = Global Life Satisfaction; Private = Private Life Satisfaction; Public = Public Life Satisfaction; Same_eth = Proportion of same-ethnicity friends; Related = Proportion of related friends; Gender (i.e., male = 1); Generation = Immigrant generation status; Neighbour = ethnic composition of neighbourhood, whereby higher scores indicate that the neighbourhood is made up more of same-ethnicity people; Discrim = Perceived discrimination; Fam_oblig = beliefs regarding family obligations; Adol_right = beliefs regarding adolescents rights.

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

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overall life satisfaction, $F(3, 152) = 1.570$, $p = .199$, but was significantly associated with both proportion of same-ethnicity friends, $F(3, 152) = 12.481$, $p < .001$, and proportion of related friends, $F(3, 152) = 6.069$, $p = .001$. Thus, ethnic group was controlled for in the analyses with the friendship variables as outcomes. In regression analyses, covariates were entered into the first step of the hierarchical regression. In the one-way ANOVAs, covariates were entered into the analysis, resulting in an ANCOVA.

Main Analyses

Research Question #1: Is culture orientation related to life satisfaction in various domains (i.e., private and public domains) after controlling for possible covariates?

Two hierarchical multiple regression analyses were conducted to address the question of whether culture orientation is related to life satisfaction in the private and public domains. Correlations between predictor and criterion variables for the regression analyses are presented in Table 4.

Private life satisfaction. To assess if having a strong heritage culture orientation predicted life satisfaction within the private domain, a hierarchical regression was conducted with private life satisfaction entered as the outcome variable. As shown in Table 5, perceived discrimination was significantly correlated with private life satisfaction and was therefore entered in step 1 of the regression analysis. The heritage culture orientation variable was entered in step 2 (see Table 6).

As shown in Table 6, the regression model with private life satisfaction as the outcome variable was significant and accounted for 8.2% of the variance, $F(2, 153) = 6.802$, $p = .001$. In step 1, low perceived discrimination predicted higher private life satisfaction, and accounted for 4.8% of the variance, $F(1, 154) = 7.767$, $p = .006$. In step

Table 6

Summary of Hierarchical Regression Analyses for Culture Orientation Predicting

Private and Public Life Satisfaction (N = 156)

Variable	*B*	*SE B*	β	R^2	ΔR^2
Private					
Step 1				.048**	
Discrim	-.148	.053	-.219**		
Step 2				.082*	.034*
VIA_her	.077	.033	.183*		
Public					
Step 1				.113**	
Discrim	-.245	.055	-.336**		
Step 2				.113	.000
VIA_host	-.010	.051	-.015		

Note. Private = Private Life Satisfaction; Discrim = Perceived Discrimination; Fam_oblig

= beliefs regarding family obligations; VIA_her = Heritage Culture Orientation;

VIA_host = Host Culture Orientation.

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

2, stronger heritage culture orientation significantly predicted greater private life satisfaction, after controlling for discrimination, $F_{change}(1, 153) = 5.606$, $p = .019$. An analysis of the standardized beta weights indicated that heritage culture orientation, β = .183, $t(2, 153) = 2.368$, $p = .019$, and discrimination, β = -.216, $t(2, 153) = -2.787$, $p = .006$, significantly predicted greater private life satisfaction.

Public life satisfaction. To assess if having a strong host culture orientation predicted life satisfaction within the public domain, a hierarchical regression was conducted with public life satisfaction entered as the outcome variable. As shown in Table 5, perceived discrimination was significantly correlated with public life satisfaction and was therefore entered in step 1 of the regression analysis. The host culture orientation variable was entered in step 2 (see Table 6).

As shown in Table 6, the regression model was significant and accounted for 11.3% of the variance, $F(2, 153) = 9.743$, $p < .001$. In step 1, low perceived discrimination predicted higher public life satisfaction, and accounted for 11.3% of the variance, $F(1, 154) = 19.574$, $p < .001$. However, the overall model was significant largely because of the inclusion of the covariate and not due to the variable of interest (i.e., host culture orientation). As such, the addition of the host culture orientation variable in step 2 did not significantly change the model, $F_{change}(1, 153) = 0.035$, $p = .851$. An analysis of the standardized beta weights indicated that discrimination significantly added to the prediction of greater public life satisfaction, β = -.340, $t(2, 153) = -4.285$, $p < .001$, but host culture orientation did not, β = -.015, $t(2, 153) = -0.188$, $p = .851$.

Research question 1: Summary of results. First, in the present study, heritage culture orientation was a significant predictor of private life satisfaction, even after

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controlling for a significant covariate (i.e., perceived discrimination). That is, heritage culture orientation predicted a change in private life satisfaction over and above the predictive ability of discrimination. These results support the hypotheses.

Second, host culture orientation was not a significant individual predictor of public life satisfaction after controlling for a significant covariate (i.e., perceived discrimination). That is, host culture orientation did not predict change in public life satisfaction over and above the change predicted by discrimination. These results did not support the hypothesis.

Research Question #2: Does support from different groups of friends mediate the relation between culture orientation and life satisfaction?

To assess each hypothesis, a series of three multiple regressions were conducted followed by a test of the indirect effect (Baron & Kenny, 1986; Preacher & Hayes, 2008). The first regression analysis assessed the relation between the culture orientation variable and the life satisfaction variable. The second regression analysis assessed the relation between the culture orientation variable and the friendship/support variable. The third and final regression analysis assessed the life satisfaction variable as the outcome variable, and simultaneously assessed the culture orientation and friendship/support variable as predictor variables. Mediation is indicated if, in the final regression analysis, there is a significant relation between the friendship/support variable and the life satisfaction variable, while also decreasing the significant relation between the culture orientation variable and the life satisfaction variable previously found in the first regression analysis. The final test of the indirect effect uses bootstrapping to determine if the effect of the mediator variable (i.e., the friendship/support variable) significantly

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reduces the effect of culture orientation on life satisfaction. Bootstrapping is a nonparametric resampling procedure that does not involve the assumption of normality (Preacher & Hayes, 2008), which is helpful in this case given the issues with normality in the friendship variables. As well, Baron and Kenny's (1986) approach has been shown to have low power in most cases (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002), so this final test may provide additional information regarding a potential mediation relationship.

Proportion of same-ethnicity friends as a mediator. To assess whether support of same-ethnicity friends mediated the relation between heritage culture orientation and private life satisfaction, a number of analyses were conducted. As mentioned, the proportion of friends nominated was used as a proxy measure of support. Three regression analyses were conducted to assess for mediation, according to Baron and Kenny's (1986) approach, and this was followed up with a test of the indirect effect using bootstrapping.

For the first regression analysis, private life satisfaction was the outcome variable. Discrimination was significantly associated with private life satisfaction and was therefore entered in step 1 (see Table 5). Heritage culture orientation was entered in step 2. As reported above (see Table 6), heritage culture orientation significantly predicted greater private life satisfaction, after controlling for discrimination.

The outcome variable for the second regression was proportion of same-ethnicity friends. Age, generation status, ethnic composition of neighbourhood, and discrimination were all significantly associated with proportion of same-ethnicity friends and were

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therefore entered in step 1 (see Table 5). Heritage culture orientation was entered in step 2.

The regression model was significant and accounted for 22.7% of the variance in proportion of same-ethnicity friends, $F(5, 148) = 8.688$, $p < .001$ (see Table 7). After controlling for age, generation status, ethnic composition of neighbourhood, and discrimination, heritage culture orientation did not significantly predict proportion of same-ethnicity friends, but the effect approached significance, $F_{change}(1, 148) = 3.794$, $p = .053$. Therefore, further regression analyses were not conducted, but results of the indirect effect were probed. Specifically, the indirect effect was assessed using a macro that provides bootstrapping results (Preacher & Hayes, 2008). Bootstrapping results produce confidence intervals based on repeated sampling of the data. Confidence intervals can be interpreted based on whether or not the interval includes zero; if the confidence interval does not include zero, the indirect effect is considered significant (Preacher & Hayes, 2008). In line with the results yielded by the Baron and Kenny (1986) method, results indicated that the indirect effect of heritage culture orientation on private life satisfaction via proportion of same-ethnicity friends was not significant, a_1 x b_1 = -0.004, 95% CI: [-0.019, 0.0019]. Therefore, based on two different types of tests, proportion of same-ethnicity friends did not mediate the relation between heritage culture orientation and private life satisfaction in this sample.

Proportion of related friends as a mediator. To assess whether support of related friends mediated the relation between heritage culture orientation and private life satisfaction, a number of analyses were conducted. Again, the proportion of friends nominated was used as a proxy measure of support. As mentioned, mediation was

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Table 7

Summary of Hierarchical Regression Analyses for Heritage Culture Orientation

Predicting Proportion of Same-Ethnicity Friends (N = 156)

Variable	B	$SE\ B$	β	R^2	ΔR^2
Same_eth					
Step 1				.207**	
Age	.024	.015	.116		
Generation	.048	.038	.108		
Neighbour	.090	.025	.299**		
Discrim	-.051	.031	-.131		
Step 2				.227	.020
VIA_her	.035	.018	.143		

Note. Same_eth = Proportion of same-ethnicity friends; Generation = Immigrant

generation status; Neighbour = Neighbourhood ethnic composition; Discrim = Perceived

Discrimination; VIA_her = Heritage Culture Orientation.

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

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assessed based on three regressions, according to Baron and Kenny's (1986) approach, as well as a test of the indirect effect using bootstrapping.

The first analysis assessed heritage culture orientation as a predictor of private life satisfaction, while controlling for discrimination. As reported above (see Table 6), heritage culture orientation predicted private life satisfaction even after controlling for discrimination.

The outcome variable for the second regression was proportion of related friends. Discrimination was significantly associated with proportion of related friends and was therefore entered in step 1 (see Table 5). Heritage culture orientation was entered in step 2.

The regression model was significant and accounted for 6.1% of the variance in proportion of related friends, $F(2, 153) = 5.012$, $p = .008$ (see Table 8). After controlling for discrimination, heritage culture orientation significantly predicted proportion of related friends, $F_{change}(1, 153) = 5.263$, $p = .023$. An analysis of the standardized beta weights indicated that stronger heritage culture orientation significantly predicted a greater proportion of related friends, $\beta = .180$, $t(2, 153) = 2.294$, $p = .023$.
The outcome variable for the third regression was private life satisfaction. Discrimination was significantly associated with private life satisfaction and was therefore entered in step 1. Heritage culture orientation and proportion of related friends were entered in step 2.

The regression model was significant and accounted for 8.8% of the variance in proportion of related friends, $F(3, 152) = 4.904$, $p = .003$ (see Table 9). After controlling for discrimination, heritage culture orientation and proportion of related friends

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Table 8

Summary of Hierarchical Regression Analyses for Heritage Culture Orientation

Predicting Proportion of Related Friends (N = 156)

Variable	B	$SE\ B$	β	R^2	ΔR^2
Related					
Step 1				.029*	
Discrim	.043	.020	.171*		
Step 2				.061*	.032*
VIA_her	.028	.012	.180*		

Note. Related = Proportion of related friends; Discrim = Perceived Discrimination;

VIA_her = Heritage Culture Orientation.

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

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Table 9

Summary of Hierarchical Regression Analyses for Heritage Culture Orientation and

Proportion of Related Friends Predicting Private Life Satisfaction (N = 156)

Variable	B	$SE\ B$	β	R^2	ΔR^2
Private					
Step 1				.048**	
Discrim	-.148	.053	-.219**		
Step 2				.088*	.040*
VIA_her	.083	.033	.199*		
Related	-.223	.213	-.084		

Note. Private = Private Life Satisfaction; Discrim = Perceived Discrimination; VIA_her =

Heritage Culture Orientation; Related = Proportion of related friends.

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

significantly predicted private life satisfaction, $F_{change}(2, 152) = 3.354$, $p = .038$. An analysis of the standardized beta weights indicated that stronger heritage culture orientation significantly predicted greater private life satisfaction, $\beta = .199$, $t(3, 152) = 2.520$, $p = .013$, but proportion of related friends did not, $\beta = -.084$, $t(3, 152) = -1.048$, $p = .296$. The inclusion of both heritage culture orientation and proportion of related friends variables did not significantly reduce the effect of heritage culture orientation to non-significance, indicating that according the Baron and Kenny (1986) approach, proportion of related friends did not mediate the effect of heritage culture orientation on private life satisfaction.

These results were followed up with a test of the indirect effect based on bootstrapping results. In line with prediction, results indicated that the indirect effect of heritage culture orientation on private life satisfaction via proportion of same-ethnicity friends was significant, a_1 x $b_1 = -0.009$, 95% CI: [-0.026, -0.001]. Given that the confidence interval does not contain zero, the effect is considered to be significant. Again, bootstrapping is a nonparametric resampling procedure and does not require the assumption of normality of the distribution, which likely explains the discrepant findings. Based on bootstrapping results, the proportion of related friends mediates the relation between heritage culture orientation and private life satisfaction in this sample.

Research question 2: Summary of results. Based on Baron and Kenny's (1986) approach utilizing a series of hierarchical regression analyses, as well as a test of the indirect effect based on bootstrapping results, the proportion of same-ethnicity friends did not mediate the relation between heritage culture orientation and private life satisfaction. These results did not support the original hypothesis.

However, evidence that the proportion of related friends may mediate the relation between heritage culture orientation and private life satisfaction was found using a test of the indirect effect based on bootstrapping results. Although the traditional hierarchical regression analyses did not indicate significant mediation, such analyses rely on a normal distribution and the distribution of the proportion of related friends variable was not normally distributed. Bootstrapping does not require a normal distribution and is generally considered to be superior to Baron and Kenny's (1986) more traditional approach of running a series of hierarchical regressions (Preacher & Hayes, 2004; 2008), and bootstrapping results indicated a significant indirect effect in this case. Combined, these results support the hypothesis that the proportion of related friends mediates the relation between heritage culture orientation and private life satisfaction.

Research Question #3: What differences among immigrant generations are present in the number of same-ethnicity friends and related friends, and the importance of same-ethnicity friends and related friends?

To address the question of similarities and differences in proportion of types of friendships, one-way ANCOVAs were conducted. Two hierarchical regression analyses were conducted to assess the importance of different types of friends.

Proportion of same-ethnicity friends. A one-way ANCOVA was conducted to assess the relation between generation status and proportion of same-ethnicity friends. Number of same-ethnicity friends was operationalized as the proportion of friends nominated who were identified as same-ethnicity. Generation status (i.e., separated by first, second, and third or higher) was entered as the independent variable, and proportion of same-ethnicity friends was entered as the dependent variable. Perceived

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discrimination, age, ethnic composition of neighbourhood, and ethnic group were entered as covariates because they were found to be significantly associated with proportion of same-ethnicity friends (see Table 5). Proportions ranged from 0-1, and results compare mean proportions by immigrant generation. A main effect for generation status was found for proportion of same-ethnicity friends, $F(6, 147) = 8.178$, $p < .001$. Contrary to the hypothesis, contrasts indicated that second-generation ($M = 0.47$, $SD = 0.33$) and third- or later-generation ($M = 0.74$, $SD = 0.31$) were each found to be significantly different from the remaining two groups, $F(1, 147) = 6.499$, $p = .012$, $F(1, 147) = 6.702$, $p = .011$, respectively; third- or later-generation immigrants were more likely to have higher proportions of same-ethnicity friends, whereas second-generation immigrants were less likely to have higher proportions of same-ethnicity friends. Counter to hypothesis, first-generation immigrants ($M = 0.49$, $SD = 0.29$) were not significantly different from those who identified as second-generation, or third- or later-generation, $F(1, 147) = 0.529$, $p = .468$.

Proportion of related friends. A one-way ANCOVA was conducted to assess the relation between generation status and proportion of related friends. Number of related friends was operationalized as the proportion of friends nominated who were identified as related to the individual (i.e., a cousin, sibling, etc.). Generation status was entered as the independent variable and proportion of related friends was entered as the dependent variable. Perceived discrimination and ethnic group were entered as covariates because they were found to be significantly associated with proportion of related friends (see Table 5). Results indicated that there was a main effect for generation status, $F(4, 151) = 3.493$, $p = .009$. Contrary to the hypothesis, contrasts indicated that

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first-generation immigrants ($M = 0.18$, $SD = 0.27$) were not significantly more likely to have a higher proportion of related friends compared with second-generation ($M = 0.18$, $SD = 0.22$), and third- or later-generation immigrants ($M = 0.12$, $SD = 0.13$), $F(1, 151) = 0.004$, $p = .949$. In fact, contrasts indicated that there were no differences among the generations.

Importance of same-ethnicity friends. It was hypothesized that support from same-ethnicity friends would moderate the relation between generation status and life satisfaction; that is, same-ethnicity friends would be more important for life satisfaction for first-generation immigrants than for second or later-generation immigrants. As mentioned, the proportion of friends nominated was used as a proxy measure of support. Prior to the analysis, the continuous moderator and covariate variables were centred in order to reduce the possibility of multicollinearity effects between the independent variable and the moderator with the interaction variable (Aiken & West, 1991). In order to assess this hypothesis, a hierarchical regression was conducted wherein overall life satisfaction was the outcome variable. Perceived discrimination and beliefs regarding family obligations were entered as covariates in step 1, generation status and proportion of same-ethnicity friends were entered in step 2, and an interaction variable, which was formed by multiplying values for generation status by values for proportion of same-ethnicity friends, was entered in step 3. A moderation effect is considered significant when the interaction term is significant.

The regression model examining the moderating role of proportion of same-ethnicity friends was significant and accounted for 17.3% of the variance in overall life satisfaction, $F(5, 150) = 6.295$, $p < .001$ (see Table 10). Generation status and proportion

Table 10

Summary of Hierarchical Regression Analyses for the Moderating Role of Same-Ethnicity Friends (N = 156)

Variable	B	$SE\ B$	β	R^2	ΔR^2
MSLSS					
Step 1				.152**	
Discrim	-.215	.052	-.306**		
Fam_oblig	.233	.072	.242**		
Step 2				.171	.019
Generation	-.098	.066	-.122		
Same_eth	-.115	.142	-.064		
Step 3				.173	.002
GenXSame_eth	-.120	.193	-.148		

Note. MSLSS = Global Life Satisfaction; Discrim = Perceived Discrimination;

Fam_oblig = beliefs regarding family obligations; Generation = Immigrant generation

status; Same_eth = Proportion of same-ethnicity friends; GenXSame_eth = the

interaction variable between generation status and proportion of same-ethnicity friends.

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

of same-ethnicity friends did not significantly predict overall life satisfaction after controlling for discrimination and beliefs about family obligations, $F_{change}(2, 151) = 1.770$, $p = .174$. Likewise, the interaction term did not significantly predict overall life satisfaction after controlling for the variables including in the previous steps, $F_{change}(1, 150) = 0.388$, $p = .534$. Generation, $\beta = -.114$, $t(5, 150) = -1.387$, $p = .168$, proportion of same-ethnicity friends, $\beta = .073$, $t(5, 150) = 0.313$, $p = .754$, and the moderating variable, $\beta = -.148$, $t(5, 150) = -0.623$, $p = .534$, did not predict overall life satisfaction. Therefore, the proportion of same-ethnicity friends variable did not moderate the relation between generation status and life satisfaction.

Importance of related friends. It was hypothesized that support from related friends would moderate the relation between generation status and life satisfaction; that is, related friends would be more important for life satisfaction for first-generation immigrants than for second or later-generation immigrants. Again, the proportion of friends nominated was used as a proxy measure of support, and the continuous moderator and covariates were centred. In order to assess this hypothesis, a hierarchical regression was conducted wherein overall life satisfaction was the outcome variable. Perceived discrimination and beliefs regarding family obligations were entered as covariates in step 1, generation status and proportion of related friends were entered in step 2, and an interaction variable, which was formed by multiplying values for generation status by values for proportion of related friends, was entered in step 3.

The regression model examining the moderating role of proportion of related friends was significant and accounted for 16.9% of the variance in overall life satisfaction,

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$F(5, 150) = 6.110$, $p < .001$ (see Table 11). Generation status and proportion of related

friends did not significantly predict overall life satisfaction after controlling for

discrimination and beliefs about family obligations, $F_{change}(2, 151) = 1.555$, $p = .215$.

Likewise, the interaction term did not significantly predict overall life satisfaction after

controlling for the variables included in the previous steps, $F_{change}(1, 150) = 0.039$, p

$= .843$. Generation, $\beta = -.139$, $t(5, 150) = -1.720$, $p = .087$, proportion of related friends,

$\beta = .000$, $t(5, 150) = 0.001$, $p = .999$, and the moderating variable, $\beta = -.040$, $t(5, 150) = -$

0.198, $p = .843$, did not predict overall life satisfaction.

Research question 3: Summary of results. The results indicated a relation

between generation status and proportion of same-ethnicity friends. However, the specific

relation was counter to the hypotheses; that is, second-generation immigrants were less

likely than first- and third- or later-generation immigrants to have same-ethnicity friends,

and third- or later generation immigrants were more likely than first- and second-

generation immigrants to have same-ethnicity friends. First-generation immigrants were

not more likely to have same-ethnicity friends compared with second- and third- or later-

generation immigrants. Similarly, first-generation immigrants were not more likely to

have friends who were also related to them. In this case, there was no association

between number of friends who are also relatives and generation status. When

interpreting these results, it is important to recall that with the exception of a few

individuals, most third- or later-generation immigrants were European Canadians, and

most first-generation immigrants were non-European Canadians (i.e., they were Arab

Canadians, East Asian Canadians and/or South Asian Canadians).

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Table 11

Summary of Hierarchical Regression Analyses for the Moderating Role of Related

Friends (N = 156)

Variable	B	$SE\ B$	β	R^2	ΔR^2
MSLSS					
Step 1				.152**	
Discrim	-.215	.052	-.306**		
Fam_oblig	.233	.072	.242**		
Step 2				.169	.017
Generation	-.110	.0634	-.137		
Related	-.103	.210	-.037		
Step 3				.169	.000
GenXRelated	-.062	.313	-.040		

Note. MSLSS = Global Life Satisfaction; Discrim = Perceived Discrimination;

Fam_oblig = beliefs regarding family obligations; Generation = Immigrant generation

status; Related = Proportion of related friends; GenXRelated = the interaction variable

between generation status and proportion of related friends.

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

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It was hypothesized that same-ethnicity friends would be more important for first-generation immigrants in terms of life satisfaction. The present study found no evidence of such a moderating relationship. Likewise, the present study found no evidence of a moderating effect for related friends for first-generation immigrants.

Exploratory Analyses

Differences by ethnic group. Exploratory analyses were conducted to assess differences among ethnic groups. As mentioned, ethnic group was not associated with differences in life satisfaction, but was associated with both of the friendship variables, so differences were probed in this area. First, a one-way ANCOVA was conducted to assess the relation between ethnic group and proportion of same-ethnicity friends. Ethnic group was entered as the independent variable, and proportion of same-ethnicity friends was entered as the dependent variable. Perceived discrimination, age, ethnic composition of neighbourhood, and generation status were entered as covariates because they were found to be significantly associated with proportion of same-ethnicity friends. A main effect for ethnic group was found for proportion of same-ethnicity friends after controlling for relevant covariates, $F(7, 146) = 8.690$, $p < .001$. Contrasts indicated that individuals of European background ($M = .72$, $SD = .31$) were more likely than those of Arab ($M = .49$, $SD = .29$), East Asian ($M = .42$, $SD = .33$), and South Asian ($M = .35$, $SD = .28$) backgrounds to have same-ethnicity friends, $F(1, 146) = 12.298$, $p = .001$. In addition, South Asian Canadians were less likely than all other groups to have same-ethnicity friends, $F(1, 146) = 10.322$, $p = .002$.

Second, a one-way ANCOVA was conducted to assess the relation between ethnic group and number of related friends. Ethnic group was entered as the independent

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variable and proportion of related friends was entered as the dependent variable. Perceived discrimination was entered as a covariate because it was found to be significantly associated with proportion of related friends. Results indicated that there was a main effect for ethnic group after controlling for relevant covariates, $F(4, 151) = 4.651$, $p = .001$. Contrasts indicated that Arab Canadians ($M = .29$, $SD = .30$) were more likely than East Asian ($M = .13$, $SD = .20$), South Asian ($M = .11$, $SD = .17$), or European Canadians ($M = .13$, $SD = .15$) to have friends who were also related to them, $F(1, 151) = 13.627$, $p < .001$.

Exploratory analyses: Summary of results. In the present study, there was an association between ethnic group and proportion of same-ethnicity friends. In this case, European Canadian participants were more likely to have same-ethnicity friends, and South Asian participants were less likely to have same-ethnicity friends. These effects were significant even after controlling for associated covariates.

Interestingly, the present study also found an association between ethnic group and proportion of friends who are also relatives. The results indicated that Arab Canadians in the sample were more likely to have related friends compared with any of the other groups.

Qualitative Data

Participants were asked to rate same-ethnicity, cross-ethnicity, and related friends' support overall. Responses were made on a 3-point scale ranging from "not at all" to "a great deal". For support from same-ethnicity friends, most participants ($n = 107$, 68.6%) indicated that their same-ethnicity friends provided them with 'a great deal' of support. Very few participants ($n = 9$, 5.8%) responded with "N/A", indicating that they do not

have any same-ethnicity friends. Similarly, most participants (n = 91, 58.3%) indicated that their cross-ethnicity friends provided them with 'a great deal' of support, whereas few participants (n = 10, 6.4%) responded with "N/A". Lastly, the majority of participants (n = 86, 55.1%) indicated that their related friends provided them with 'a great deal' of support, but a more significant proportion of participants (n = 45, 28.8%) responded with "N/A", indicating that they do not have any friends who are also relatives.

Second, participants were asked to describe the kinds of support they receive from each group of friends. These data were assessed using an exploratory process of open coding (Strauss & Corbin, 1998). Narrative responses were first analyzed for categories, which allowed for codes to be derived from the data rather than a priori. Each narrative was read and coded for concepts that came up repeatedly. In the current study, the codes were predominantly types of support, which was expected based on the questions asked. The codes were used to create frequency counts, which were then compared between groups using chi-square analyses.

Participants provided responses to questions regarding the kind of support they receive from their same-ethnicity, cross-ethnicity, and related friends. They were asked to add as much detail as possible and to refer to friends that they identified with nicknames earlier in the study, when appropriate. Of the 156 valid participants included in the quantitative analyses, 14 left all of the qualitative items that involved completing text responses blank and were therefore not included in these analyses. Responses to the 3 questions were each coded based on 7 themes that came up repeatedly throughout (see Table 12).

Table 12

Themes Based on Coding of Qualitative Responses

Code	Example Key Words	Example from Participant Responses
Emotional Support	Understanding, listening, encouragement	"The support I receive from my same ethnicity friends is when I have a problem they are there to talk to me. They are very supportive and non judgemental in their opinions and comments. We all are on the same page about everything."
Financial/Tangible Support	Lending/giving money, borrowing things	"[Name] is always there for me when I need him, he pays for things and if i ever needed any kind of help … financially … he would do the best he could to help. For example, [Name] lent me money one time when I couldn't afford to pay my bills that month."
Practical Support	Help with school, providing information	"My sister gives me the most support in my life, she used to look out for deadlines I may miss for me, she tells me about opportunities..."
Fun/Hang Out/"Social"	Party, going out to eat, social events	"…They always help me when I need them, and always go out and have a good time with me."
Preferred Over Other Groups	They understand me better than my X group friends	"…Other friends are helpful and supportive but the bond shared by my same-ethnicity friends seems to be stronger. My same-ethnicity friends were available at a young age and due to similar upbringing we share many of the same values and behavioural tendencies."
Not Preferred Over Other Groups	They don't understand me like my X group friends	"I'm not as close to most of my cross-ethnicity friends. There's probably 1-2 out of a group of 10 that I can say I feel comfortable asking for help (serious problems)."
Lack of Support	Don't go to them for support, they aren't supportive	"It is hard to talk to my family about anything personal. They are judgemental and would think badly of me if I asked them about things such as sex or relationships. They are really hard to talk to and very traditional when it comes to things like that. We don`t talk about it and pretend like it doesn`t exist."

Pearson's chi-square tests were conducted to examine differences among both ethnic group and generation for each of the codes. Chi-square tests require that each expected frequency should be greater than 5 (Field, 2009). Because some of the codes were identified infrequently in the text provided by participants, not every code was analyzed due to insufficient sample size.

First, differences based on immigrant generation were assessed. There was a difference between generations based on the mention of emotional support from same-ethnicity friends, χ^2 (2) = 6.667, p = .036, Cramer's V = .217, indicating a small to medium effect size (Cohen, 1988). Comparison between expected and actual counts indicated that third- or later-generation immigrants were more likely to identify emotional support from same-ethnicity friends, whereas first-generation immigrants were less likely to identify this type of support. As well, there was a difference between generations based on the mention of 'fun' support from cross-ethnicity friends, χ^2 (2) = 9.140, p = .010, Cramer's V = .254, indicating a small to medium effect size (Cohen, 1988). In this case, second-generation immigrants were more likely to identify 'fun' support from cross-ethnicity friends, whereas first-generation immigrants were less likely to identify this type of support.

Second, differences based on ethnic groups were assessed. There was a difference between ethnic groups based on the mention of some type of 'fun' support from same-ethnicity friends, χ^2 (3) = 8.426, p = .038, Cramer's V = .244, indicating a small to medium effect size (Cohen, 1988). Comparison between expected and actual counts indicated that European Canadians were more likely than expected to identify 'fun' support from same-ethnicity friends, whereas South Asian Canadians were less likely to

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identify this type of support. As well, there was a difference between ethnic groups based on the mention of emotional support from related friends, which approached significance, $\chi^2 (3) = 7.648$, $p = .054$, Cramer's $V = .232$, again indicating a small to medium effect size (Cohen, 1988). In this case, Arab Canadians were more likely than expected to identify emotional support from related friends, and East Asian Canadians were less likely to identify this type of support.

In summary, when participants were asked to rate support from same-ethnicity, cross-ethnicity, and related friends overall, most participants rated support from their friends quite positively. Some differences emerged when participants were asked to write text responses for the specific types of support they receive from each group of friends. Results of coding the text responses indicated that there were differences among immigrant generations for emotional support from same-ethnicity friends, wherein third- or later-generation immigrants were more likely to identify this type of support and first-generation immigrants were less likely to identify this type of support. In this case, it is important to recall that with the exception of a few individuals, most third- or later-generation immigrants were European Canadians, and most first-generation immigrants were non-European Canadians. As well, there was a difference based on generation for 'fun' support from cross-ethnicity friends, where second-generation immigrants were more likely to identify 'fun' support among this group of friends, and first-generation immigrants were less likely to identify this type of support.

There were also differences based on ethnic group. There were ethnic group differences for 'fun' support from same-ethnicity friends, where European Canadians were more likely to identify 'fun' support from this group of friends and South Asian

Canadians were less like to identify this type of support. As well, there was a difference that approached significance between ethnic groups based on emotional support from related friends, where Arab Canadians were more likely to identify this type of support for related friends, and East Asian Canadians were less likely to identify this type of support.

CHAPTER V

DISCUSSION

Review of Results

The purpose of the present study was to investigate the relation between cultural orientation and different domains of life satisfaction among immigrant and non-immigrant youth from four ethnic groups. In addition, this study examined the role of different groups of friends, particularly same-ethnicity and related friends, and assessed how the presence of specific types of friends was related to cultural orientation and life satisfaction. Further, the present study included qualitative items in order to attempt to clarify the types of support received from same-ethnicity, cross-ethnicity, and related friends.

Private and public life satisfaction. Previous research has suggested that parents influence heritage culture retention, whereas peers encourage exploration of the host culture among immigrant youth (Oppedal et al., 2004). Similarly, Abu-Laban and Abu-Laban (1999) have suggested that youth, especially Arab youth, may have two major areas of life: the private life sphere, including family and home life, and the public sphere, including school and friends. Specifically, the current study sought to follow up on results obtained by Paterson (2008; Paterson & Hakim-Larson, 2012), which indicated that, among Arab youth, heritage and host culture orientation were related to private and public life satisfaction, respectively. Likewise, in the current study, it was hypothesized that greater heritage culture orientation would predict greater private life satisfaction and greater host culture orientation would predict greater public life satisfaction. These hypotheses were partially supported. In the current study, greater heritage culture

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orientation, indicating greater identification with one's heritage culture and cultural practices, predicted greater private life satisfaction, including satisfaction with family and self. However, greater host culture orientation, indicating greater identification with North American culture and cultural practices, did not significantly predict public life satisfaction, including satisfaction with school, friends, and living environment.

Importantly, this study echoes Paterson's (2008; Paterson & Hakim-Larson, 2012) findings indicating the importance of heritage culture orientation in predicting life satisfaction within the private domain, including satisfaction with family and self. Among immigrant families, parents often encourage their children to hold values consistent with their heritage culture (Berry et al., 2006b). The current study indicates that this may be true for second-generation and third- or later-generation immigrants as well.

Granted, the current study did not mirror all of Paterson's (2008; Paterson & Hakim-Larson, 2012) findings. The current study did not find support for host culture orientation as a predictor of satisfaction within the public domain, including satisfaction with friends, school, and living environment. There are a few possible reasons for this discrepancy. First, the current study collected data from a different sample; that is, the current study included immigrant and non-immigrant youth from four ethnic groups, rather than just immigrant Arab youth. Second, the current study included a number of important covariates which were not included in Paterson's (2008; Paterson & Hakim-Larson, 2012) study. Namely, the current study included a measure of family values, which was associated with a number of outcomes, as well as a measure of perceived discrimination, which was associated with all outcomes and nearly every variable

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included in the study. Evidently, perceived discrimination is an incredibly important variable to include in research that samples immigrants and/or ethnic minorities. Including such covariates may account for some of the differences in the results.

Social support as a mediator. Previous research has suggested a mediating role of social support on the relation between cultural orientation and adaptation as well as well-being (e.g., Oppedal et al., 2004; Paterson, 2008; Paterson & Hakim-Larson, 2012; Shen & Takeuchi, 2001). Paterson and Hakim-Larson (2012) found that family support mediated the relation between heritage culture orientation and greater satisfaction with family among Arab youth. However, friend support did not mediate the relation between positive host culture orientation and greater satisfaction with school life (Paterson & Hakim-Larson, 2012). In line with prediction, the present study found that support from related friends (i.e., based on proportion of related friends identified) mediated the relation between heritage culture orientation and private life satisfaction. In other words, support from related friends helps to explain how greater heritage culture affects change in private life satisfaction. In the present study, it was hypothesized that greater support from same-ethnicity friends would function in a similar manner; however, evidence for this hypothesis was not found.

Types of friendships. Previous research has indicated some conflicting results regarding the types of friends that immigrant and non-immigrant youth seem to have. Berry and colleagues (2006b) found that, among immigrant and non-immigrant youth, *all* youth were more likely to have friends who were of their own ethnicity. However, other researchers have found that first-generation immigrant youth had more same-ethnicity friends compared to second- or later-generation youth (e.g., Harris et al., 2003). Based

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on these findings, it was hypothesized that first-generation immigrants would have more same-ethnicity friends than second- or later-generation immigrants. Contrary with prediction, first-generation immigrants were not more likely to have more same-ethnicity friends. However, there was a difference in the number of same-ethnicity friends by generation. In the current study, third- or later-generation immigrants were more likely than earlier immigrants to have more same-ethnicity friends. Because the same-ethnicity friends variable is a proportion, cross-ethnicity friends is directly inverse. By extension, then, third- or later-generation immigrants were least likely to have cross-ethnicity friends. Again, with the exception of a few individuals, most third- or later-generation immigrants were European Canadians. As well, second-generation immigrants were least likely to have same-ethnicity friends, which also indicates that they were most likely to have cross-ethnicity friends.

Although empirical studies seem to be lacking, some researchers have suggested that immigrant youth may be more likely to create close friendships with relatives, such as siblings or cousins (Azmitia et al., 2006; Bradford Brown & Mounts, 2007; Stanton-Salazar & Spina, 2005). Therefore, it was hypothesized that first-generation immigrants would have more related friends than second- or later-generation immigrants. Evidence to support this hypothesis was not found in the current study. In fact, there were no detectable differences in number of related friends based on generation status. Again, it is important to note that in the current study, most first-generation participants were non-European Canadians.

The results regarding types of friendships conflict with past research which has indicated that either friendships are similar across immigrant generation (Berry et al.,

2006b), or that first-generation immigrants are more likely to have same-ethnicity (Harris et al., 2003) and related friends (Azmita et al., 2006; Bradford Brown & Mounts, 2007; Stanton-Salazar & Spina, 2005). A possible explanation for the contrary findings in this case is that first-generation immigrants may have less access to same-ethnicity and related peers, depending on their country of origin, the number of people from that ethnic group in the area in which they reside, as well as if they have come to Canada with family or not. It is possible that first-generation immigrants would be more likely to have same-ethnicity and related friends, but may not have had access to such individuals in the sample of the current study. Similarly, assuming that all individuals are more likely to have same-ethnicity friends, as Berry and colleagues (2006b) found, it would make sense that third- or later-generation immigrants would have more access to same-ethnicity peers, especially because in the current study most of the third- or later-generation sample was made up of European Canadians, which indicates that they would be members of the ethnic majority in Canada. In the current study, proportion of same-ethnicity friends was associated with ethnic composition of neighbourhood, whereby individuals were more likely to have more same-ethnicity friends if they lived in an area where a greater number of people were from their ethnic group, and this seems to support this idea that friendships may be based on the people available to youth. Thus, it would be important to include availability of friends as a factor in future studies.

Social support as a moderator. Previous studies have indicated a moderating role of social support on the relation between cultural orientation and adaptation (e.g., Crockett et al., 2007). In the present study, it was hypothesized that support from same-ethnicity friends would be more important for life satisfaction for first-generation

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immigrants compared to second- or later-generation immigrants. This was assessed based on a moderation analysis, examining any differences between first-, second-, and third- or later-generation immigrants. In the current study, there was no evidence that proportion of same-ethnicity friends moderated the effect of generation status on overall life satisfaction. Likewise, it was hypothesized that support from related friends would moderate the relation between generation status and overall life satisfaction. Again, no evidence of this moderating relationship was found. It is important to keep in mind that in the current study the moderator variable that was assessed was not social support precisely, but rather a measure of the proportion of friends that individuals reported.

Results from previous research that have included social support operationalized in a variety of ways have indicated rather mixed findings when assessing the moderating role of social support in the relation between culture orientation and adaptation (e.g., Crockett et al., 2007). Among the studies that have found moderation, they have generally used immigrants that belong to a single ethnic group, such as Mexican Americans. Nevertheless, many studies which have not found evidence of a moderating role of social support (e.g., Paterson, 2008; Rodriguez et al., 2003) have also studied immigrants that belong to a single ethnic group. As well, the current study examined social support as a moderator of the relation between generation status and overall life satisfaction. Although generation status and overall life satisfaction are somewhat similar to culture orientation and adaptation, respectively, the variables are not exactly the same, and this may also account for why no evidence of moderation was found in the current study. The variables used in the current study were slightly different than the variables frequently used in past work.

At this point, it is difficult to say if social support acts as a moderator, and if so, for which particular variables. In the present study, there was no evidence found for social support as a moderator. It is important to note that power for tests of moderation is quite low, especially when continuous variables are included, as they were in this case (McClelland & Judd, 1993), so it is also possible that the current study did not have sufficient sample size to detect an effect.

Exploratory findings. Given that the hypotheses related to types of friendships were generally not supported, differences in types of types of friendships based on ethnic group were probed. Results from the current study indicated that there were differences among the four ethnic groups both in terms of proportion of same-ethnicity friends as well as proportion of related friends. First, those of European background were more likely to have same-ethnicity friends, and by extension, less likely to have cross-ethnicity friends. As well, those of South Asian background were less likely to have same-ethnicity friends, and thus more likely to have cross-ethnicity friends. Second, those of Arab background were more likely to have friends who were also related to them. There were no differences among the remaining groups for proportion of related friends.

Although these analyses were exploratory, some of the results do fit well with current literature regarding cultural differences. For instance, it has been mentioned in past research that South Asians, especially those from India, are often able to speak English better than many other immigrant groups, which may ease adaptation to Canadian culture and perhaps encourage more cross-ethnicity friendships (Vohra & Adair, 2000). This may explain why in the current study South Asian Canadians were more likely to have a higher proportion of cross-ethnicity friends.

As well, European Canadian youth in the current study were more likely to have same-ethnicity friends. It is likely that this result corresponds with the previous findings regarding third- or later-generation immigrants being more likely to have same-ethnicity friends. Given that the third- or later-generation sample was almost entirely made up of European Canadians, the results obtained for generation differences are obviously closely linked with the results obtained for ethnic group differences, especially for third- or later-generation and European Canadian participants. As mentioned, Berry et al. (2006b) found that both immigrant and non-immigrant youth were more likely to have same-ethnicity friends (i.e., more same-ethnicity than cross-ethnicity friends). Therefore, it is possible that individuals of European background had more same-ethnicity friends than other groups because they are part of the ethnic majority and there are more people of European descent in the sample population. As well, proportion of same-ethnicity friends was associated with ethnic composition of neighbourhood, whereby individuals were more likely to have more same-ethnicity friends if they lived in an area where a greater number of people were from their ethnic group. This may lend support to the idea that friendships are based on the people available to youth. Yet, in this case, it is important to be mindful of the differences in sample sizes between these groups; it is difficult to draw firm conclusions given the relatively small sample sizes in the Arab, East Asian, and South Asian groups.

In the current study, Arab Canadians were more likely to have friends who were also related to them. Some research has indicated that those who come from collectivist cultures may be more likely to have an overlap in family and friends (Seginer et al., 2007). Although all of the ethnic groups included in the study, except for the European

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Canadians, hail from collectivist cultures, Arab Canadians also value paternalism in addition to collectivism (Hakim-Larson et al., 2007). In the Arab culture, extended family is valued as the dominant family structure, and kin are often thought of as worthy of the most attention and of being confided in (McGoldrick et al., 2005; Nassar-McMillan & Hakim-Larson, 2003). These fundamental values may make immigrants of Arab ethnicity more likely to have a greater proportion of friends who are also related to them compared with other cultures, as was found in the present study.

  Qualitative data. Results of the qualitative data indicated that when asked to rate support of same-ethnicity, cross-ethnicity, and related friends overall, most participants rated support from their friends quite positively. Yet, differences in types of support received from each group of friends differed in a few areas based on both immigrant generation and ethnic group. There were differences based on immigrant generation for emotional support from same-ethnicity friends. In this case, third- or later-generation immigrants, who were primarily European Canadians in the current study, were more likely to identify this type of support from same-ethnicity friends, whereas first-generation immigrants, who were primarily non-European Canadians in the current study, were less likely to identify this type of support from same-ethnicity friends. This result may be related to the quantitative finding regarding third- or later-generation individuals identifying a greater proportion of same-ethnicity friends. Together, the findings suggest that third- or later-generation immigrants have more same-ethnicity friends, and they are more likely to say that their same-ethnicity friends support them emotionally. For first-generation immigrants, it is somewhat unclear why they would identify emotional support from same-ethnicity friends less frequently than expected. One possibility is that

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those they consider their same-ethnicity friends may be less accessible for emotional support. For example, even if first-generation immigrants identified same-ethnicity friends that still lived in their country of origin, they may find that it is somewhat difficult to go to those individuals with emotional problems, from a logistical standpoint (e.g., effect of time zone). Although technology has increased the ability to communicate with those around the world, it may still be difficult to gain access to individuals who live in another country in times of acute need.

There were also differences in the qualitative responses based on immigrant generation for 'fun' support from cross-ethnicity friends. In this case, second-generation immigrants were more likely to identify 'fun' support among cross-ethnicity friends, and first-generation immigrants, who were primarily non-European in the current study, were less likely to identify this type of support. In the current study, 'fun' support was identified as responses such as going out together, partying, and socializing. In the qualitative responses, it was mentioned by a few participants that cross-ethnicity friends can serve a different purpose than same-ethnicity friends, and this may be the case especially for second-generation individuals. For example, a second-generation participant wrote the following: "My cross-ethnicity friends have no connection with my same ethnicity friends and so when I want to relax and not think about stresses at home I prefer hanging out with them." Previous research has indicated that for second-generation youth, having both heritage and host culture membership is a central aspect of how they define themselves, but can also be a source of conflict (Giguère, Lalonde, & Lou, 2010). If cross-ethnicity friends are considered separate from family and heritage culture, perhaps this is why second-generation immigrants feel that they can go out and

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have fun with these individuals. It may be that they worry less about the social repercussions of their actions with cross-ethnicity friends, who do not necessarily have the same conservative values of their heritage culture and family. This finding may also be related to the quantitative finding that indicated that second-generation immigrants were more likely to have more cross-ethnicity friends and less same-ethnicity friends.

It is not clear why first-generation immigrants who were primarily non-European Canadian would be less likely to mention 'fun' support from cross-ethnicity friends. One possibility is that first-generation immigrants would prefer to have fun with other groups of friends, such as their same-ethnicity friends. First-generation immigrants tend to have greater heritage culture orientation, and this may include things such as participating in cultural traditions, enjoying entertainment such as movies and music from one's heritage culture, or attending cultural festivals. It is possible that first-generation immigrants who are quite involved in heritage culture practices and events may tend to rely on same-ethnicity or related friends for fun activities. It is not possible to say based on the present study results if this possibility is accurate, and further research will be required to determine why first-generation immigrants may be less likely to rely on their cross-ethnicity friends for 'fun' support.

In addition to differences by immigrant generation, there were also some differences based upon ethnic groups. First, there were ethnic group differences for 'fun' support from same-ethnicity friends. European Canadians were more likely to identify 'fun' support from same-ethnicity friends and South Asian Canadians were less likely to identify this type of support from same-ethnicity friends. These results seem to correspond with the results reported above indicating that European Canadians were

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more likely to identify same-ethnicity friends, whereas South Asian Canadians were less likely to identify same-ethnicity friends. It seems that European Canadians both have relatively more same-ethnicity friends and seek out more 'fun' support from these individuals. At this point it is difficult to explain the result for South Asian individuals. Lack of a 'fun' code does not mean that friends are not supportive in this manner, but instead means that that particular type of support was not mentioned by participants. It is possible that South Asian Canadians prefer to go to others for 'fun' support or that they seek other types of support from their same-ethnicity friends. Given the low South Asian sample size, these results should be considered preliminary.

There were also differences in the qualitative responses based on ethnic group for emotional support from related friends**.** Although this effect only approached significance, the effect size indicated that there was a small to medium effect, and will therefore be discussed. In this case, Arab Canadians were more likely to identify emotional support from related friends, and East Asian Canadians were less likely to identify this type of support from related friends. This result may be associated with the quantitative finding regarding Arab Canadians having a greater proportion of related friends. It seems as though Arab Canadians may be more likely to embrace kin as friends, and more likely to find related friends to be sources of emotional support. As mentioned, given that Arab Canadians tend to value extended family (McGoldrick et al., 2005; Nassar-McMillan & Hakim-Larson, 2003), this result is not particular surprising. The results of the current study bolster theoretical suggestions in the literature regarding the importance of family in the Arab culture with empirical findings.

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It is not entirely clear why East Asian Canadians would mention emotional support from related friends less often than expected. It is possible that East Asian Canadians prefer to go to others for emotional support or that they seek other types of support from their related friends. Given the low sample size for the East Asian group, these results should be considered preliminary and in need of replication in future research.

Strengths and Limitations

There were several strengths associated with the current study. Notably, this study attempted to fill a gap in the literature regarding the relation between cultural orientation and life satisfaction, as well as the effect of different groups of friends on immigrant and non-immigrant multicultural youth. Additionally, the present study included important covariates, such as family values and perceived discrimination, which were associated with many of the variables in the current study and have been frequently overlooked in previous research. Lastly, the current study included a qualitative element, which helped to clarify the quantitative data and add more specific information about how participants rely on different groups of friends.

Despite the strengths of the present study, there were several limitations to consider. First, it would have been advantageous to have the sample more evenly spread across both ethnic groups and immigrant generations. Some of the results of this study are somewhat unclear because of the confound of ethnic background and immigrant generations in the sample distribution. Namely, analyses that found differences based on immigrant generation must be interpreted with caution because the differences also reflect a difference in ethnic background given the fact that most first-generation

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immigrants were non-European Canadians, and most third- or later-generation immigrants were European Canadians. In the current study, I attempted to recruit individuals of Arab, East Asian, and South Asian descent, as well as individuals of European descent who were first- or second-generation using a variety of recruitment strategies. In future work, it would be helpful to take additional time to recruit a more balanced sample, though this was not possible given the time constraints of the current study.

An associated issue is the use of the snowball technique used in recruitment for the current study. Given that this study was about friendships, it is conceivable that participants may have sent the study to a friend that they identified in the study, which would affect the independence of participants' responses. However, not all of the community participants were recruited using the snowball technique (i.e., some were recruited based on community advertisements etc.). Therefore, the number of participants recruited using the snowball technique was quite low, and any effect on results would likely be extremely minimal.

Second, given the measurement issues related to the social support variables, it was not possible to use these variables in the main analyses. The way that social support was measured in the current study (i.e., as proportion of type of friends) arguably provides more specific information about important people in individuals' lives than the original Social Support Microsystems Scale (Seidman et al., 1995). However, in the current study, it was necessary to use the proportion of friends identified as a proxy measure for support. Given that all of the individuals identified by participants were considered friends, it is likely that participants would find these individuals fairly

supportive in general; nevertheless using the social support variables would have been more consistent with the study goals as well as past research.

Third, given that the study was conducted online, it is impossible to determine the environment in which participants completed the study. Although instructions for the study asked that participants complete the study alone, in a quiet environment, it is not possible to know if participants complied with these requests.

Fourth, generalizability of the study results is somewhat limited. The current sample does not include an equal number of males and females. Males are somewhat underrepresented in the sample, which makes it difficult to say if the results generalize well to young men. As well, generalizability is limited to university undergraduates, and largely to undergraduates who have taken courses in psychology. The primary recruitment source was the psychology participant pool, so nearly all of the participants sampled were taking a psychology course. It is possible that students who take psychology courses differ somehow from the more general university sample.

Implications

The results of this study indicate that strong heritage culture orientation is related to greater life satisfaction in the private domain. Based on the current study, this cannot be stated as a causal relationship; that is, it cannot be determined if it is a strong heritage culture orientation that leads to greater private life satisfaction. Nevertheless, it is noteworthy that this relationship occurred when the entire sample was included in analyses, indicating that there is a relation between these variables not just for first-generation immigrants but also for children and grandchildren of immigrants who comprise the non-immigrant sample. Although further studies would need to be

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conducted to determine causality of the relationship, it is possible that attempting to bolster interest and pride in one's heritage culture could improve life satisfaction with both family and self.

As well, proportion of related friends was found to mediate the relation between heritage culture orientation and private life satisfaction. This indicates that the presence of related friends may play an important role in this relation. The mediation relationship found in the current study indicates that a strong heritage culture orientation may lead one to have more friends who are also relatives, which then leads to greater private life satisfaction. This effect seems to further underscore the importance of valuing one's culture and one's kin. As well, this effect occurred when the entire sample was included in the analyses, which indicates that related friends may play an important role for immigrants as well as non-immigrants.

In the current study, the sample of third- or later-generation immigrants, which was made up almost entirely of European Canadians, were more likely to have same-ethnicity friends and rely on same-ethnicity friends for emotional support. Consistent with Berry and colleagues' (2006b) results, it is possible that all individuals prefer to have more same-ethnicity friends, but that third- or later-generation immigrants, who were primarily European Canadians, have the greatest access to same-ethnicity peers, given that the vast majority of the third- or later-generation sample in the current study was made up of European Canadians. However, proportion of same-ethnicity friends did not moderate the relation between generation and overall life satisfaction, indicating that same-ethnicity friends do not seem to be more important to any immigrant generation in terms of effect on life satisfaction.

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As well, second-generation immigrants in the current study were more likely to have cross-ethnicity friends and rely on cross-ethnicity friends for 'fun' support. This seems consistent with previous literature that indicates that although identification with heritage and host culture is an important aspect of identity for those who are second-generation immigrants, it can also be a source of conflict (Giguère et al., 2010). It seems that cross-ethnicity friends may be considered separate from family and heritage culture, which is likely why second-generation immigrants are more comfortable going out and having fun with these individuals. It may be that their same-ethnicity friends have more conservative values or are connected to others in the heritage culture community. Based on the current, preliminary results, it seems as though cross-ethnicity friends serve an important role for second-generation immigrants.

In addition, past literature has noted that individuals from collectivist cultures may be more likely to have an overlap in family and friends (Seginer et al., 2007). The current study found empirical evidence indicating that Arab Canadians are more likely to have friends that are also related to them, such as siblings or cousins, and they are more likely to rely on related friends for emotional support. Although this result is not particularly surprising, given the values that are prized in Arab culture, this finding has not been assessed in any known previous research. This finding further underscores what has been discussed theoretically in the literature: family, including extended family, is of the utmost importance in the Arab culture.

Future Directions

Future research should assess the causal relation between cultural orientation and domains of life satisfaction. The current study cannot determine causality because of the

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study design, but future work should strive to determine the causal direction between these variables. If cultural orientation affects level of life satisfaction, it would be possible to design programs to encourage both heritage and host culture orientation, which would then improve life satisfaction for individuals.

In the future, it will also be important to find a way to assess social support from different groups of friends in a way that can be successfully analyzed. It is possible that another method of operationalizing social support would have provided different results. Assessing how different immigrant generations and ethnic groups perceive social support from different groups of friends is still somewhat unclear, though the qualitative responses did provide useful information regarding specific differences between immigrant generations and ethnic groups that will be relevant to future work.

In future research concerning immigrants and/or ethnic minorities, it will also be important to include the covariates that were included in the current study, such as family values and perceived discrimination. As well, a more specific measure of availability of certain groups of friends will likely provide important information, and perhaps even clarify the results of the current study.

Lastly, given the uneven cell sizes in the current study, replication of the current findings with more equal sample sizes will be important in order to determine the accuracy of the current results.

Conclusions

The overarching aim of the present study was to examine the relation between cultural orientation and different domains of life satisfaction among immigrant and non-immigrant youth from four ethnic groups. In addition, the study investigated the role of

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different groups of friends, particularly same-ethnicity and related friends, and assessed how the presence of specific types of friends was associated with cultural orientation and life satisfaction. The current study also included qualitative items in order to attempt to clarify the types of support received from same-ethnicity, cross-ethnicity, and related friends.

Results indicated that greater heritage culture orientation predicted greater private life satisfaction, and proportion of related friends mediated this relationship. Further, there were differences based on immigrant generation and ethnic group for types of friendships, as well as types of support sought from different groups of friends.

This research adds to the existing literature concerning cultural orientation and adaptation of immigrant youth. As well, this study represents a significant preliminary step in clarifying the importance of different groups of friends for both immigrant and non-immigrant youth from four specific ethnic groups.

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APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

1. What is your age? _____

2. What is the highest level of education you have <u>completed</u>?
   - O Elementary School (Grades 1-6)
   - O Middle School (Grades 7-8)
   - O High School (Grades 9-12)
   - O Some university or college, or CEGEP
   - O University/College
   - O Graduate School

3. What is your occupation? _____

4. Gender:
   - O Male
   - O Female
   - O Trans
   - O Genderqueer
   - O None of these options speak to who I am. I consider myself to be:_____

5. Your marital status:
   - O Single or in a relationship but not living together
   - O Married
   - O Living together
   - O Separated
   - O Divorced
   - O Other, specify _____

6. What is your current living situation?
   - O Living with parents full time
   - O Living alone or with roommates full time
   - O Living with parents during the summer, and alone or with roommates during the school year
   - O Living with spouse or partner full time
   - O Other

7. Which statement is most true about the neighbourhood where you live? (Berry et al., 2006b)
   - O Almost all people are from a different ethnic group than mine
   - O A majority of the people is from a different ethnic group than mine
   - O There is about an equal mix of people from my ethnic group and other groups
   - O A majority of the people is from my ethnic group
   - O Almost all people are from my ethnic group

8. What is your self-identified ethnic background or heritage culture? _____

9. Which ethnic category best describes you?
        O Caucasian
        O Black
        O Hispanic
        O Asian/Pacific
        O Native/Aboriginal
        O Arab/Middle Eastern
        O Other, Specify: _____

10. Were you born in Canada?
        O Yes
        O No
                If No, please specify your country of birth: _____
                If No, how many years have you lived in Canada? _____ years

11. IF you were born outside of Canada, please indicate your **main** reason for immigration:
        O Voluntary (i.e., a better life, more opportunities, etc.)
        O War
        O Political oppression/persecution
        O Poverty
        O Other, Specify: _____

12. Current immigration status:
        O Canadian Citizen
        O Landed Immigrant
        O Refugee
        O Other, Specify: _____

13. What is your generation status in Canada?
        O 1st generation (born outside of Canada & immigrated to Canada after the age of 12)
        O 1.5 generation (born outside of Canada & immigrated to Canada before the age of 12)
        O 2nd generation (born in Canada & have at least one parent who was born outside of Canada)
        O 3rd generation (born in Canada & have at least one parent who was born in Canada)
        O Beyond 3rd generation or later
        O I am an international student who was born outside of Canada

14. What language do you speak the most with your family?
        O English
        O Other, Specify: _____

15. What is your religion?
        O No religion
        O Protestant
        O Roman Catholic
        O Greek Orthodox
        O Jewish
        O Muslim
        O Buddhist
        O Hindu
        O Other, Specify: _____

16. Marital status of your parents:
    O Married to each other (including common-law and same-sex unions)
    O Living together
    O Separated
    O Divorced
    O Widowed
    O Other, specify _____

17. What are the genders, place of birth, highest levels of education, and occupations of your parent(s)?

Parent 1:

What is Parent 1's biological relationship to you?
    O Biological mother/father
    O Step-mother/step-father
    O Foster parent
    O Adoptive parent
    O Grandmother/grandfather
    O Aunt/uncle
    O Other, specify: _____

gender:　　　　*O Male O Female*　　　*O Other, Specify: _____*

Place of birth:　　　*O Canada*　　　*O Other, Specify: _____*

Occupation: _____

What is Parent 1's highest level of education <u>completed</u>?
    O Elementary School (Grades 1-6)
    O Middle School (Grades 7-8)
    O High School (Grades 9-12)
    O Some university or college, or CEGEP (Only for Quebec students)
    O University/College
    O Graduate School

Parent 2:

What is Parent 2's biological relationship to you?
    O Biological mother/father
    O Step-mother/step-father
    O Foster parent
    O Adoptive parent
    O Grandmother/grandfather
    O Aunt/uncle
    O Other, specify: _____

gender:　　　　*O Male O Female*　　　*O Other, Specify: _____*

Place of birth:　　　*O Canada*　　　*O Other, Specify: _____*

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Occupation: _____

What is Parent 2's highest level of education <u>completed</u>?

       O Elementary School (Grades 1-6)

       O Middle School (Grades 7-8)

       O High School (Grades 9-12)

       O Some university or college, or CEGEP (Only for Quebec students)

       O University/College

       O Graduate School

18. Growing up, what was your gross family income?

       O 70,000 or more

       O 60,000 to 69,999

       O 40,000 to 59,999

       O 30,000 to 39,999

       O Below 30,000

       O I do not know or I do not wish to answer

APPENDIX B

Consent Form for Participant Pool

University
of Windsor

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Support from Friends and Life Satisfaction among Arab* Canadian youth

You are asked to participate in a research study conducted by Samantha Daniel supervised by Dr. Julie Hakim-Larson, from the department of Psychology at the University of Windsor. The results of this study will be used to fulfil the requirements of a Master's thesis.

If you have any questions or concerns about the research, please feel to contact the primary investigator, Samantha Daniel at daniel11@uwindsor.ca, or the faculty supervisor, Dr. Julie Hakim-Larson at 519-253-3000 ext. 2241.

PURPOSE OF THE STUDY

The purpose of this study is to better understand the various kinds of support that Arab* Canadian youth receive from their friends.

PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following. By agreeing to this consent form, you are indicating that you wish to participate in the present study. Following endorsement of this consent form, you will be directed to an online survey that includes several questionnaires. These include a background information questionnaire, questionnaires relating to your relationships with friends, questionnaires relating to your attitudes toward your heritage culture and Canadian culture, questionnaires relating to your well-being and life satisfaction, a questionnaire relating to perceived discrimination, and a questionnaire regarding your family values. Please complete the survey in a quiet place where you are able to concentrate. The survey will take approximately 60 minutes to complete.

After finishing the online survey, you will be directed to a form where you can fill in your personal information for verifying your bonus credit.

POTENTIAL RISKS AND DISCOMFORTS

The questionnaires may remind you of some uncomfortable feelings about your heritage culture or about the Canadian culture. In addition, some of the questions may remind you of uncomfortable experiences regarding discrimination. It is also possible that you might be reminded of some uncomfortable situations involving friends or other people you know. You may refuse to answer any questions that you're uncomfortable answering. In addition, you may leave the study at any time by clicking on the 'Discard responses and exit' icon. If you choose to withdraw, you will be directed to a form that describes the purpose of this study. You can also contact the University of Windsor Student Counselling Centre at 519-253-3000 ext. 4616.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Participating in this study may help you to learn more about yourself and who you identify with. It may allow you to reflect on your life and how satisfied you are with it. It may also allow you to learn more about your friendships. In addition, participating in this study will provide you with the opportunity to learn about and contribute to psychological research.

COMPENSATION FOR PARTICIPATION

You will receive 1.0 bonus point towards a psychology course for 60 minutes of participation, provided you are registered in the psychology participant pool and enrolled in one or more eligible courses.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. Note that we must collect your name and student number at the end of the study in order for you to receive bonus credit for your participation. Your data will be kept separate from your name and student number. Both files will be encrypted and stored in the University of Windsor data servers. Your data will be retained for 10 years, after which point it will be securely wiped from the servers.

PARTICIPATION AND WITHDRAWAL

Your participation in this study is completely voluntary. If you decide to participate, you may withdraw at any time during the study by clicking on the "Discard responses and exit" button without negative consequences of any kind. However, if you choose to withdraw before completing the survey, you will not receive the bonus credit. You may refuse to answer any questions you do not want to answer by leaving the question blank, and still remain in the study. We encourage you to answer all questions with which you are comfortable answering, as your responses are important to our investigation. Once all data has been collected, any participant contact information will be permanently and securely deleted. After this point, you will be unable to withdraw your data from the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so (e.g., very incomplete questionnaires).

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings for this study will be available to participants, and will be posted on the University of Windsor REB website. In addition, a copy of the principal investigator's Master's thesis will be available to the public in both the Psychology graduate secretary's office, and Leddy library.

Web address: www.uwindsor.ca/reb
Date when results are available: October 2013
SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.
Samantha Daniel, B.A.
Department of Psychology
University of Windsor

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It is recommended that you print out a copy of this letter of information for your records. It also is recommended that you turn off your pop-up blockers before beginning the survey, should you choose to do so.

CONSENT OF RESEARCH PARTICIPANT

"I understand the information provided for the study 'Support from Friends and Life Satisfaction Among Arab* Canadian youth' described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I will print a copy of this form for my own reference."

To acknowledge that you have read the letter of information, and that you are providing informed consent to participate in this study, please click "I agree" below.

I agree
No thank you

*Note: for versions for other ethnicities "Arab" was replaced with "South Asian", "East Asian", and "European".

APPENDIX C

Consent Form for Community Participants

University
of Windsor

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Support from Friends and Life Satisfaction among Arab* Canadian youth

You are asked to participate in a research study conducted by Samantha Daniel supervised by Dr. Julie Hakim-Larson, from the department of Psychology at the University of Windsor. The results of this study will be used to fulfil the requirements of a Master's thesis.

If you have any questions or concerns about the research, please feel to contact the primary investigator, Samantha Daniel at daniel11@uwindsor.ca, or the faculty supervisor, Dr. Julie Hakim-Larson at 519-253-3000 ext. 2241.

PURPOSE OF THE STUDY

The purpose of this study is to better understand the various kinds of support that Arab* Canadian youth receive from their friends.

PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following. By agreeing to this consent form, you are indicating that you wish to participate in the present study. Following endorsement of this consent form, you will be directed to an online survey that includes several questionnaires. These include a background information questionnaire, questionnaires relating to your relationships with friends, questionnaires relating to your attitudes toward your heritage culture and Canadian culture, questionnaires relating to your well-being and life satisfaction, a questionnaire relating to perceived discrimination, and a questionnaire regarding your family values. Please complete the survey in a quiet place where you are able to concentrate. The survey will take approximately 60 minutes to complete.

After finishing the online survey, you will be directed to a form where you will have the option to provide your name and email address if you would like to be entered in a draw for a $50 gift card. You will also be asked to indicate if you would like to be contacted in the future regarding this study or future studies.

POTENTIAL RISKS AND DISCOMFORTS

The questionnaires may remind you of some uncomfortable feelings about your heritage culture or about the Canadian culture. In addition, some of the questions may remind you of uncomfortable experiences regarding discrimination. It is also possible that you might be reminded of some uncomfortable situations involving friends or other people you know. You may refuse to answer any questions that you're uncomfortable answering. In addition, you may leave the study at any time by clicking on the 'Discard responses and exit' icon. If you choose to withdraw, you will be directed to a form that describes the purpose of this study. You can also contact the University of Windsor Student Counselling Centre at 519-253-3000 ext. 4616.

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POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Participating in this study may help you to learn more about yourself and who you identify with. It may allow you to reflect on your life and how satisfied you are with it. It may also allow you to learn more about your friendships. In addition, participating in this study will provide you with the opportunity to learn about and contribute to psychological research.

COMPENSATION FOR PARTICIPATION

You will be given the opportunity to enter your name and email address in a draw for a $50 gift card to Amazon.ca.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. Note that we must collect your name and email address at the end of the study in order for you to be entered in the $50 draw. Your data will be kept separate from your name and email address. Both files will be encrypted and stored in the University of Windsor data servers. Your data will be retained for 10 years, after which point it will be securely wiped from the servers.

PARTICIPATION AND WITHDRAWAL

Your participation in this study is completely voluntary. If you decide to participate, you may withdraw at any time during the study by clicking on the "Discard responses and exit" button without negative consequences of any kind. However, if you choose to withdraw before completing the survey, you will not receive the draw entry. You may refuse to answer any questions you do not want to answer by leaving the question blank, and still remain in the study. We encourage you to answer all questions with which you are comfortable answering, as your responses are important to our investigation. Once all data has been collected, any participant contact information will be permanently and securely deleted. After this point, you will be unable to withdraw your data from the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so (e.g., very incomplete questionnaires).

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings for this study will be available to participants, and will be posted on the University of Windsor REB website. In addition, a copy of the principal investigator's Master's thesis will be available to the public in both the Psychology graduate secretary's office, and Leddy library.

Web address: www.uwindsor.ca/reb
Date when results are available: October 2013
SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.
Samantha Daniel, B.A.
Department of Psychology
University of Windsor

It is recommended that you print out a copy of this letter of information for your records. It also is recommended that you turn off your pop-up blockers before beginning the survey, should you choose to do so.

CONSENT OF RESEARCH PARTICIPANT

"I understand the information provided for the study 'Support from Friends and Life Satisfaction Among Arab* Canadian youth' described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I will print a copy of this form for my own reference."

To acknowledge that you have read the letter of information, and that you are providing informed consent to participate in this study, please click "I agree" below.

I agree
No thank you

*Note: for versions for other ethnicities "Arab" was replaced with "South Asian", "East Asian", and "European".

VITA AUCTORIS

Samantha Daniel was born in 1987 in Toronto, Ontario. She graduated from Notre Dame High School in 2005. From there she attended the University of Waterloo where she obtained an Honours Bachelor of Arts degree in 2009, majoring in Psychology. She is currently a Master's student in the Clinical Psychology-Child Track program at the University of Windsor.