

Language Brokering Frequency, Feelings and Autonomy Support: Disentangling the
Language Brokering Experience within Chinese Immigrant Families

by

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B.Sc., University of British Columbia, 2000
M.Sc., University of Victoria, 2008

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Abstract

As families immigrate to a new country, adolescents often acculturate and learn the host-language more quickly than do their parents. As a result, many adolescents engage in language brokering (i.e., providing translation, interpretation, and communication mediation assistance) for their immigrant parents. This study aimed to disentangle the nature of multiple dimensions of language brokering within a community sample of 152 Chinese immigrant families residing in Western Canada. Specifically, I examined language brokering frequency as well as positive and negative feelings about language brokering as distinct constructs to better understand how they relate to one another and with adjustment. Applying self-determination theory, I also considered the role of autonomy-supportive contexts in moderating links between the various language brokering constructs and adjustment, with the expectation that language brokering would present less risk to adjustment in contexts high in autonomy support. A higher frequency of language brokering for both mothers and fathers predicted more intense feelings. Further, language brokering feelings were more predictive of adjustment than frequency. There was little evidence that brokering feelings moderated relations between language brokering frequency and adjustment. However, there was evidence that the absence of autonomy-supportive contexts was a risk for poorer adjustment, and that environments rich in autonomy support have the potential to mitigate risks associated with language brokering. The results are discussed with respect to unique adolescent experiences language brokering for mothers versus fathers, which further highlight the complex relations between language brokering and adjustment.

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Dedication

In loving memory of my father, Joseph Hua.

Introduction

Acculturation refers to the complex process that unfolds when people engage in intercultural contact between two or more cultures (Berry, 1997; 2003). For immigrant families adjusting to the host country, this involves family members making decisions about the extent to which they adopt new cultural values, attitudes, and practices, and about the extent to which values, attitudes and practices of the heritage culture are retained (Berry, 1997; 2003). While all immigrant family members go through an acculturation process, parents and children tend to acculturate at different rates (Costigan & Dokis, 2006a). Because children are immersed into the host culture at a younger age than their parents, they tend to adopt the features of the new culture more quickly than do their parents (Coll & Magnuson, 1997; Costigan & Dokis, 2006a; Kwak, 2003).

Immigrant parents tend to be more oriented toward their heritage culture, having reached the age of maturity in their country of origin (Costigan & Dokis, 2006a; Telzer, 2010).

These different rates of acculturation often result in a notable acculturation discrepancy between immigrant parents and their children. Recent research has identified these acculturation discrepancies as risk factors for family and individual maladjustment (Costigan & Dokis, 2006a; Kim, Chen, Wang, Shen, & Orozco-Lapray, 2013; Telzer, 2010). For example, larger parent-child acculturation discrepancies are associated with greater family disagreement, and more depressive symptoms and poorer academic achievement outcomes for adolescents (Costigan & Dokis, 2006a; Kim et al., 2013)

Acculturation discrepancies are quite commonly found in the area of language use. Acculturation discrepancies in language use are common because of children's greater exposure and immersion into mainstream language environments such as public

school settings. As a result, children often acquire the host-language more quickly than do their parents (Jia, 2004), and some immigrant parents rely on their children to translate and interpret for them so that they may more effectively function in the new culture (McQuillan & Tse, 1995; Morales & Hanson, 2005; Weisskirch & Alva, 2002). This process, whereby children and adolescents provide translation and interpretation assistance for their immigrant parents and others, has come to be known as child and adolescent *language brokering* (McQuillan & Tse, 1995).

This dissertation examines the process of language brokering as an instantiation of the broader dynamic of parent-child acculturation discrepancies and seeks to better understand the language brokering experience and its relations with the psychological adjustment of adolescent language brokers and the quality of their family relationships. Consistent with research demonstrating links between acculturation gaps and distress, some research has found that language brokering is a risk factor for poorer family functioning and child maladjustment (Morales & Hanson, 2005). However, other studies have argued language brokering to be a very natural exchange process between adolescents and their immigrant parents with minimal or positive psychological impact (Dorner, Orellana, & Jimenez, 2008; Orellana, Dorner, & Pulido, 2003). What then has been lost in translation to explain these inconsistent findings? Could the different ways in which language brokering is conceptualized or measured account for differences in individual and relational adjustment? Are there differences between language brokering for one parent versus another? What cultural-familial environments underlie the language brokering process and experience for language brokers and their families? In this dissertation, I aim to answer these questions.

The first objective of this dissertation is to disentangle the language brokering experience within Chinese immigrant families by simultaneously examining adolescent-reported language brokering frequency, positive feelings about language brokering, and negative feelings about language brokering. I examine these language brokering constructs with respect to language brokering for mothers and for fathers separately. I aim to better understand how these language brokering constructs interrelate and explore their associations with individual and relational adjustment outcomes. I also consider whether language brokering frequency and feelings interact to predict adjustment.

The second objective of this dissertation is to apply self-determination theory to examine the role of autonomy-supportive contexts in shaping the relations between adolescent language brokering and adjustment outcomes. By applying a new theoretical lens to the study of language brokering, I consider whether autonomy-supportive contexts can explain some of the mixed adjustment findings in the current language brokering literature.

In this dissertation, I provide a rationale for the study of language brokering within Chinese immigrant families residing in Canada, describe the process of language brokering and review relevant research to date including initial findings associated with language brokering for mothers versus fathers and the mixed adjustment findings associated with language brokering. Next, some of the key theories and perspectives used to better understand language brokering are reviewed before I describe self-determination theory and, in particular, highlight the potential significance of autonomy-supportive contexts and how they may be helpful in predicting adjustment for adolescent

language brokers and their families. Finally, I present the research models and hypotheses related to the two objectives of the current study.

The Importance of Studying Chinese Immigrant Families in Canada

In Canada, 6.7 million foreign-born individuals represent 20.6% of the total population (Statistics Canada, 2013). For several decades, Chinese Canadians have consistently constituted one of the largest groups of immigrants (Wang & Lo, 2004) and Chinese languages are the most commonly used in the home among the Canadian immigrant population (Statistics Canada, 2013). The high rate of Chinese immigration to Canada alone warrants increased attention to and research in this population.

This language brokering study also focuses on Chinese immigrant families because large differences between Chinese and North American cultures may create significant adjustment difficulties. Circumstances including language barriers, school or employment adjustments, discrepancies in values, prejudice, and lack of supports may all add stress that could increase risks for adolescent children of Chinese immigrants. As noted earlier, one area in which parents and children tend to acculturate at different rates is in language learning. There are significant differences between the Chinese and English language and different rates of language learning among family members are well documented (Coll & Magnuson, 1997; Costigan & Dokis, 2006a; Kwak, 2003). This makes language brokering a very relevant topic in the study of Chinese families who are adjusting to life in Canada.

What is Language Brokering?

Language brokering refers to when a third party mediates communication between linguistically and/or culturally different agents (McQuillan & Tse, 1995; Tse,

1995, 1996). While the process of language brokering does involve bilingualism, translation, and interpretation, McQuillan and Tse (1995) stress that it should be considered a broader and more intimate form of communication that is distinct from formal translation and interpretation. As explained by Morales and Hanson (2005), formal translation and interpretation both require the exceptional understanding of two or more languages. Translation involves demonstrated skill in translating primarily written work such as documents and other materials. Interpretation, on the other hand, deals with verbal forms of communication and involves demonstrated skill in being able to communicate intended meanings conveyed in ordinary social situations.

Although translation, interpretation, and language brokering all require a certain level of bilingualism, language brokering is motivated by family survival and acculturation, and does not occur at the professional level associated with formal translation and interpretation (Morales & Hanson, 2005). Consequently, the role of language brokers as liaisons and communication mediators is more informal. Furthermore, language brokering can involve decision-making concerning what is translated or interpreted, and how the intended message is communicated. For example, when McQuillan and Tse (1995) interviewed nine adults who had brokered for their parents as children, they found that some children went beyond simple translation by acting as primary decision makers or negotiators, and by conveying information in a way that increased successful outcomes or that neutralized tense exchanges. Thus, language brokering is also distinct from formal translation and interpretation because an unequal power relationship may exist. That is, children who are normally dependent and under the authority of their parents may be in situations of authority and decision-making where

parents must trust and depend on their children to interpret and translate accurately and/or to ensure successful communication outcomes (McQuillan & Tse, 1995).

The State of the Literature

The study of language brokering is relatively new, beginning in the mid-1990s (Morales & Hanson, 2005). Since the literature review on language brokering was published (by Morales & Hanson, 2005), a body of literature on the topic has grown. Today, the literature comprises a rich array of qualitative and quantitative work on the nature and prevalence of language brokering as well as how language brokering relates to the adjustment and well-being of language brokers.

The Prevalence of Language Brokering

Studies examining the prevalence of language brokering have consistently determined it to be a fairly common experience among children of immigrants (Chao, 2006; Hua & Costigan, 2012; McQuillan & Tse, 1995; Morales & Hanson, 2005; Tse, 1995, 1996; Tse & McQuillan, 1996; Weisskirch, 2005). Tse (1996), for example, reported that nearly 90% of her sample of 64 Chinese and Vietnamese American high school students had brokered at least once. Of these, 92% reportedly brokered for their parents, and also brokered for other individuals including friends, siblings, other relatives, and community members such as neighbours, although to a lesser degree.

In addition to asking children and adolescents whether they had *ever* language brokered, some studies have also assessed the *frequency* of translation or interpretation for parents, across different settings and type of material translated. For example, in Chao's (2006) study consisting of 463 Mexican American, 581 Chinese American, and 557 Korean American ninth graders, almost 70% reported having language brokered for a

parent at least once, but on average they reported language brokering quite infrequently. Similarly, in Hua and Costigan's (2012) study of 182 adolescents from Chinese immigrant families residing in Western Canada, although over 90% reported that they had language brokered at least once for their parents, the average frequency was relatively low (i.e., *a few times a year*). These findings suggest that while common, language brokering on average may be an infrequently occurring practice. However, there is scant research on this topic, which makes it difficult to establish a consistent pattern.

Language Brokering Behaviours and Attitudes

The two main aspects of language brokering that have been measured are the actual behaviours involved with language brokering and the attitudes associated with language brokering (Buriel, Perez, De Ment, Chavez, & Moran, 1998; Tse, 1996). Behavioural aspects primarily include measures of language brokering frequency and represent the predominant quantitative measure of language brokering. Measures of language brokering frequency ask how often this form of translation and interpretation occurs across different materials (e.g., school materials, media or immigration papers) and/or settings (e.g., home, school or medical settings) and for whom (e.g., parents, other relatives, friends or neighbours).

Attitudinal aspects, on the other hand, normally refer to children's and adolescents' feelings about their language brokering experiences. Some studies that have documented the emotional experience of language brokering employ qualitative interviews (e.g., Hall & Sham, 1998; Morales, Yakushko, & Castro, 2012). Other researchers have asked participants to rate the degree of their agreement with various

affective statements that either reflect positive (e.g., "I feel good about myself when I translate for family") or negative (e.g., "I feel embarrassed when I translate for others"; "translation is a burden") feelings about their language brokering experiences (e.g., Buriel et al., 1998; Kam, 2011; Weisskirch & Alva, 2002; Wu & Kim, 2009). For example, Weisskirch (2007) provided a list of 13 positive emotion words and 27 negative emotion words and had 98 Mexican American 7th graders rate the extent to which they experienced each emotion when translating. He found that language brokering evoked a range of positive and negative emotions but most of the children reported positive feelings about language brokering more strongly (e.g., helpful and happy) than negative feelings (e.g., anxious and ashamed; Weisskirch, 2007).

Although language brokering frequency and feelings about language brokering are distinct constructs, they have rarely been distinguished in relation to their associations with the adjustment of family members involved in language brokering (Kam, 2011). A few researchers have begun to examine language brokering frequency and feelings simultaneously (e.g., Kam & Lazarevic, 2014; Tilghman-Osborne, Bámaca-Colbert, Witherspoon, Wadsworth, & Hecht, 2016; Weisskirch, 2013), but have focused exclusively on Latino and Mexican American populations. The extent to which frequency and feelings relate similarly or uniquely to adjustment, particularly within immigrant Chinese families, remains a prime area for language brokering research. Given the growing cultural diversity in North America and elsewhere, more studies that examine how language brokering frequency and feelings about language brokering interrelate with one another and with a greater variety of adjustment outcomes are still needed (Kam & Lazarevic, 2014).

Language Brokering for Mothers versus Fathers

Research supports the notion that there are differences between mothers and fathers in the style of parenting, acculturation and psychological adjustment (e.g., Costigan & Dokis, 2006b; Shek, 2000). In traditional Chinese (as well as in traditional Western) culture, mothers are typically regarded as the main figure in direct childrearing, whereas fathers are generally regarded as the family patriarch, making decisions for the family as a whole, providing family security, and disciplining children as needed. Indeed, there is a popular Chinese saying that reflects mother-father role differences: “strict father, kind mother” (Shek, 2000). Examining Chinese adolescents’ perceptions of differences between mothers and fathers in parenting and communication styles, Shek (2000) found fathers to be regarded as less responsive, less demanding, less demonstrative of concern, and more harsh compared to mothers. Mothers, in turn, were perceived as more nurturing but also more demanding.

Whether and how such differences in traditional mother-father parenting roles may influence any mother-father differences with respect to language brokering frequency and feelings within Chinese immigrant families remains unclear in the current literature. As described previously, language brokering is applied in everyday occurrences involving responsibilities within the home and immediate community (e.g., television and school), but is also applied with respect to important family affairs (e.g., medical and immigrant information). Conceivably, language brokering assistance could prove instrumental in interactions involving both traditional mother and traditional father parenting roles.

In the current language brokering literature, the majority of studies to date have

focused on language brokering for parents collectively and have not differentiated between language brokering for mothers versus fathers (e.g., Hua & Costigan, 2012; Kam & Lazarevic, 2014; Weisskirch, 2005). Shen and colleagues (2014) focused on language brokering for mothers exclusively. The few studies that have examined language brokering for mothers and fathers separately provide some initial evidence that adolescent language brokers may perceive the experience differently depending on the parent who is receiving the language brokering assistance. For example, Wu and Kim (2009) found that adolescents were more likely to perceive a sense of burden as well as greater efficacy when language brokering for mothers versus fathers. Guan and Shen (2015) found language brokering more frequently for mothers predicted lower levels of maternal regard, whereas there was no relation with respect to language brokering for fathers. Thus, the examination of similarities and differences between language brokering for mothers versus fathers is an area ripe for study.

Language Brokering, Psychological Adjustment, and Family Functioning

Language brokering behaviours are widely considered to be a cultural stressor and there is a large body of research demonstrating associations between language brokering frequency and adverse psychological outcomes for child and adolescent language brokers as well as negative attitudes about and accounts of language brokering (Morales & Hanson, 2005). There are also research findings showing associations between both language brokering frequency and negative feelings and poorer family functioning with respect to the language broker's relationship with his or her parents (Morales & Hanson, 2005). However, positive associations with language brokering frequency and with positive language brokering feelings also exist, highlighting the complexity of this

phenomenon.

Language brokering perceived as a burden. Researchers have raised concerns about the negative repercussions of language brokering on the emotional development of youth (e.g., Chao, 2006; Umana-Taylor, 2003). In qualitative studies, descriptive accounts of children feeling stress and burdened from language brokering highlight potential risks associated with language brokering. Accounts include children going to bed well after midnight to accommodate school as well as family obligations, feeling anxious about the consequences of making mistakes during translation, and feeling resentment from the stress and responsibility imposed by family members (Hall & Sham, 1998; Morales et al., 2012). Consistently, quantitative research has found language brokering frequency to be associated with greater internalizing and externalizing symptoms (Chao, 2006; Martinez, McClure, & Eddy, 2009), and lower self-esteem (Oznobishin & Kurman, 2009). Negative language brokering feelings, such as feeling embarrassed and/or nervous when language brokering, have been related to personal acculturation stress and poorer self-esteem (Kam, 2011; Weisskirch, 2013).

In addition to examining children's psychological adjustment outcomes, research has begun to examine relations between language brokering and family functioning. Umana-Taylor's (2003) opinion piece and a literature review (Morales & Hanson, 2005) suggest that parents' dependence on their children may diminish their authority, leading to a reversal of roles within the family that negatively affects the parent-child relationship. Supporting this perspective, several studies have found more frequent language brokering or a higher demand for language brokering to be associated with greater family conflict, higher levels of family stress, and lower levels of parenting

effectiveness (Hua & Costigan, 2012; Jones & Trickett, 2005; Kam, 2011; Martinez et al., 2009; Trickett & Jones, 2007). Negative feelings about language brokering were associated with family-based acculturation stress and more problematic family relationships (Weisskirch, 2007).

Language brokering as an asset. As research on the risk of language brokering has grown, alternative perspectives have been proposed. For example, in an opinion piece, Halgunseth (2003) argued that the process of mediating between agents in complex, adult-like situations teaches social, negotiation, and decision-making skills, as well as family responsibility, which in turn instills confidence and pride in young language brokers. Indeed, descriptive accounts obtained through qualitative research have included reports of children enjoying language brokering, and, as a result, feeling more mature, independent, proud, having higher self-esteem, and feeling greater trust between parent and child (e.g., McQuillan & Tse, 1995; Morales et al., 2012). There also exist quantitative studies that found both behavioural and attitudinal aspects of language brokering to be associated with stronger ethnic identity and enhanced feelings of confidence in social situations (Buriel et al., 1998; Weisskirch, 2005). In addition, positive feelings about language brokering related to higher levels of self-esteem and academic self-concept, smoking fewer cigarettes, greater perceived popularity with peers, and less problematic family relationships (Kam, 2011; Niehaus & Kumpiene, 2014; Weisskirch, 2007).

Furthermore, Chao (2006) found that, for Mexican American youth, language brokering frequency was positively associated with adolescents' respect for both parents. This positive association also was found for respect for fathers among Korean American

youth, and respect for mothers among Chinese American youth. Similarly, among a sample of Latino American youth, Tilghman-Osborne and colleagues (2016) found that language brokering frequency positively predicted parent-adolescent closeness two years later. They also assessed language brokering attitudes, defined as low levels of negative feelings about language brokering. They found that parent-child closeness at the start of the Grade 7 predicted better language brokering attitudes for males (but not females) by the end of the school year. Thus, as with the psychological adjustment of child language brokers, language brokering has been associated both positively and negatively with the quality of parent-child relationships.

Taken together, prior research suggests that the psychological experiences associated with language brokering may vary greatly and are complex.

The Context of Language Brokering

In light of the mixed findings regarding the psychological adjustment of language brokers and their relationships with their parents, research began to shift focus from the individual language broker to the contexts in which language brokering takes place (e.g., Dorner et al., 2008; Hua & Costigan, 2012; Jones, Trickett, & Birman, 2012; Martinez et al., 2009; Oznobishin & Kurman, 2009; Shen, Kim, Wang, & Chao, 2014; Trickett, Sorani, & Birman, 2010; Wu & Kim, 2009). This work examined the cultural-familial environments that may facilitate or complicate the language brokering process and the psychological development of children and their families. For example, Martinez and colleagues (2009) compared high versus low demand family environments for language brokering, while Wu and Kim (2009) examined adolescents' orientation to Chinese culture as setting in motion perceptions of language brokering experiences. Shen and

colleagues (2014) investigated whether mother-child open communication interacted with language brokering frequency for mothers to predict perceptions of maternal sacrifice and respect for mothers, and whether this indirectly predicted adolescent internalizing and externalizing problems. Hua and Costigan (2012) considered Chinese cultural values regarding filial piety and hierarchy and examined how family obligation values and perceptions of parental psychological control shaped the way in which language brokering frequency related to the psychological adjustment of adolescent language brokers and to the quality of parent-child relationships. Kam and Lazarevic (2014) asked whether effects of language brokering frequency on the adjustment of early adolescent youth depended on how they feel about language brokering. Each of these aspects of the broader context was found to moderate the relations between language brokering and adjustment. Thus the findings suggest that language brokering is likely too complex to be uniformly portrayed as solely a positive or negative developmental experience. Rather, the research highlights that the context in which language brokering takes place plays a key role in how language brokering is experienced and holds potential to better understand how any risks associated with the language brokering process may be mitigated.

Differentiating Language Brokering Frequency and Language Brokering Feelings

As mentioned previously, few studies have explored both behavioural and attitudinal aspects of language brokering, their relations with one another, or their relations to adjustment outcomes. An exception is Tilghman-Osborne and colleagues' (2016) longitudinal study, which found language brokering frequency to be unrelated to language brokering attitudes (defined as low negative feelings) by the end of the school

year. However, two years later, more language brokering frequency was associated with better language brokering attitudes (defined as low levels of negative language brokering feelings) for adolescent males only.

Another exception is Kam's (2011) study, which examined the effects of language brokering frequency and positive and negative feelings about language brokering on acculturation stress. Kam (2011) found that more frequent language brokering was associated with higher levels of family-based acculturation stress (e.g., language brokers getting upset at parents because of their lack of knowledge about "American ways;" adolescent perceptions that family views them as "too American"), but not to "other-based" acculturation stress (i.e., acculturation stress not necessarily related to family; e.g., "I do not feel at home here in the United States"). Negative feelings about language brokering were associated with family-based as well as with other-based acculturation stress. In contrast, positive language brokering feelings were not significantly related to either type of acculturation stress.

In the same study, Kam (2011) also examined links between language brokering and mental health and risky behaviours and found more frequent language brokering was associated with fewer risky behaviours and was not related to substance use. Negative language brokering feelings were not significantly related to either risky behaviours or substance use. Positive language brokering feelings were negatively related to cigarette use, but were not significantly related to other substance use or other risky behaviours. Taken together, such differential correlates among language brokering constructs and with adjustment offer support that language brokering frequency, negative language brokering feelings, and positive language brokering feelings be examined as distinct

constructs.

To better understand how different aspects of language brokering may work together to affect the well-being of language brokers, Kam and Lazarevic (2014) examined both mediation and moderation models incorporating both language brokering frequency and language brokering feelings in their study of Latino immigrant children in the 6th to 8th grade. They first ran three separate mediation models: (1) examining direct and indirect effects of language brokering frequency on adjustment independently from language brokering feelings, (2) examining language brokering frequency and positive language brokering feelings concurrently as potential predictors of risky behaviours, and (3) examining language brokering frequency and negative language brokering feelings concurrently. In the first model, they found indirect effects for language brokering frequency on two risky behaviours (i.e., alcohol and marijuana use), mediated through family-based acculturation stress. In the second model, no paths were significant for positive feelings, but language brokering frequency continued to indirectly predict alcohol use (but not marijuana use), through family-based acculturation stress. Interestingly in the third model, when examining language brokering frequency and negative language brokering feelings concurrently as predictors of risky behaviours, language brokering frequency no longer functioned as a significant predictor when negative brokering feelings were taken into account. Negative feelings about language brokering were predictive of depressive symptoms and perceiving brokering as burdensome on one's time indirectly predicted alcohol and marijuana use, through family-based acculturation stress.

Kam and Lazarevic (2014) also examined the moderating role of positive and

negative feelings about language brokering on relations between language brokering frequency and adjustment among their sample of Latino immigrant children in early adolescence. They found that when the adolescents perceived brokering as a burden on their time, more frequent language brokering for parents was positively related to acculturation stress, which in turn related to higher levels of alcohol and marijuana use. In contrast, language brokering frequency was unrelated to acculturation stress when the adolescents did not perceive brokering as burdensome on their time. This study is among the first to examine multiple dimensions of language brokering and how these dimensions interact to predict mental health and behavioural health outcomes.

Theories of Language Brokering

A few researchers have adopted different theoretical lenses to guide their study of language brokering (e.g., Jones et al., 2012; Kam, 2011; Morales et al., 2012). To date, two main and competing theoretical frameworks for understanding language brokering guide the research: the role-reversal framework and that of independent/interdependent scripts.

The most prominent theoretical lens, which adopts a risk perspective, is the *parent-child role reversal* framework. This framework suggests that parents' dependence on their children for language brokering assistance may diminish parental authority and may place children in typical adult roles. As a result, children who are normally dependent on and under the authority of their parents may enter situations of authority and decision-making where parents must trust and depend on them (McQuillan & Tse, 1995; Umana-Taylor, 2003). From this deficit perspective, the unequal power relationship that is thought to accompany language brokering has negative repercussions

for the child language broker, his or her parents, and/or the parent-child relationship (e.g., Morales & Hanson, 2005; Umana-Taylor, 2003).

Research on adultification and parentification, two related bodies of literature, also adopt the parent-child role reversal lens and have recently been linked to the language brokering literature and immigrant contexts more generally (Ponizovsky, Kurman, & Roer-Strier, 2012). This literature, which focuses on parents who are hindered by physical or mental illness, marital difficulties or dissolution, and/or death, also examines the process through which children acquire or assume behaviour and roles that are typically reserved for adults. The assistance children provide their parents in adultification and parentification is also motivated by family need and survival. Given that the children's level of competence and readiness to perform the requested tasks are secondary and that limited to no guidance is offered on how to perform these tasks, the literature raises questions and concerns regarding whether such tasks are developmentally inappropriate and taxing on adultified and parentified children (e.g., Burton, 2007; Burton, Garrett-Peters, & Eaton, 2009; Chase, 1999; Jurkovic, 1997; Nebbitt & Lombe, 2010).

Drawn from qualitative data asking adolescents about family-related experiences following immigration, Ponizovsky and colleagues' (2012) identified various roles assumed by children of immigrant families. These roles, regarded and termed as "filial responsibilities," included language and cultural brokering as well as roles often associated with parentification (e.g., acting as counselor or emotional supporter of parents). Ponizovsky and colleagues' (2012) then used factor analysis to examine the independence and convergence of these roles. They found that brokering variables

indeed correlated with other “filial responsibility” variables including emotional support to parents (i.e., parentification), providing support of a shared role-reversal framework. Language brokering and emotional support to parents, however, emerged as separate factors and made unique contributions to the prediction of psychological distress indicators. In another study examining relations between language brokering and parentification, Kam (2011) found neither language brokering frequency nor negative language brokering feelings were significantly related to parentification, although positive language brokering feelings were related to perceptions of being an adult in the family.

In contrast to the view of language brokering as a role-reversal between parents and children, the *independent/interdependent scripts* perspective emphasizes values of interdependence that may frame language brokering responsibilities as opportunities to contribute to the family and thus are experienced as a natural part of daily activities (Dorner et al., 2008; Orellana et al., 2003). From this perspective, the role-reversal framework is largely a Western lens that examines language brokering under the assumption that such family assistance requires premature acts of independence and is burdensome. However, Dorner and colleagues (2008) argue that immigrant parents often come from countries that value interdependent family relationships. For families accustomed to family member interdependence, parents who receive language brokering assistance may readily maintain their parental authority and language brokering activities may simply be viewed as neutral or positive family experiences (Dorner et al., 2008; Orellana et al., 2003).

Although these opposing theoretical lenses both contribute to the existing

literature by offering theoretical frameworks within which the effects of language brokering can be understood, neither lens fully accounts for the findings associated with language brokering which, as described previously, have been mixed.

Self-determination Theory

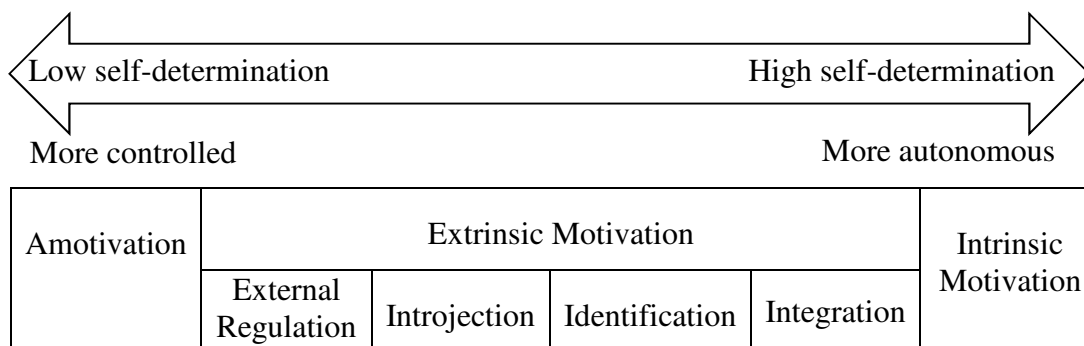
Self-determination theory (SDT; Ryan & Deci, 2000) is a broadband theory of motivation that may help to account for both the positive and negative findings associated with language brokering within immigrant families. The theory assumes that people have a natural tendency towards curiosity, vitality, and self-motivation, and that, unthwarted, this tendency leads to well-being. At its essence, SDT focuses on the social-contextual conditions that enhance or hinder these natural tendencies and postulates competence, autonomy, and relatedness as the key psychological needs for optimal social development and well-being (Deci & Ryan, 2008a). Of the three psychological needs, *autonomy* has received the greatest attention in motivation research and, in the present study, is argued to be central to the study of language brokering.

From a SDT perspective, autonomy is defined as volitional or self-endorsed functioning and refers to the extent to which behaviours are initiated or endorsed freely, rather than motivated by pressure, control, or coercion (Deci & Ryan, 2000). Here, the motivation underlying children's behaviours reflects self-endorsed functioning, resulting in their actions being accepted as volitional, personally valuable, and meaningful (Deci & Ryan, 2008a).

The extent to which behaviours are experienced autonomously or nonautonomously ranges along a continuum of internalization (Deci & Ryan, 2000). Along this continuum, behaviours that are more internalized as self-endorsed are more

autonomously experienced (see Figure 1).

Figure 1. Self-determination continuum with types of motivation.



At the extremes of the continuum are states of amotivation and intrinsic motivation. When behaviours are *intrinsically motivated and regulated*, autonomy is at its purest and children engage in activities because they are inherently interesting and enjoyable (Deci & Ryan, 2000). There is no separate goal as to why the activity is undertaken; the pleasure one experiences from engaging in the activity is itself the goal. In contrast, *amotivation* is a state in which children lack any intention to behave (Deci & Ryan, 2000). When amotivated, there is no sense of efficacy, control or autonomy.

In between being intrinsically motivated and amotivated, behaviours are *extrinsically motivated* and can be experienced autonomously or nonautonomously depending on the extent to which they are enacted with a sense of volition (Deci & Ryan, 2000). *Integration* and *identification* represent forms of extrinsic motivation that involve complete and partial internalization, respectively. These well-internalized externally-motivated behaviours are experienced as autonomous because children identify with the importance of the behaviours and these actions are accepted and integrated with other

aspects of their sense of self. For example, when a child engages in a behaviour that may not be inherently fun for him or her (e.g., practicing playing an instrument), but does so out of a desire towards a valued goal (e.g., to become a better musician), the behaviour although extrinsically motivated is experienced as integrated with other aspects of his or her sense of self (i.e., more autonomously; Deci & Ryan, 2000). Even in a situation where a child follows a parent's request, such activities that are extrinsically motivated by parents can be experienced autonomously if that action is internalized as personally valuable rather than perceived as controlled.

Introjection and *external regulation* represent forms of nonautonomous extrinsically-motivated behaviours (Deci & Ryan, 2000). In these circumstances, actions are not internalized as volitional and instead follow from a sense of internal or external pressure to meet demands. *Introjection* occurs when children perceive pressure from within. In this case, children may act to avoid feelings of guilt or shame. If a child follows through on a parent's request in this circumstance, it may be, for example, to avoid feeling bad about being disobedient to his or her parents. Although the motivation in this case comes from within, the behaviour is still controlled externally and accompanied by feelings of self-imposed pressure, rather than feelings of full self-endorsement and of their own volition. Actions are perceived as least self-determined (or most environmentally controlled) when they are *externally regulated* and undertaken for the sake of obtaining external rewards or avoiding punishment (Ryan & Deci, 2000). For example, in the context of parenting, a child might obey his or her parent because he or she would otherwise be punished or would lose certain privileges.

SDT suggests that the extent to which behaviours are internalized as autonomous

relates to different adjustment outcomes (Deci & Ryan, 2000, 2008a). SDT-based research has consistently found that more autonomous motives and autonomy-supportive contexts relate to positive individual and relational outcomes.

Within the context of parenting and the fostering of autonomous development, children's capacity for self-determination is optimized when parents are autonomy-supportive by encouraging their children to engage in activities with the goal of self-regulation versus compliance (Joussemet, Landry, & Koestner, 2008). When there is parental support for autonomy within the family, parents value autonomy over emphasizing compliance, seek to understand their children's feelings and perspective, use reasoning in their parenting methods while minimizing the use of rewards and punishments, and offer their children choices rather than impose their own agenda (Joussemet et al., 2008). Such parental environments relate positively to children's own sense of competence and autonomy likely because with reasoning, children are more likely to internalize that rationale as their own (Deci & Ryan, 2000). Indeed, autonomy supportive environments have been associated with better psychological adjustment, fewer externalizing difficulties, greater school success, and better peer and parent-child relationships (Joussemet et al., 2008). This pattern associating autonomy support and positive adjustment has been documented across various age groups including infants, children, adolescents, emerging adults, and adults (Deci & Ryan, 2008b; Joussemet et al., 2008).

Whereas autonomy-supportive contexts consistently relate to positive outcomes, more controlled, less autonomous motives, and contexts that foster controlled motives, consistently relate to poorer outcomes (Deci & Ryan, 2000, 2008a; Vallerand, Pelletier,

& Koestner, 2008). In particular, parental psychological control is regarded as especially undermining of children's sense of volition because it is a parenting technique that seeks to manipulate and control children's behaviours and psychological world (Joussemet et al., 2008). In contrast to methods of autonomy support, methods of psychological control may include the invalidation of children's feelings or perspectives, and/or the use of an existing parent-child bond as leverage for guilt induction or love withdrawal (Barber, 1996). Disciplinary actions used by psychologically controlling parents tend to be stricter and rely on pressure, coercion, punishment, and/or restrictive rules to obtain the desired behaviours (Barber, 1996). Such control by parents has been associated with poorer psychological adjustment including poorer emotional well-being, more hopelessness, fewer feelings of personal control over one's own life, lower life satisfaction, and lower self-esteem (Shek, 2008; Wang, Pomerantz, & Chen, 2007).

Self-Determination Theory and Culture

According to SDT, the psychological need for autonomy is culturally universal (Deci & Ryan, 2000, 2008a), however, this claim of universality has not gone unchallenged. Specifically, some researchers have challenged the importance of autonomous functioning for families in non-Western cultures (Iyengar & Lepper, 1999; Markus & Kitayama, 1991, 2003). The application of SDT has been questioned in cultures that emphasize interdependence over independence (such as in Asian cultures), where respect of and submission to elders is commonplace (Markus & Kitayama, 1991, 2003). Based on findings that, in Asian American children, accepting the choices of trusted others (more than making choices individually) is associated with higher levels of intrinsic motivation, Iyengar and Lepper (1999) challenged the importance of autonomy

for families from cultures that value interdependence. Deci and Ryan's (2000) interpretation of these findings was that the means through which autonomy is experienced could differ across cultures. They argued that it is not whether or not decisions are being made individually that determines autonomy, but rather whether actions were freely endorsed (Deci & Ryan, 2008a). Thus, people from interdependent cultures may still feel autonomous when acting on the demands of in-group others if they have internalized those demands as their own view. Thus, SDT maintains the universality of the benefits of autonomy support as applicable to individuals and families from both independent and interdependent cultures.

Operationalization of Autonomy Support

There is a distinction between autonomy as defined by SDT and autonomy as defined by developmental theory. According to SDT, autonomy support is defined as the promotion of volitional functioning. Developmental theory, in contrast, defines autonomy support as the promotion of independence. Whereas parents who promote independence aim for their children to move from dependence to independence (a natural distancing or separating from parents typically encouraged in adolescence; Beyers, Goossens, Vansant, & Moors, 2003), parents who promote volitional functioning aim for their children to make decisions (whether towards dependence or independence) according to their children's personal values and interests (Soenens, Vansteenkiste, & Sierens, 2009). Research findings support the differentiation between autonomy support as promotion of volitional functioning versus autonomy support as promotion of independence (Ryan, Deci, Grolnick, & Guardia, 2006).

According to SDT, one of the prominent ways that volitional functioning is

fostered in children is through their interpersonal environment and depends on whether authority figures, including parents, are autonomy-supportive or controlling (Deci & Ryan, 2000, 2008a). When autonomy-supportive, parents offer meaningful choices, encourage initiative and self-expression, and consider their children's perspectives (Joussemet et al., 2008; Kunz & Grych, 2013; Ryan et al., 2006). Even when parents make decisions that limit their children's actions, autonomy-supportive parents consider their children's views and continue to keep their children involved by communicating the rationale for their actions (Bao & Lam, 2008). Their goal as parents is to foster autonomous self-regulation, rather than to achieve mere compliance (Joussemet et al., 2008). Non autonomy-supportive parents, on the other hand, are primarily oriented towards their own position in the parent-child relationship and are more likely to use pressure and control in their parenting to achieve compliance (Joussemet et al., 2008; Soenens et al., 2009). They tend to inhibit autonomy by being inflexible, overly demanding, or less responsive to their children's views, feelings, and attitudes (Ferguson, Kasser, & Jahng, 2011). Their goal and focus tends to be to meet their own agenda and they are less concerned about being attuned to and responsive to their children's viewpoints (Soenens et al., 2009).

Research by Bao and Lam (2008) offers evidence that the extent to which parents are making decisions for adolescents is relatively less important than the extent to which children concur with and endorse a choice made by parents. They determined that autonomy is distinct from complete freedom of choice and is instead more concerned with whether actions are fully endorsed (Bao & Lam, 2008). Thus, it is possible for adolescents to experience autonomy when acting on the demands or decisions of others if

they are able to internalize such demands or decisions as their own (Bao & Lam, 2008; Deci & Ryan, 2000). According to SDT, this is relevant for individuals who value interdependence and relatedness because internalization is facilitated within the context of relatedness and autonomy support.

Autonomous child rearing goals include parental desires for their children to be self-regulated and self-expressive, and for children's behaviours to be volitional, meaningful, and reflective of their own personal values (Deci & Ryan, 2008a). Parents' childrearing goals play an important part in determining parenting practices (Hastings & Grusec, 1998). Hastings and Grusec (1998) found that child-centered goals related to the use of reasoning in parenting techniques, whereas parent-centered goals related to the use of power assertion. Additionally, when parents value autonomy more than obedience and when parents use reasoning with their children (e.g., by considering their children's perspective and providing a rationale when making decisions), research has found children to be higher in autonomous self-regulation as well as to fare better with respect to both psychological and academic adjustment (e.g., Grolnick & Ryan, 1989; Joussemet et al., 2008; Kim & Ge, 2000; Lekes, Gingras, Philippe, Koestner, & Fang, 2010). For example, in a study of Chinese American families, adolescents' perceptions of their parents being higher in reasoning related inversely to adolescents' reports of depressive symptoms (Kim & Ge, 2000).

Adolescent Psychological Adjustment and Parent-child Relationship Quality

Internalizing and externalizing symptoms. As noted previously, associations between language brokering and the adjustment of the language broker have been a central area of language brokering research. Both internalizing and externalizing

symptoms have been reported to co-vary with language brokering frequency (e.g., Chao, 2006; Martinez et al., 2009). For Chinese immigrant families in Chao's (2006) study, language brokering for mothers and fathers was associated with more internalizing, but not externalizing problems in adolescent language brokers. For Korean immigrant families, language brokering for parents was significantly positively correlated with adolescents' self-reports of both internalizing and externalizing difficulties (Chao, 2006). Comparing high versus low demand family environments for language brokering, Martinez and colleagues (2009) found that Latino adolescents living in environments in which the demand for language brokering was high were perceived by parents as having more internalizing, but not externalizing symptoms. Living in a high-demand language brokering environment was associated with a greater risk for substance use (e.g., alcohol and tobacco) and a larger proportion of actual cases of substance use (Martinez et al., 2009). These findings, which highlight different relations between language brokering and internalizing symptoms and between language brokering and externalizing symptoms, provide strong support for examining internalizing and externalizing symptoms as separate indicators of adolescent adjustment. Furthermore, negative indicators of individual adjustment during adolescence are considered important given the growing body of evidence highlighting internalizing and externalizing symptoms as risk factors for negative trajectories into adulthood (Mash & Dozois, 2003).

Self-esteem. While internalizing and externalizing symptoms are indicators of adolescent maladjustment, self-esteem is an indicator of positive adjustment. Although research has consistently found poor self-esteem to be associated with maladjustment including both internalizing and externalizing symptoms, higher levels of self-esteem

have also been associated with positive well-being and health promotion (Mann, Hosman, Schaalma, & de Vries, 2004). Furthermore, links between language brokering constructs and self-esteem have been documented in previous research. For example, Weisskirch (2013) found burdensome perceptions of language brokering predictive of poorer self-esteem. Positive emotions associated with language brokering were associated with higher self-esteem (Weisskirch, 2007). Hua and Costigan (2012) found language brokering frequency predicted lower self-esteem when parents were perceived as psychologically controlling. Such findings support the examination of multiple aspects of language brokering and their relations to adolescent self-esteem.

Parent-child relationship quality. Given the relational nature of children's language brokering as a service children perform for their parents, it is important to also consider the relations between language brokering and other aspects of adjustment within the family, including the quality of the parent-child relationship. Indeed, previous research has linked language brokering experiences with family dynamics including parent-child conflict (e.g., Hua & Costigan, 2012; Martinez et al., 2009; Weisskirch, 2007). Developmental researchers also highlight adolescence as a prime developmental period to study parent-child relationship quality as this period has long been marked as a time of change in relations with significant others (Collins & Laursen, 2004), whereby opportunity and vulnerability are often negotiated within parent-child relationships (McElhaney, Allen, Stephenson, & Hare, 2009). Furthermore, as with symptoms of individual maladjustment, family problems in adolescence are considered as risk factors for negative outcomes in adulthood (Mash & Dozois, 2003).

The Current Study

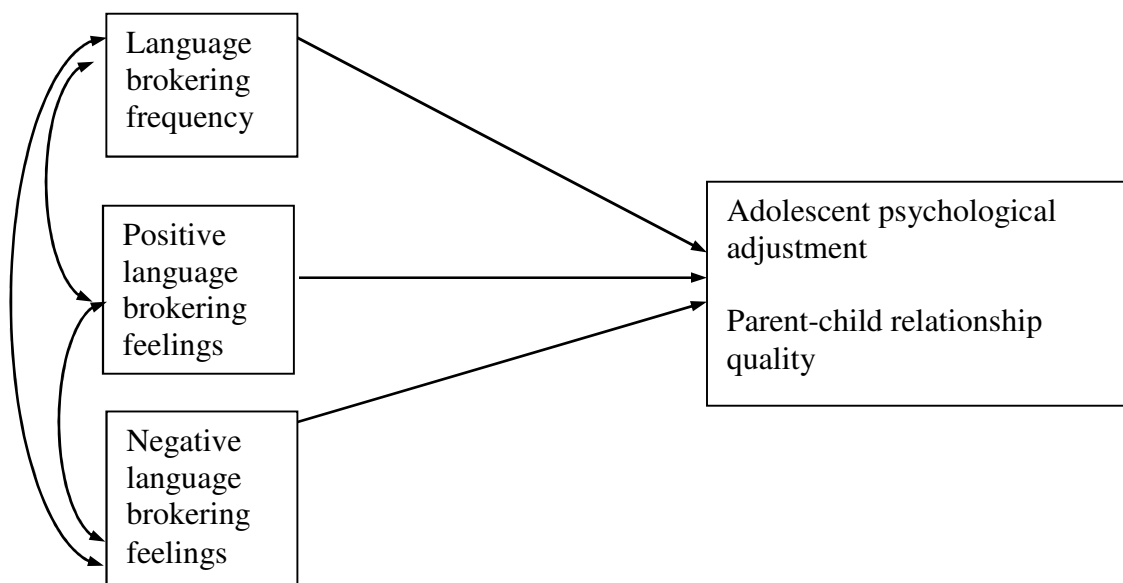
Objective 1: Disentangling Language Brokering Frequency and Feelings in Predicting Adjustment in Chinese Immigrant Families

The first goal of the current study built on the existing language brokering literature by examining language brokering frequency, and positive and negative feelings about language brokering as distinct constructs. By examining language brokering frequency and positive and negative language brokering feelings concurrently, I sought to better understand (1) how such behavioural and attitudinal aspects of language brokering interrelate and (2) how these constructs may be associated with individual and family adjustment within Chinese immigrant families. By simultaneously considering language brokering frequency, negative feelings about language brokering, and positive feelings about language brokering, this study explored how frequency relates to positive and negative feelings about language brokering, how positive and negative language feelings relate to one another, and whether the frequency of language brokering is more or less closely related to adjustment compared to the feelings that adolescents experience while language brokering. Figure 2 depicts this model and highlights the examination of language brokering frequency and language brokering feelings concurrently as predictors.

Adolescent adjustment was assessed using self-reports of adolescent internalizing and externalizing symptoms as well as adolescent self-reports of self-esteem. Parent-child relationship quality was assessed via adolescent reports of the intensity of parent-child conflict as well as intergenerational congruence. By examining both positive and negative aspects of individual and relational adjustment, I was able to independently examine language brokering in terms of possibly creating risk as well as possibly

promoting well-being.

Figure 2. Examining the relative importance of language brokering frequency and feelings in predicting adolescent adjustment and parent-child relationship quality.



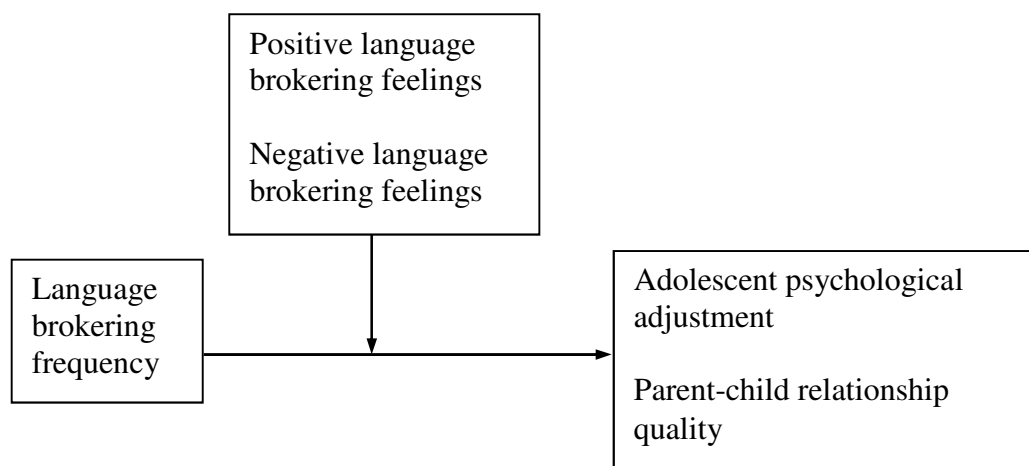
Hypotheses regarding relations among language brokering constructs and between language brokering constructs and adjustment. My first hypothesis pertains to how the predictor variables would relate to one another. More frequent language brokering was expected to relate to more negative and less positive language brokering feelings. I also predicted that positive and negative language brokering feelings would be inversely but not perfectly correlated with one another.

With respect to predicting relations between the language brokering constructs and the adjustment outcomes of interest, I generally hypothesized that more frequent language brokering and more negative feelings about language brokering would relate to poorer adolescent adjustment and poorer parent-child relationship quality. More positive

feelings about language brokering were expected to correlate with better adolescent adjustment and parent-child relationship quality.

In light of the mixed findings in past language brokering literature and building on recent findings that have explored various dimensions of language brokering in predicting adjustment, I also considered the potential moderating role of language brokering feelings on relations between language brokering frequency and adjustment (see Figure 3).

Figure 3. Language brokering feelings as moderator of relations between language brokering frequency and adjustment.



Indeed, Kam and Lazarevic (2014) found that for children who reported feeling confident in their ability to broker, language brokering more frequently did not function as a stressor. However, when they perceived brokering as burdensome, more frequent language brokering was associated with greater acculturation stress and, in turn, greater alcohol and marijuana use.

Hypotheses regarding the moderating role of language brokering feelings.

Building on the findings of Kam and Lazarevic (2014), I hypothesized that for adolescents who highly endorsed positive feelings about language brokering, the risks associated with language brokering frequency would be mitigated. That is, I predicted that when positive language brokering feelings were low, more frequent language brokering would relate to poorer individual and relational adjustment. In the context of high positive language brokering feelings, however, I expected more frequent language brokering to be associated with neutral or positive adjustment.

With respect to negative language brokering feelings, I hypothesized that relations between language brokering frequency and poorer adjustment would be strengthened when adolescents endorsed high levels of negative feelings. In contrast, in the context of low negative feelings about language brokering, I expected either no relations between frequency and adjustment or for language brokering frequency to be associated with positive adjustment.

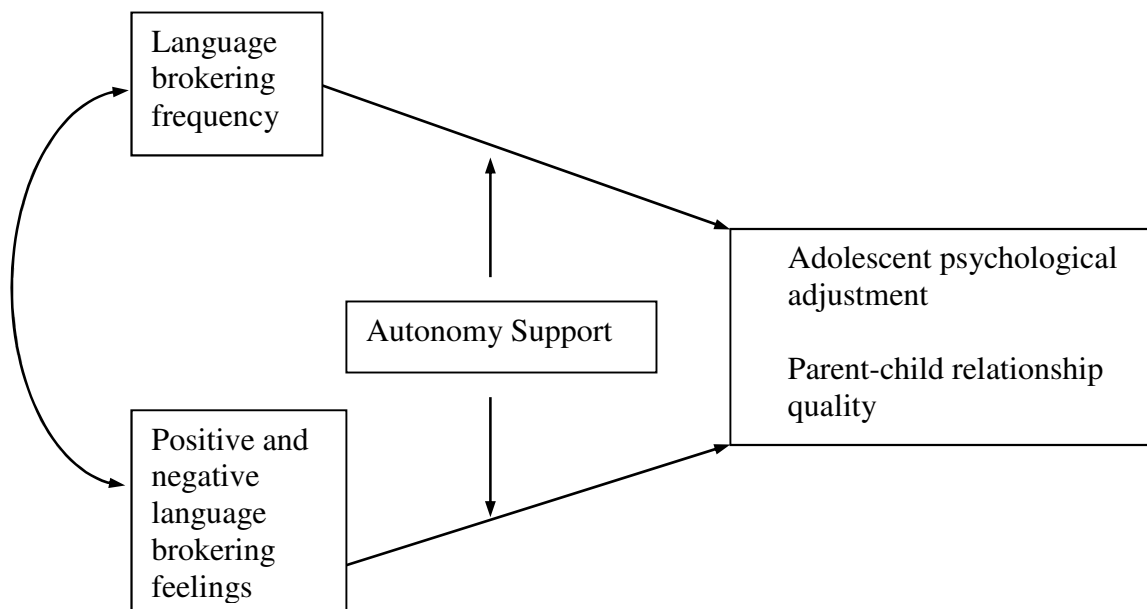
Objective 2: Applying Self-determination Theory and Understanding the Role of Autonomy Support on Relations between Language Brokering and Adjustment

In addition to begin disentangling frequency and feelings constructs within the language brokering literature within Chinese immigrant families, a second goal of the current study was to apply a new theoretical lens that might account for the mixed language brokering findings in adjustment and family functioning. Specifically, I used self-determination theory (SDT) to focus on the role of autonomy support (i.e., as the promotion of volitional functioning) to better understand and potentially predict relations between language brokering and adjustment outcomes. In this study, autonomy support

reflects autonomy-supportive parenting practices, including parents' reports of their autonomous childrearing goals and adolescent reports of their parents' use of reasoning. As with Objective 1, I considered both behavioural and attitudinal aspects of language brokering (i.e., frequency and feelings), adolescent psychological adjustment, and the parent-adolescent relationship.

Overall, I hypothesized that relations between language brokering and individual and relational adjustment would be moderated by autonomy support (as defined by SDT). The proposed model is presented in Figure 4 and examines language brokering frequency and language brokering feelings concurrently as predictors.

Figure 4. Autonomy support as moderator of relations between language brokering and adjustment.



Hypotheses regarding the moderating role of autonomy support. In the current study, I evaluated autonomy-supportive contexts as a moderator of relations between language brokering and adjustment. In autonomy-supportive contexts, I expected language brokering duties would more likely be freely endorsed, performed volitionally, and in line with the adolescent language broker's personal values. Even when language brokering duties were conducted following a parent's request, language brokering was predicted to be experienced positively in autonomy-supportive contexts because the rationale for providing interpretation and translation services for parents would more likely to be understood as reasonable and internalized by the language broker as their own view. Such instances were expected to be associated with emotional well-being and strong parent-child relationships.

On the other hand, in contexts of low autonomy support, the motivation for carrying out language brokering responsibilities is likely internally or externally controlled. In these contexts, I expected duties would more likely be experienced as an obligation rather than as a personal choice. When parents apply pressure or when adolescents experience guilt, for example, autonomy support would be lacking and the language brokering experience would less likely be in line with the adolescent's own opinions and values. Such instances were expected to be associated with greater emotional distress and with poorer parent-child relationship quality.

Specifically, I hypothesized that when parents' endorsement of autonomous childrearing goals is high and when adolescents perceive their mothers or fathers as high in parental reasoning, any risks associated with language brokering frequency would be attenuated. Furthermore, since language brokers might be able to appreciate and

internalize values associated with their language brokering responsibilities, I predicted language brokering frequency in highly autonomy-supportive contexts would be associated with positive individual and relational adjustment. In contrast, when mothers' and fathers' endorsement of autonomy-supportive childrearing goals are low or when their adolescent children perceive them as low in their use of parental reasoning, I hypothesized that language brokering frequency would relate to poorer adjustment, including lower levels of adolescent self-esteem, more adolescent psychological symptoms, greater parent-child relationship distress, and less intergenerational congruence.

With respect to relations between negative language brokering feelings and adjustment, I hypothesized that any negative links with poorer individual or family adjustment might be buffered in the context of high autonomy support, such that negative language brokering feelings would relate less strongly with adolescent adjustment and parent-child relationship quality. As with language brokering frequency, I expected that when parents report low autonomous childrearing goals or when adolescents perceive their parents as low in their use of parental reasoning, links between negative feelings about language brokering and outcomes would be accentuated, resulting in poorer individual and parent-child adjustment.

Finally, I hypothesized that within contexts high in autonomy support (whether based on parents' childrearing goals or their adolescents' perceptions), relations between positive language brokering feelings and positive adjustment would be enhanced. That is, I expected that in such contexts, more positive language brokering feelings would relate to greater adolescent self-esteem, fewer adolescent psychological symptoms, less

parent-child relationship conflict, and more intergenerational congruence. When mothers' and fathers' endorsement of autonomy-supportive childrearing goals are low or when their adolescent children perceive them as low in their use of parental reasoning, I hypothesized that associations between positive feelings about language brokering and positive adjustment would be muted such that links between positive language brokering feelings and adolescent adjustment and the parent-child relationship would be weak or not significant.

Hypotheses regarding Language Brokering for Mothers versus Fathers

All the above hypotheses were examined separately with respect to language brokering for mothers versus fathers. By examining adolescents' reports of their parents independently in the current study, rather than as a unit, I was able to evaluate whether adolescent language brokers provide interpretation, translation and communication mediation assistance to their parents equally. Furthermore, it was possible to evaluate whether any relations found between language brokering and adjustment were uniquely associated with language brokering for mothers or for fathers, or whether relations were similar for both parents.

In the current study, the hypotheses regarding whether and how language brokering for mothers and fathers would be similar or different were exploratory. That is, I made no specific hypotheses with respect to the frequency with which adolescents language broker for mothers versus fathers, their feelings about language brokering for mothers versus fathers, or the relations between language brokering constructs and adolescent adjustment or parent-child relationship quality.

Methods

Participants

The data for this study were collected as part of a larger two-wave longitudinal Intercultural Family Study directed by Dr. Costigan. The larger study examines acculturation, parent-child relationships, and adjustment among Chinese immigrant families residing in Canada. During Wave 1, data from 182 immigrant Chinese families, typically consisting of two parents and one child, were collected. All parents emigrated voluntarily from Mainland China (63.2%), from Taiwan (22.4%), or from Hong Kong (13.8%). Parents had lived in Canada between 2 and 36 years (Fathers $M = 10.36$ years, $SD = 6.58$; Mothers $M = 9.86$ years, $SD = 6.02$), and first-generation adolescents had lived in Canada for an average of 5.99 years ($SD = 1.98$). At Wave 2, data from 152 of the original families were collected approximately 18 months later.

Following Wave 1 data collection, Hua and Costigan (2012) conducted a study examining the familial context of adolescent language brokering. In the process of conducting this research, a limitation of the original data set for the study of language brokering became apparent. That is, adolescents reported language brokering for their parents collectively making it impossible to differentiate language brokering for mothers and fathers separately. Furthermore, the first wave did not assess adolescents' feelings about language brokering. Accordingly, several revisions were made in preparation for Wave 2 data collection: we had adolescents report the frequency with which they language brokered for their mothers and fathers separately and we asked adolescents the extent to which they felt various positive and negative emotions as a result of language brokering for their parents. Consequently, data from Wave 2 allowed for examination of

the language brokering experience more deeply in terms of evaluating differences in language brokering for mothers and fathers and exploring the relative importance of frequency versus feelings in the language brokering experience.

In order to capitalize on the above improvements, analysis for the current study used primarily Wave 2 data. One exception is the measure of parent childrearing goals, which was collected during Wave 1 only. This construct was considered to be stable and unlikely to change significantly within the 18-month period between Wave 1 and Wave 2.

At Wave 2, adolescent children were between 13 and 19 years old ($M = 15.79$ years, $SD = 1.73$). There were approximately equal numbers of female (53.6%) and male (46.4%) adolescents, and approximately half came to Canada at or after the age of six (i.e., 55.6% first generation), and half were born in Canada or came to Canada before the age of six (i.e., 44.4% second generation, including 1.5 generation).

At Wave 2, 133 fathers and 150 mothers participated in the study. Fathers were on average 48.29 years old ($SD = 5.77$), and mothers were on average 45.76 years old ($SD = 4.48$). The majority of fathers (98.5%) and mothers (92.7%) were currently married. For these parents, the average length of marriage was 20 years (Fathers = 20.27 years, $SD = 4.43$, Mothers = 20.09 years, $SD = 4.52$).

Most parents were well educated. When asked for the highest level of education completed, 60.9% of fathers and 48.7% of mothers reported having completed a university degree or graduate work; 20.3% of fathers and 27.3% of mothers completed college or vocational school; 9.8% of fathers and 16.7% of mothers completed high school; and 9.0% of fathers and 7.3% of mothers did not complete high school. The

majority of fathers (73.7%) reported being employed on a full-time basis, and 14.3% were engaged in part-time employment. Approximately half of mothers (51.3%) were employed full-time, and 24.7% reported working on a part-time basis. Among parents who were not employed, 3.8% of fathers and 2% of mothers were looking for work; 2.3% of fathers and 16% of mothers chose not to work, and 4.5% of fathers and 3.3% of mothers reported that they were retired.

Procedures

Eligibility. Four criteria were required for families to be eligible for the Intercultural Family Study. First, both parents had to be born in and emigrated voluntarily from Mainland China, Taiwan, or Hong Kong. These regions were chosen because they represent top sending regions for new arrivals to British Columbia (Statistics Canada, 2001). Second, both parents had to have immigrated to Canada after the age of 18 and identify themselves as Chinese, thus representing adult immigrants who were brought up in predominantly Chinese culture. Third, families had to be living in Canada for at least two years to allow for a sufficient amount of time to have passed, ensuring that the process of acculturation (rather than re-settlement) could be studied. Fourth, parents had to have at least one child between the ages of 12 and 17 at Wave 1. This enabled data collection from children of immigrants making a transition through adolescence, therefore capitalizing on a developmental period marked by significant changes in both parent-child relationships and acculturation into Canadian society.

Recruitment. The initial identification and recruitment of eligible families were achieved in two ways. The largest proportion of families was randomly recruited from greater Victoria and greater Vancouver, British Columbia. Using telephone directories to

identify individuals with Chinese last names, potential participants were randomly contacted by a contracted survey research centre (Malatest) that employed bilingual recruiters. For each family that met the specified criteria for participation, the Malatest recruiter provided information about the main goals and procedures of the Intercultural Family Study. If parents expressed interest in participating, their contact information was shared with the Intercultural Family Study research team. A project research assistant then sent interested families a letter providing more detailed information about the project, and contacted families by phone to answer any additional questions and to arrange a time for fathers, mothers, and one child from each family to complete their individual questionnaire booklets. A smaller, non-random portion of the sample (21.7%) was obtained by research assistant referrals. The majority of families were recruited from greater Vancouver (68.4%) with the remainder from greater Victoria (31.6%). Eighteen months following Wave 1 data collection, research assistants re-contacted families that had previously participated and that had given permission to be contacted again in the future for follow-up research.

Data collection. During both Wave 1 and 2 data collection, two research assistants, with at least one having bilingual abilities, visited each family in their homes. Although the measures used in the current study focused primarily on the report of adolescents, original data collection procedures involved fathers, mothers, and the adolescent child from each family simultaneously but independently complete consent forms and questionnaire booklets available in the language of their choice. Prior to administration, these materials were translated into Chinese using back-translation procedures to ensure that English and Chinese versions were equivalent in meaning.

During Wave 1, approximately 90 minutes were required to complete the entire process with each family. During Wave 2, 60 to 90 minutes were required of each family. As compensation for their time, families were given \$50 at Wave 1 and \$60 at Wave 2.

Ethics approval. This Intercultural Family Study was granted research ethics approval by the University of Victoria, and is supported by a grant to Dr. Costigan from the Social Sciences and Humanities Research Council. To uphold ethical standards, family members were informed that participation in the study was completely voluntary and members could withdraw at any time during the completion of the questionnaires without penalty. Furthermore, within each family, members were asked not to share their responses with one another so as not to influence each other's responses, and also to uphold confidentiality between family members. The research team assigned each family with a numeric code so that there was no identifying information anywhere on the questionnaires. Forms with identifying information, including consent forms, were locked and stored separately. I received ethics approval from the University of Victoria to use the anonymized data to conduct the current study.

Measures

The measures used for this study represent a small subset of scales contained in the Intercultural Family Study Wave 2 questionnaire booklets. Parents' childrearing goals were assessed at Wave 1. All other measures were completed at Wave 2.

Demographic information. A background questionnaire gathered information about participant characteristics such as age, gender, highest level of education completed, employment status, income, reasons for immigration, and length of residence in Canada. To measure parents' English proficiency, mothers' and fathers' were asked

whether they spoke English and were given the choice of answering “yes”, “no”, or “a little.”

Language brokering frequency. Adapted from Chao’s (2006) language brokering measure, adolescents reported on the frequency with which they translated or interpreted for their parents in eight situations (see Appendix A). The situations included materials from school, bills or financial information, household issues, medical/health information, immigration information, media (e.g., news items, TV), parents’ work materials, and informal conversation. Adolescents rated the frequency of their language brokering on a 5-point scale: 0 (*never*), 1 (*a few times a year*), 2 (*about once a month*), 3 (*a few times a week*), and 4 (*daily*). They reported each item separately for their mothers and fathers. The language brokering scale, which is an average of all eight items, showed excellent internal consistency ($\alpha = .89$ for mothers, $\alpha = .90$ for fathers).

Language brokering feelings. Adolescents’ positive and negative feelings about language brokering for each of their parents was examined using an 8-item scale created for the Intercultural Family Study (see Appendix B), based on feelings reported in past studies (e.g., Chao, 2006; McQuillan & Tse, 1995). Specifically, adolescents were asked, “If you ever translate or interpret for your mother and father, how much do you feel _____ because of it?” Positive feelings included feeling proud, helpful, grown-up, and respectful, while negative feelings included feeling stressed, embarrassed, annoyed, and nervous. Items were on a 4-point scale: 1 (*not at all*), 2 (*a little*), 3 (*a fair amount*), and 4 (*a great deal*). The reliability of the four items assessing adolescents’ positive feelings while language brokering was good ($\alpha = .79$ for language brokering for mothers, $\alpha = .81$ for language brokering for fathers). The reliability of the four items assessing

adolescents' negative feelings while language brokering was also good ($\alpha = .73$ for language brokering for mothers, $\alpha = .80$ for language brokering for fathers). Items representing positive feelings were averaged to make a composite score of positive feelings. Similarly, the items representing negative feelings were averaged to make a separate composite score of negative language brokering feelings. Higher scores indicate greater endorsement of adolescent feelings while language brokering.

Autonomy support. Two measures of autonomy-supportive parenting practices were used to reflect autonomy support. The first measure examined parents' reports of their autonomous childrearing goals and the second examined adolescents' reports of their parents' use of reasoning.

Autonomous childrearing goals. Parents' autonomous childrearing goals were assessed using items selected from the 15-item Childrearing Goals Questionnaire (see Appendix C). The Childrearing Goals questionnaire consists of two separate measures of childrearing goals: interdependent goals and child-centered goals. Six items that represented interdependent goals (e.g., to be cooperative) were selected from the Interdependent Self-Construals Scale (Kim et al., 1996) and have demonstrated validity with Chinese samples (Kim, Smith, & Yuego, 1999). The nine items that assessed child-centered goals (e.g., to be self-expressive and verbal) were adopted from the child-centered subscale of Padmawidjaja and Chao's (2010) Parental Beliefs Scale. These child-centered goals reflect childrearing goals that stress the importance of independence and self-expression and have demonstrated validity with Chinese immigrant parents (Padmawidjaja & Chao, 2010).

For the current study, only items that reflected the childrearing goals described in the SDT literature on autonomy-supportive parenting were selected (Joussemet et al., 2008). Specifically, 4 items were selected for the current study because they emphasized parents' desire for their children to be self-expressive and confident in their own abilities and judgment. Mothers and fathers were asked, "How important is it to you for your child to be self-expressive and verbal? To be very confident about his/her abilities? To do what he/she thinks is right for him/herself? To trust his/her own judgment?" These items were rated on a 5-point scale from 1 (*not at all important*) to 5 (*extremely important*). Both mothers and fathers completed this measure during Wave 1 data collection. Reliability of this scale was adequate ($\alpha = .75$ for both mothers and fathers).

Parental reasoning. Parents' use of reasoning was assessed using the Inductive Reasoning subscale of Kim and Ge's (2000) Parenting Practices scale. Other subscales on the Parenting Practices scale assess parents' use of harsh discipline and monitoring. For the Intercultural Family Study, the 4-item Inductive Reasoning subscale was included in a broader 21-item Parenting Experiences Questionnaire that also included subscales assessing monitoring (6 items), unrestricted autonomy granting (4 items), and warmth (7 items; see Appendix D).

Adolescents completed the Inductive Reasoning subscale separately with respect to their mother and father and were asked, "Do you talk with your mom/dad about what is going on in your life? Does your mom/dad give you reasons for her/his decisions? Does your mom/dad ask you what you think before making decisions that affect you? Does your mom/dad discipline you by reasoning, explaining, or talking to you?" All items were rated on a 7-point scale from 1 (*never*) to 7 (*always*). Kim and Ge (2000) found

good internal consistency on the Inductive Reasoning subscale across adolescents' perceptions of their parents' use of parental reasoning ($\alpha = .71$ for mothers, $\alpha = .82$ for fathers) using a sample of Chinese immigrant families. In the current study, the reliability was also quite good across adolescents' reports of their mothers' ($\alpha = .77$) and fathers' ($\alpha = .76$) use of reasoning.

Adolescent self-esteem. Adolescents completed the Rosenberg Self-esteem Scale (Rosenberg, 1965; see Appendix E) as a measure of their psychological adjustment. This 10-item scale measured self-esteem, including concepts of personal worth, self-confidence, self-satisfaction, self-respect, and self-deprecation (e.g., I feel that I have a number of good qualities;" "I feel that I have much to be proud of"). Participants reported their agreement with each statement on a 4-point scale from 1 (*strongly disagree*) to 4 (*strongly agree*). Among college students of White, Black and Asian backgrounds, Rosenberg (1965) reported good internal consistency (range α s = .85 to .88). Furthermore, subsequent studies using the Rosenberg Self-esteem Scale have demonstrated its validity with Chinese samples (e.g., Yuang, 2000). The internal consistency of this scale in the current sample was good ($\alpha = .89$).

Adolescent internalizing and externalizing symptoms. Adolescents' self-report of their internalizing and externalizing symptoms were also used to measure adolescent psychological adjustment. Adolescents completed the 112-item Youth Self-Report (YSR; Achenbach, 1991; see Appendix F). The 36-item Internalizing scale includes subscales for depressive-anxiety symptoms, somatic complains, and withdrawal (e.g., I cry a lot, I feel overtired, I am shy). The Externalizing scale consists of 32 items and includes subscales assessing aggression and rule-breaking behaviour (e.g., I am mean to

others, I lie or cheat). Adolescents reported how true these statements were on a 3-point scale: 0 (*not true*), 1 (*somewhat or sometimes true*), and 2 (*very true or often true*). Chao (2006) used the YSR in her study on language brokering among Chinese American, Mexican American and Korean American high-school students and found excellent internal consistency for her overall sample ($\alpha = .90$ for the internalizing scale, $\alpha = .89$ for the externalizing scale). Other research has also demonstrated the reliability and validity of the YSR with Chinese samples (e.g., Wong, Jenvey, & Lill, 2012; Wu & Chao, 2011). In the current study, the internal consistency of adolescents' reports on the YSR was good ($\alpha = .78$ for the internalizing scale, $\alpha = .72$ for the externalizing scale).

Parent-adolescent conflict intensity. The intensity of parent-adolescent conflict in discussions was assessed using the Issues Checklist (Robin & Foster, 1989; see Appendix G). This 26-item measure lists discussion topics that are potentially a source of parent-adolescent conflict (e.g., cleaning up bedroom, how money is spent, going on dates). Adolescents indicated separately for each parent whether each item has been a topic of discussion, and if so, how intense the discussion has been. The intensity of anger for each discussion topic was rated on a 6-point scale from 0 (*not discussed*) to 5 (*very angry*). The Issues Checklist has been used in populations of diverse cultural and ethnic backgrounds, and has shown good reliability in Chinese samples (Fulgini, 1998). With the sample in the current study, the Issues Checklist showed good reliability for adolescents' reports of conflict intensity with mothers ($\alpha = .86$) and fathers ($\alpha = .78$).

Intergenerational congruence. The Intergenerational Congruence in Immigrant Families – Child Scale (ICIF-CS) was also used as a measure of parent-child relationship quality (Ying, Lee, & Tsai, 2004; see Appendix H). This 8-item scale assesses children's

level of understanding and satisfaction with the parent-child relationship. Two adaptations were made for the purposes of this study. First, because pilot data revealed high correlations between adolescents' reports of their relationship with their mothers and fathers ($r = .93$), the original questions were re-worded for the current study to ask about adolescents' relationship with their parents collectively in order to reduce the length of the overall questionnaire booklet (e.g., "My parents and I agree on the aims, goals, and things believed to be important in life;" "My parents and I agree on friends"). The second adaptation was to replace "American" with "Canadian" in one question (i.e., "My parents and I agree on how to behave in a predominantly Canadian setting"). Responses were rated on a 5-point scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). While designed to be applicable across various ethnic groups, the psychometric properties of the ICIF-CS were examined with Chinese American children of immigrants (Ying et al., 2004). Internal reliability was high (range α s = .84 to .85), as was one-month test-retest reliability (range α s = .88 to .90). In the current sample, the internal reliability of this scale was also good ($\alpha = .86$).

Results

Preliminary Results

Data screening. Prior to conducting the main analyses, I carefully examined the data for accuracy, assessed the extent of missing data, and screened for normality of variables. In total, only 2.8% of the total data was missing. Comparisons of various methods for imputing missing values have shown similar results across methods when the amount of missing data is very low (i.e., less than 5%; Barzi & Woodward, 2004; Tabachnick & Fidell, 2013). Thus, missing cases were omitted from analyses and no further steps were taken.

With respect to the distribution of the key variables of interest, variables with statistically significant skewness or kurtosis were considered for transformation. None of the key variables in the current study met West, Finch and Curran's (1995) criteria of an absolute skew value of >2.1 or an absolute kurtosis value of >7.1 as indicative of substantial departure from normality. Thus, no variable transformations were undertaken.

Control variables. Adolescents' age, gender, generational status and the number of children in the family were adolescent background variables considered as possible control variables. Parent background variables, including mothers' and fathers' age, level of education, length of residence in Canada and their level of English proficiency, were also considered. Background variables were controlled for in the regression analyses if they showed significant relations with a language brokering construct (i.e., language brokering frequency, negative language brokering feelings, or positive language brokering feelings) as well as with a dependent variable (individual or relational adjustment). Relations between the background variables and the other predictors (i.e.,

moderator) variables were also considered when evaluating the need for statistical controls. Altogether, only the number of children in the family and mothers' and fathers' levels of education met the above criteria and were included as control variables in all subsequent regression analyses. The zero-order correlations among all main study variables, including the control variables, are presented in Table 1.

As seen in Table 1, the number of children in the family correlated positively with negative feelings about language brokering for mothers and fathers. The number of children in the family was also significantly negatively related to parent-child congruence. No other adolescent demographic variables correlated significantly with both a language brokering construct and an outcome variable.

Of the parent background variables, only mothers' and fathers' level of education related significantly to both language brokering and outcome variables. Specifically, as shown in Table 1, mothers' and fathers' level of education correlated negatively with adolescent-reported language brokering frequency and negative language brokering feelings. Furthermore, mothers' level of education also correlated significantly with one of the autonomy support variables (i.e., the higher mothers' level of education, the more adolescents perceived their mothers as autonomy supportive, as defined by adolescent perceptions of maternal reasoning). Fathers' level of education correlated negatively with adolescent externalizing symptoms and positively with parent-adolescent congruence, while mothers' level of education correlated positively with adolescent self-esteem. Taken together, mothers' and fathers' level of education, in addition to the number of children in the family, were used as control variables for subsequent regression analyses.

Table 1

Inter-correlations among All Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Number of Children	1	-.42***	.13	-.11	.27***	-.01	-.16 ^a	-.16 ^a	.09	.11	.09	-.18*
2. Parents' Education	-.32***	.65***	-.20*	.04	-.34***	.16 ^a	.19*	.16*	-.02	-.16*	-.05	.20*
3. Language Brokering Frequency	.12	-.34***	.72***	.40***	.35***	.02	.07	-.09	.16 ^a	.21**	.24**	.10
4. Positive Language Brokering Feelings	-.03	-.09	.37***	.91***	-.003	.16*	.33***	.12	-.02	-.04	.09	.34***
5. Negative Language Brokering Feelings	.26**	-.37***	.30***	.02	.84***	-.04	-.19*	-.31***	.16*	.24**	.29***	-.26**
6. Autonomous Childrearing Goals	-.06	.06	.00	.11	.03	.21*	.09	.16 ^a	-.02	-.01	-.03	.14
7. Parental Reasoning	-.10	.14	.20*	.29***	-.19*	.10	.70***	.15 ^a	-.17*	-.24**	-.24**	.51***
8. Adolescent Self-Esteem	-.16 ^a	.17*	-.10	.12	-.27***	.13	.18*	1	-.55***	-.40***	-.14 ^a	.14 ^a
9. Adolescent Internalizing Symptoms	.09	.06	.15 ^a	-.04	.16 ^a	-.07	-.18*	-.55***	1	.61***	.29***	-.12
10. Adolescent Externalizing Symptoms	.11	-.07	.06	.01	.16 ^a	-.06	-.21**	-.40***	.61***	1	.41***	-.15 ^a
11. Parent-Adolescent Conflict Intensity	.01	.10	.24**	.08	.19*	.05	-.01	-.07	.19*	.25**	.48***	-.21**
12. Intergenerational Congruence	-.18*	.15 ^a	.17*	.35***	-.19*	.00	.39***	.14 ^a	-.12	-.15 ^a	-.11	1

Note. Mother-father correlations are on the diagonal; mother correlations are above the diagonal; father correlations are below.

^a $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Objective 1: Understanding Language Brokering Frequency and Feelings and Characteristics of Adolescent Language Brokers and their Parents

In order to gain a thorough understanding of the language brokering constructs, I examined the means, standard deviations, and observed ranges of the language brokering frequency and feelings variables (see Table 2). Inter-correlations among and between the language brokering constructs were also examined to better understand how frequency and feelings relate to one another (see Table 1). Finally, I examined the relations between the language brokering constructs and both adolescent and parent background variables to better understand the characteristics of the adolescent language brokers in my sample as well as the characteristics of the mothers and fathers who received language brokering services.

Table 2

Means, Standard Deviations and Observed Range for Adolescent Reported Language Brokering Variables

	For Mothers		For Fathers	
	Means (SD)	Observed Range	Means (SD)	Observed Range
Language Brokering Frequency ^a	1.25 (.82)	0.00 – 3.63	0.98 (.85)	0.00 – 4.00
Positive Language Brokering Feelings ^b	2.22 (.74)	1.00 – 4.00	2.17 (.77)	1.00 – 4.00
Negative Language Brokering Feelings ^b	1.52 (.51)	1.00 – 3.25	1.51 (.59)	1.00 – 4.00

^a Range of scale = 0-4

^b Range of scale = 1-4

Language brokering frequency. Adolescents' reports of language brokering frequency ranged from 0 (*never*) to 4 (*daily*) for both mothers and fathers. The average reported frequency for both mothers and fathers was “*a few times a year.*” Although the average reported frequency was relatively low, 84.8% of adolescents reported having ever language brokered for their fathers, and 94.6% of adolescents reported having ever language brokered for their mothers. As shown in Table 1, adolescent reports of language brokering frequency for mothers and fathers were significantly positively correlated with each other. Adolescents reported significantly more frequent language brokering for mothers compared to fathers, $t(144) = 5.43, p < .001; d = .34$.

Language brokering feelings. Similar to reports of language brokering frequency, there was a wide range of responses in the extent to which adolescents endorsed positive and negative feelings about language brokering for their parents. Adolescents' reports of positive feelings language brokering for their parents ranged from 1 (*not at all*) to 4 (*a great deal*). Their reports of negative feelings about language brokering ranged from 1 (*not at all*) to 4 (*a great deal*) for fathers and from 1 (*not at all*) to 3 (*a fair amount*) for mothers. On average, adolescents reported feeling “*a little*” positive and “*not at all*” to “*a little*” negative language brokering for both their mothers and fathers. Adolescents reported more positive feelings language brokering for mothers than fathers, $t(140) = 2.78, p < .006; d = .11$. No statistically significant differences were observed comparing negative brokering feelings for mothers with negative brokering feelings for fathers, $t(140) = 0.72, p = .48$. As shown in Table 1, positive language brokering feelings for mothers and fathers were significantly correlated, as were negative language brokering feelings for mothers and fathers. However, contrary to expectations,

positive language brokering feelings for mothers did not correlate significantly with negative language brokering feelings for mothers, nor did positive and negative language brokering feelings for fathers correlate significantly with each other (see Table 1).

Relations between language brokering frequency and feelings. Interestingly, adolescent reported language brokering frequency for mothers and fathers was significantly positively correlated with both negative language brokering feelings (as expected) and positive language brokering feelings (which was unexpected). That is, as shown in Table 1, greater language brokering frequency for fathers was significantly related to more negative as well as more positive feelings about language brokering for fathers. Similarly, more frequent language brokering for mothers was significantly related to more negative and more positive feelings about language brokering for mothers.

Adolescent characteristics. To gain a better understanding of the adolescent language brokers in my sample, relations between the language brokering constructs and four adolescent demographic variables (i.e., age, gender, generational status, and the number of children in the family) were examined. Language brokering frequency was not significantly related to adolescents' age (for mothers: $r(149) = .04, p = .62$; for fathers: $r(145) = .03, p = .76$). Similarly, neither positive feelings nor negative feelings about language brokering significantly related to adolescent age (adolescent positive feelings about language brokering for their mothers: $r(148) = -.01, p = .94$; for their fathers: $r(141) = -.01, p = .89$; adolescent negative feelings about language brokering for their mothers: $r(148) = -.04, p = .66$; for their fathers: $r(141) = -.002, p = .98$).

T-tests revealed that none of the language brokering constructs differed statistically

by adolescents' gender (adolescent report of language brokering frequency for mothers: $t(146) = 0.62, p = .53$, females: $M = 1.29, SD = .84$, males: $M = 1.21, SD = .81$; for fathers: $t(142) = 1.48, p = .14$, females: $M = 1.08, SD = .87$, males: $M = 0.88, SD = .82$; adolescent report of positive language brokering feelings for mothers: $t(145) = 0.84, p = .40$, females: $M = 2.27, SD = .69$, males: $M = 2.17, SD = .79$; for fathers: $t(138) = 0.63, p = .53$, females: $M = 2.21, SD = .72$, males: $M = 2.13, SD = .84$; adolescent report of negative language brokering feelings for mothers: $t(145) = 0.53, p = .60$, females: $M = 1.54, SD = .54$, males: $M = 1.49, SD = .48$; for fathers: $t(138) = 0.02, p = .99$, females: $M = 1.51, SD = .59$, males: $M = 1.51, SD = .60$).

Examining adolescents' generational status, adolescents' reports of language brokering frequency did not significantly differ by generational status (for mothers: $t(146) = 0.02, p = .98$, second-generation children: $M = 1.26, SD = .87$, first-generation children: $M = 1.25, SD = .79$; for fathers: $t(142) = 0.82, p = .41$, second-generation children: $M = 1.06, SD = .83$, first-generation children: $M = 0.94, SD = .87$). There were also no significant differences by generational status for positive feelings while language brokering for mothers ($t(145) = -0.42, p = .67$, second-generation children: $M = 2.20, SD = .69$, first-generation children: $M = 2.25, SD = .77$) or for fathers ($t(138) = 0.18, p = .86$, second-generation children: $M = 2.19, SD = .69$, first-generation children: $M = 2.17, SD = .83$). However, second-generation children (those born in Canada or arrived before the age of 6 years) endorsed negative feelings while language brokering to a greater extent than first-generation children (those that arrived to Canada at or after age 6 years). This was the case for language brokering for mothers ($t(145) = 2.61, p = .01; d = .43$; second-generation children: $M = 1.64, SD = .55$; first-generation children: $M = 1.42, SD = .47$)

and fathers ($t(138) = 2.13, p = .04; d = .18$; second-generation children: $M = 1.63, SD = .61$; first-generation children: $M = 1.42, SD = .56$).

As previously mentioned, the larger the number of children in the home, the more adolescents expressed negative feelings about language brokering for their mothers and fathers (see Table 1). As shown in Table 1, no relations were found between the number of children in the home and adolescents' reports of language brokering frequency for mothers or fathers, or between the number of children and positive feelings about language brokering for mothers or fathers.

Parent characteristics. As was the case with the number of children in the family, mothers' and fathers' level of education met the criteria for inclusion as control variables in regression analyses. As shown in Table 1, lower levels of education completed by mothers were associated with more frequent language brokering for mothers. Similarly, lower levels of education completed by mothers were associated with adolescents endorsing more negative feelings while language brokering for their mothers. Showing a similar pattern with fathers, lower levels of education completed by fathers were associated with more frequency language brokering for fathers and with adolescents' negative feelings language brokering for their fathers (see Table 1). There were no relations between either parent's level of education and positive language brokering feelings.

In addition to parents' level of education, relations between the language brokering constructs and three additional parent background variables (i.e., parents' age, length of residence in Canada, and proficiency with the English language) were examined to better understand the characteristics of the parents who received language brokering services

from their children.

Language brokering frequency and mothers' age were not statistically related, $r(140) = .004, p = .97$. Furthermore, neither adolescents' positive feelings nor their negative feelings about language brokering related statistically significantly to mothers' age (positive feelings: $r(139) = -.10, p = .22$; negative feelings: $r(139) = .14, p = .10$).

With respect to relations between language brokering and fathers' age, all language brokering constructs were statistically unrelated to fathers' age (frequency: $r(126) = .06, p = .51$; positive feelings language brokering: $r(123) = -.05, p = .58$; negative feelings: $r(123) = .02, p = .80$).

Neither mothers' nor fathers' length of residence in Canada related significantly with language brokering frequency (mothers' length of residence with adolescents' report of language brokering frequency for mothers: $r(146) = -.13, p = .13$; fathers' length of residence with adolescents' report of language brokering for fathers: $r(132) = -.05, p = .59$). Similarly, mothers' and fathers' length of residence in Canada did not relate statistically significantly with adolescents' feelings about language brokering (mothers' length of residence with adolescents' report of positive feelings language brokering for mothers: $r(145) = -.13, p = .11$; fathers' length of residence with adolescents' report of positive feelings language brokering for fathers: $r(129) = -.01, p = .94$; mothers' length of residence with adolescents' report of negative feelings language brokering for mothers: $r(145) = .15, p = .07$; fathers' length of residence with adolescents' report of negative feelings language brokering for fathers: $r(129) = .15, p = .09$).

Not surprisingly, adolescents reported language brokering more frequently for mothers who reported speaking little to no English than for mothers who reported being

able to speak English ($t(143) = 3.12, p = .002; d = .54$; language brokering frequency for mothers reporting no to little English proficiency: $M = 1.53, SD = .83$; language brokering frequency for mothers who report proficiency in English: $M = 1.09, SD = .79$). In contrast, fathers' English proficiency was not statistically related to language brokering frequency (fathers' English proficiency with adolescents' report of language brokering frequency for fathers, $t(125) = 0.15, p = .89$; language brokering frequency for fathers reporting no to little English proficiency: $M = 1.00, SD = .90$; language brokering frequency for fathers who report proficiency in English: $M = 0.99, SD = .82$). Mothers' and fathers' English proficiency was also not statistically related to adolescents' feelings about language brokering (mothers' English proficiency with positive feelings language brokering for mothers: $t(142) = 0.81, p = .42$, positive brokering feelings for mothers reporting no to little English proficiency: $M = 2.30, SD = .78$, positive brokering feelings for mothers who report proficiency in English: $M = 2.20, SD = .71$; with negative feelings language brokering for mothers: $t(142) = 1.14, p = .26$, negative brokering feelings for mothers reporting no to little English proficiency: $M = 1.58, SD = .51$, negative brokering feelings for mothers who report proficiency in English: $M = 1.48, SD = .49$; fathers' English proficiency with positive feelings language brokering for fathers, $t(122) = 0.26, p = .80$, positive brokering feelings for fathers reporting no to little English proficiency: $M = 2.20, SD = .73$, positive brokering feelings for fathers who report proficiency in English: $M = 2.16, SD = .79$; with negative feelings language brokering for fathers, $t(122) = .83, p = .41$, negative brokering feelings for fathers reporting no to little English proficiency: $M = 1.61, SD = .64$, negative brokering feelings for fathers who report proficiency in English: $M = 1.51, SD = .60$).

Summary. Taken together, the preliminary analyses revealed that positive language brokering feelings are not the opposite of negative language brokering feelings (in which case a perfect negative correlation would be expected). Instead, contrary to hypotheses, positive and negative language brokering feelings were found to be statistically unrelated to one another. As predicted, more language brokering frequency related to more negative language brokering feelings, however frequency related to more positive feelings as well. That is, the more frequently adolescents language brokered for both mothers and fathers, the more they endorsed feelings in general about language brokering for both their parents.

These preliminary analyses also revealed that language brokering frequency and feelings were largely unrelated to background characteristics of the adolescent language brokers or their parents receiving language brokering assistance. A few exceptions emerged: (a) having a greater number of children in the family as well as being a second generation child was related significantly to more negative feelings about language brokering for both parents, (b) language brokering frequency was related significantly to lower levels of parental education and lower English proficiency in mothers only, and (c) mothers' and fathers' lower levels of education was related to more negative language brokering feelings.

Dependent Variables

Table 3 presents the means, standard deviations and observed ranged for the dependent variables. Adolescents' responses regarding their self-esteem varied considerably. On average, they reported that they "agree" with statements reflecting fairly high levels of self-esteem. Not surprisingly, the community sample of adolescents

reported, on average, a low rate of internalizing and externalizing symptoms, although their responses varied considerably. With respect to mother-adolescent conflict intensity, adolescents reported that they had either not discussed various topics with their mothers at all (rated 0), or that the intensity of discussions ranged from 1 (*calm*) to 4 (between *angry* and *very angry*). On average, adolescents reported conflict intensity with their mothers as a 2 (between *calm* and *angry*). Adolescents reported that they had either not had any discussion concerning a list of various topics with their fathers, or they reported that the intensity of discussions ranged from 1 (*calm*) to 5 (*very angry*). On average, adolescents reported that discussions with their fathers were “calm.” As shown in Table 3, adolescents provided a range of responses regarding the degree of congruence with their parents, but on average, reported moderately high intergenerational congruence.

Table 3

Means, Standard Deviations and Observed Range for Dependent Variables

	Means (and SD)	Observed Range
Adolescents' Self-Reported Self-Esteem ^a	3.11 (0.55)	1.10 – 4.00
Adolescents' Self-Reported Internalizing Symptoms ^b	12.06 (8.28)	0.00 – 52.00
Adolescents' Self-Reported Externalizing Symptoms ^b	8.93 (6.67)	0.00 – 39.00
Adolescents' Reported Mother-Adolescent Conflict Intensity ^c	1.68 (0.61)	0.00 – 3.50
Adolescents' Reported Father-Adolescent Conflict Intensity ^c	1.44 (0.87)	0.00 – 4.73
Adolescents' Reported Intergenerational Congruence ^d	3.56 (0.67)	1.13 – 5.00

^a Original Range of scale = 1-4^b Original Range of scale = 0-62^c Original Range of scale = 0-5^d Original Range of scale = 1-5

As shown in Table 1, adolescent feelings of self-esteem were moderately but significantly negatively correlated with adolescent internalizing as well as externalizing symptoms. Relations between self-esteem and parent-child relationship constructs (i.e., father-adolescent conflict intensity, mother-adolescent conflict intensity, and intergenerational congruence) were not statistically significant. A moderate and significant positive correlation was found between internalizing and externalizing symptoms. Similarly, whether reporting on internalizing and externalizing difficulties,

adolescents who self-endorsed greater symptoms also endorsed more intense conflict with both their mothers and fathers. However, internalizing and externalizing symptoms were not statistically significantly correlated with intergenerational congruence.

Examining correlations among the constructs related to the parent-child relationship, mother-adolescent and father-adolescent conflict intensity were moderately and significantly positively correlated with one another, however, only mother-child conflict intensity (and not father-child conflict intensity) correlated significantly negatively with intergenerational congruence.

Univariate Relations between Language Brokering and Dependent Variables

The relations between the language brokering constructs and the dependent variables (i.e., adolescent reported self-esteem, internalizing symptoms, externalizing symptoms, mother-adolescent and father-adolescent conflict intensity, and intergenerational congruence) are presented in Table 1. More frequent language brokering for mothers was associated with higher levels of adolescent externalizing symptoms and more intense mother-adolescent relationship conflict. More frequent language brokering for fathers was associated with more father-adolescent conflict intensity and greater intergenerational congruence. Neither language brokering frequency for mothers nor for fathers was associated with self-esteem or internalizing symptoms.

With respect to adolescents' feelings about language brokering, positive feelings about language brokering for mothers and fathers were unrelated to reports of self-esteem, internalizing and externalizing symptoms, or perceptions of conflict intensity with their parents. However, as expected, greater endorsement of positive feelings about

language brokering (for mothers and fathers) was associated with higher intergenerational congruence.

Overall, adolescents' negative feelings while language brokering, particularly for their mothers, appear to relate to the outcomes variables more strongly than do positive feelings. Specifically, the greater extent to which adolescents endorsed negative feelings about language brokering for their mothers, the more they also endorsed lower levels of self-esteem as well as difficulties with internalizing and externalizing symptoms.

Negative language brokering feelings for mothers were also significantly associated with more intense mother-adolescent conflict and poorer intergenerational congruence.

Showing a similar pattern but to a lesser degree, negative feelings while language brokering for their fathers correlated significantly with lower levels of self-reported self-esteem, more intense father-adolescent conflict, and poorer intergenerational congruence.

Objective 1: Regression Analyses of Language Brokering Frequency and Feelings as Predictors of Adjustment

Ten hierarchical stepwise regression analyses evaluated the ability of language brokering frequency and feelings to predict adjustment outcomes (three measures of individual adjustment and two measures of relational adjustment). These analyses also examined the moderating role of positive and negative language brokering feelings on relations between language brokering frequency and the five outcomes of interest. In total, five regression analyses examined relations between language brokering for *mothers* and the outcome variables of interest (i.e., adolescent self-esteem, internalizing symptoms, externalizing symptoms and mother-child conflict intensity and intergenerational congruence) and five analyses examined relations between language

brokering for *fathers* and the outcome variables. Following recommendations by Aiken and West (1991) for evaluating interactions, all predictor variables were centered prior to calculating interaction terms and conducting the analyses.

In each regression analysis, the number of children in the family and either mothers' or fathers' education were entered as control variables in the first step. In the second step, language brokering frequency and both positive and negative language brokering feelings were entered to examine main effects. Next, a stepwise method was applied at Step 3 to test whether positive and negative language brokering feelings moderated relations between language brokering frequency and outcomes. That is, two-way interactions involving frequency and either positive or negative feelings were tested for entry at Step 3 and subsequent steps after accounting for main effects, such that only significant interaction effects were retained in the models. Table 4 depicts a model of how analyses were set up. The results are presented in Table 5 regarding mothers and Table 6 regarding fathers.

Table 4

Model for Applied Stepwise Regression Analyses

	Dependent Variable
Step 1: ENTER Control Variables	
Number of Children	
Parents' Education	
Step 2: ENTER Main Effects	
Language Brokering Frequency	
Positive Language Brokering Feelings	
Negative Language Brokering Feelings	
Step 3: STEPWISE ^a Interactions	
LB Frequency X Positive LB Feelings	
LB Frequency X Negative LB Feelings	

^a Only significant interactions retained in model

Language brokering for mothers. As shown in Step 2 of Table 5, controlling for the number of children in the family as well as mothers' education, when the language brokering constructs were considered simultaneously, language brokering frequency was unrelated to any of the five indicators of adjustment. Consistent with univariate analyses, more positive feelings about language brokering were predictive of one of the adjustment indicators: more intergenerational congruence. While univariate analyses found negative feelings about language brokering for mothers to correlate significantly with all adjustment variables, the multivariate regression analyses found that adolescents' endorsement of negative feelings about language brokering for mothers predicted lower

self-esteem, more intense mother-adolescent conflict, and less positive relationship congruence, but not internalizing or externalizing symptoms.

Step 3 evaluated adolescent feelings about language brokering as a possible moderator. None of interaction terms made a significant contribution to the prediction of outcomes and therefore all five models stopped at Step 2. In sum, contrary to expectations, there was no evidence that positive or negative language brokering feelings towards mothers moderated the relations between language brokering frequency for mothers and any of the adjustment outcomes of interest.

Language brokering for fathers. As shown in Step 2 of Table 6, controlling for the number of children in the family as well as fathers' education, and considering the language brokering constructs simultaneously, more language brokering frequency for fathers predicted more intense father-adolescent conflict (consistent with univariate analyses). However, although frequency also related positively with intergenerational congruence in univariate analyses, this relation was no longer significant in these multivariate analyses. As with mothers and consistent with univariate analyses, more positive language brokering feelings were predictive of more intergenerational congruence. Regression analyses also found that more negative language brokering feelings towards fathers were related to less adolescent self-esteem and less intergenerational congruence. Unlike the univariate analyses, negative feelings were no longer related significantly with father-adolescent conflict intensity.

On Step 3, contrary to expectations, there was no evidence that negative language brokering feelings towards fathers moderated relations between language brokering frequency and adjustment. These interactions were not significant and as a result,

regression analyses stopped at Step 2. There was one instance in which positive language brokering feelings moderated links between frequency and adjustment. Specifically, language brokering frequency for fathers interacted significantly with positive language brokering feelings to predict father-adolescent conflict intensity, $t(123) = 1.95, p = .05$.

In order to understand the nature of the moderation, the significant interaction was probed according to procedures outlined by Aiken and West (1991). That is, the simple slope between language brokering for fathers and father-adolescent conflict intensity was calculated at one standard deviation above the mean of positive language brokering feelings and one standard deviation below the mean of positive feelings, so that relations between frequency and conflict intensity could be plotted at high and low levels of positive feelings, respectfully. I had hypothesized that for adolescents who highly endorsed positive feelings about language brokering, risks associated with language brokering frequency would be mitigated; more frequent language brokering would be associated with neutral or positive adjustment. Within the context of low positive feelings, I hypothesized that more frequent language brokering would relate to poorer adjustment. Contrary to these hypotheses, as shown in Figure 5, when positive feelings were low, frequency was unrelated to father-adolescent conflict intensity ($B = .12, p = .26$). Instead, conflict intensity was consistently high regardless of the frequency in which adolescents language brokered for their fathers. However, when positive feelings were high, more frequent language brokering was associated with more rather than less conflict intensity ($B = .38, p = .001$). Thus, the results did not support the hypothesis that high positive feelings would have a buffering effect. Instead, the findings suggest that contexts in which adolescents do not feel particularly positive about language brokering

for their fathers may actually pose a risk. In such contexts, adolescent reported more intense conflict with their fathers, even when the frequency in which they language brokered was low.

Table 5

Hierarchical Regressions Predicting Relations between Language Brokering Frequency for Mothers, Language Brokering Feelings Variables and Adjustment Outcomes

Variable	Adolescent Self-esteem n= 144			Adolescent Internalizing Symptoms n= 144			Adolescent Externalizing Symptoms n= 144			Conflict Intensity with Mother n= 143			Intergenerational Congruence n= 144		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Step 1: Control Variables															
R ²	.03			.01			.03			.01			.06		
Number of children	-.08	.06	-.12	.84	.90	.09	.36	.72	.05	.04	.06	.06	-.10	.07	-.12
Mothers' education	.05	.04	.10	.13	.63	.02	-.78	.50	-.14	-.02	.04	-.04	.09 ^a	.05	.16
Step 2: Main Effects															
R ²	.11			.05			.09			.11			.22		
Number of children	-.04	.06	-.06	.43	.91	.04	-.03	.72	.00	.01	.06	.01	-.04	.07	-.05
Mothers' education	.01	.04	.03	.56	.65	.08	-.38	.52	-.07	.03	.04	.06	.06	.05	.11
LB Frequency for Mothers	.01	.06	.01	1.61	1.01	.16	1.45 ^a	.80	.18	.12 ^a	.07	.17	.08	.07	.10
Positive LB Feelings for Mothers	.08	.07	.10	-.96	1.05	-.08	-.95	.83	-.10	-.01	.07	-.02	.28 ^{***}	.08	.31
Negative LB Feelings for Mothers	-.30 ^{**}	.10	-.28	2.01	1.52	.13	1.96	1.20	.15	.28 ^{**}	.10	.25	-.31 ^{**}	.11	-.24
Step 3: Interactions	n/a														

^a $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

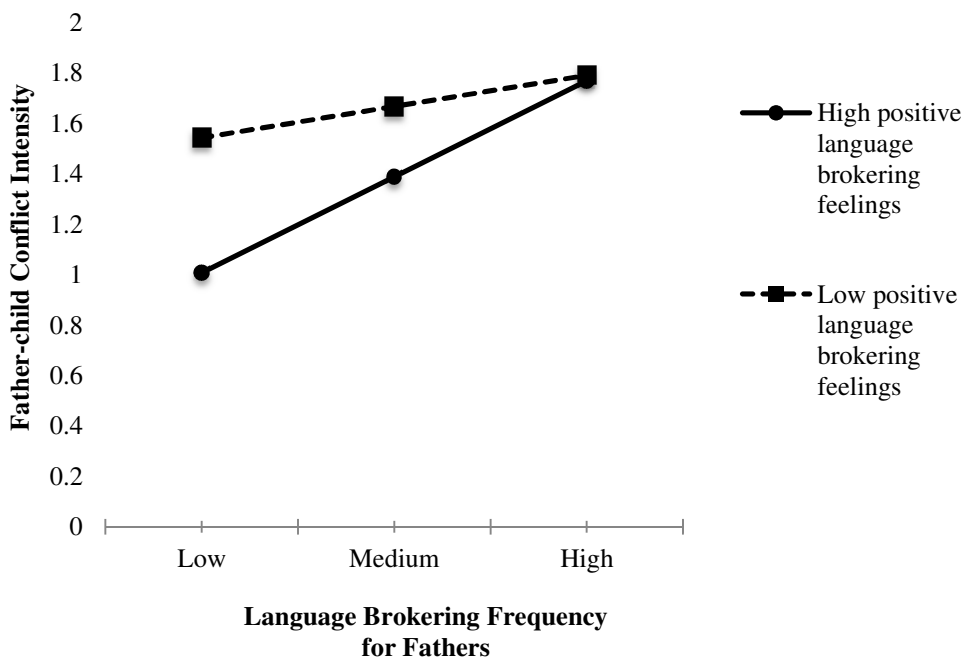
Table 6

Hierarchical Regressions Predicting Relations between Language Brokering Frequency for Fathers, Language Brokering Feelings Variables and Adjustment Outcomes

Variable	Adolescent Self-esteem n= 125			Adolescent Internalizing Symptoms n= 124			Adolescent Externalizing Symptoms n= 124			Conflict Intensity with Father n= 124			Intergenerational Congruence n= 124		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Step 1: Control Variables															
R ²	.05			.04			.02			.02			.05		
Number of Children	-.09	.06	-.13	1.86*	.82	.21	1.10	0.76	0.14	.10	.09	.11	-.13	.08	-.16
Fathers' Education	.05	.04	.13	.73	.53	.13	-.15	0.49	-.03	.08	.06	.14	.05	.05	.10
Step 2: Main Effects															
R ²	.10			.10			.05			.14			.22		
Number of Children	-.06	.06	-.10	1.54 ^a	0.82	0.18	.91	.77	.11	.08	.09	.08	-.10	.07	-.12
Fathers' Education	.03	.04	.06	1.20*	0.57	0.21	.09	.53	.02	.15**	.06	.25	.06	.05	.11
LB Frequency for Fathers	-.01	.07	-.01	1.44	0.92	0.16	-.08	.86	-.01	.34***	.09	.37	.11	.08	.14
Positive LB Feelings for Fathers	.09	.07	.12	-1.53	0.96	-0.15	-.32	.90	-.03	-.05	.10	-.04	.31***	.08	.33
Negative LB Feelings for Fathers	-.22*	.10	-.23	1.86	1.28	0.15	1.90	1.20	.16	.04	.13	.03	-.26*	.11	-.22
Step 3: Interactions	n/a			n/a			n/a						n/a		
R ²										.17					
LB Freq X Positive LB Feelings										.23*	.12	.18			

^a $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5. Positive feelings language brokering for fathers moderates language brokering frequency for fathers and father-child conflict intensity.



Objective 2: Understanding Autonomy Support in Relation to Language Brokering and Adjustment

As previously described, a second objective of the current study was to apply self-determination theory and investigate autonomy-supportive contexts as a potential moderator of relations between language brokering and adjustment. First, I examined the means, standard deviations, and observed ranges of the autonomy support variables (i.e., mother and father reports of their autonomous childrearing goals, and adolescent reports of their mothers' and fathers' use of reasoning; see Table 7). This allowed for a greater understanding of this study's measures of parental autonomy support, as perceived by

mothers and fathers as well as by adolescent participants. Second, I examined the univariate inter-correlations among the autonomy support variables. Finally, I examined relations between the language brokering and autonomy support constructs as well as between autonomy support and the outcome variables of interest (see Table 1).

Table 7

Means, Standard Deviations and Observed Range for Autonomy Support Variables

	Mothers		Fathers	
	Means (SD)	Observed Range	Means (SD)	Observed Range
Parents' Autonomous Childrearing Goals ^a	4.25 (.45)	2.75 – 5.00	4.20 (.41)	3.25 – 5.00
Perceived Parental Use of Reasoning ^b	5.04 (1.10)	2.00 – 7.00	4.77 (1.19)	1.00 – 7.00

^a Range of scale = 1-5

^b Range of scale = 1-7

Autonomy support characteristics. With respect to parents' autonomous childrearing goals, both mothers and fathers reported on average that trying to instill a sense of autonomy in their children was “*very important*” to them (i.e., rating of 4). All parents endorsed to some degree the importance of raising their adolescent with a sense of autonomy (i.e., responses by both mothers and fathers ranged from 3 “*somewhat important*” to 5 “*extremely important*”).

As shown in Table 7, adolescent-reported autonomy support, defined by their report of their parents' use of reasoning, ranged from 2 “*almost never*” to 7 “*always*” when referring to mothers' use of reasoning and from 1 “*never*” to 7 “*always*” when

referring to fathers' use of reasoning. On average, adolescents reported that their mother and father were supportive of their autonomy "fairly often" (i.e., rating of 5).

Inter-correlations among the autonomy support variables, shown in Table 1, indicated a low but statistically significant correlation between mothers' and fathers' autonomous childrearing goals, and a strong significant correlation between adolescents' reports of their mothers' and fathers' use of reasoning. Other inter-correlations among the autonomy support variables were not statistically significant.

Univariate relations between language brokering and autonomy support.

With respect to relations between language brokering constructs and autonomy support variables (displayed in Table 1), adolescent language brokering frequency for mothers was not significantly associated with either of the autonomy support variables. Language brokering frequency for fathers showed a significant positive correlation with adolescent reports of father's use of reasoning. Adolescent reports of positive feelings about language brokering for their mothers were significantly positively related to both adolescent and mother reported autonomy support variables (i.e., adolescent-reported maternal reasoning and mothers' self-report of autonomous childrearing goals). Positive feelings about language brokering for fathers were also significantly positively related to adolescent-reported paternal reasoning, but not to father's autonomous childrearing goals. Similarly, adolescents' negative feelings about language brokering for their mothers and fathers were significantly negatively related to their perceptions of parental use of reasoning, but were unrelated to parents' autonomous childrearing goals.

Univariate relations between autonomy support and dependent variables.

Examining relations between indicators of autonomy support and adjustment, as shown in

Table 1, neither mothers' nor fathers' autonomous childrearing goals related significantly with any outcomes variables of interest. However, there was much evidence linking adolescents' reports of their parents' use of reasoning with improved individual as well as relational adjustment. Specifically, fathers' use of reasoning correlated significantly with higher levels of self-esteem, less internalizing and externalizing symptoms and better relational congruence. Mothers' use of reasoning correlated with less internalizing and externalizing symptoms, less intense mother-adolescent conflict, and better relational congruence. Thus, consistent with SDT, when adolescent perceive parents as autonomy-supportive, they are more likely to endorse better individual adjustment and better relationships with their parents.

Objective 2: Regression Analyses Evaluating the Moderating Role of Autonomy

Support

For Objective 2, a series of hierarchical stepwise regression analyses evaluated the proposed moderating role of autonomy-supportive contexts on relations between the language brokering constructs and the five outcome variables. In total, ten hierarchical regression analyses were performed. As for Objective 1, the number of children in the family as well as either mothers' or fathers' education were entered as control variables in the Step 1. In Step 2, the analyses retained language brokering frequency and positive and negative language brokering feelings as predictor variables, and added the two autonomy support variables (i.e., parents' autonomous childrearing goals and parental use of reasoning). Finally, in Step 3, interaction terms between the three language brokering constructs and the two autonomy support variables were evaluated for inclusion in the model. Only significant interaction effects were retained in the models (see Table 4 for a

template of how analyses were set up). My presentation of the results focuses on main effects involving mothers' and fathers' autonomy support as predictors of adjustment, and any significant interaction terms. The results regarding mothers are presented in Table 8 and those for fathers are presented in Table 9.

Table 8

Hierarchical Regressions Predicting Relations between Language Brokering for Mothers, Autonomy Support and Adjustment

Variable	Adolescent Self-esteem n= 141			Adolescent Internalizing Symptoms n= 140			Adolescent Externalizing Symptoms n= 140			Conflict Intensity with Mother n= 140			Intergenerational Congruence n= 141		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Step 1: Control Variables															
R ²	.03			.01			.03			.01			.06		
Number of Children	-.07	.06	-.10	.73	.93	.07	.27	.73	.03	.05	.07	.07	-.10	.07	-.13
Mothers' Education	.05	.04	.11	.04	.65	.01	-.85 ^a	.52	-.15	-.02	.05	-.03	.08	.05	.15
Step 2: Main Effects															
R ²	.12			.07			.13			.19			.36		
Number of Children	-.04	.06	-.06	.27	.94	.03	-.22	.73	-.03	.00	.06	.00	-.05	.06	-.06
Mothers' Education	.01	.04	.02	.60	.68	.09	-.34	.53	-.06	.05	.04	.10	.02	.05	.04
LB Frequency for Mothers	.00	.07	.01	1.69 ^a	1.02	.16	1.47 ^a	.80	.18	.12 ^a	.07	.17	.07	.07	.08
Positive LB Feelings for Mothers	.05	.07	.07	-.34	1.11	-.03	-.41	.86	-.05	.05	.07	.07	.17 [*]	.07	.18
Negative LB Feelings for Mothers	-.29 ^{**}	.10	-.27	1.60	1.57	.10	1.71	1.22	.13	.25 [*]	.10	.22	-.23 [*]	.10	-.17
Mothers' Autonomous Childrearing Goals	.15	.10	.12	-.27	1.61	-.01	.33	1.25	.02	-.04	.11	-.03	.11	.11	.07
Mothers' Use of Reasoning	.02	.04	.03	-1.24 ^a	.69	-.16	-1.25 [*]	.53	-.21	-.16 ^{***}	.05	-.30	.24 ^{***}	.05	.40
Step 3: Interactions															
R ²	n/a			n/a			.17			.23			.40		
Neg LB Feel X Auton Goals							-5.32 ^{**}			2.07			-.21		
Pos LB Feel X Reasoning										-.13 [*]			.06		
Step 4: Interactions															
R ²	n/a			n/a			n/a			.25			n/a		
Neg LB Feel X Reasoning										-.16 [*]			.08		

^a $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 9

Hierarchical Regressions Predicting Relations between Language Brokering for Fathers, Autonomy Support and Adjustment

Variable	Adolescent Self Esteem n= 119			Adolescent Internalizing Symptoms n= 118			Adolescent Externalizing Symptoms n= 118			Conflict Intensity with Father n= 119			Intergenerational Congruence n= 119		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Step 1: Control Variables															
R ²	.04			.04			.02			.01			.05		
Number of Children	-.07	.07	-.11	1.67 ^a	.87	.19	.86	.80	.11	.09	.09	.10	-.14 ^a	.08	-.17
Fathers' Education	.06	.04	.13	.72	.55	.13	-.27	.51	-.05	.07	.06	.11	.05	.05	.09
Step 2: Main Effects															
R ²	.11			.12			.07			.14			.31		
Number of Children	-.05	.07	-.08	1.31	.85	.15	.67	.80	.08	.05	.09	.05	-.12 ^a	.07	-.14
Fathers' Education	.02	.04	.05	1.26 [*]	.59	.22	.10	.55	.02	.14 [*]	.06	.22	.03	.05	.05
LB Frequency for Fathers	-.03	.07	-.04	1.99 [*]	.96	.23	.42	.90	.05	.36 ^{***}	.10	.39	.07	.08	.09
Positive LB Feelings for Fathers	.07	.08	.09	-1.42	.98	-.14	-.21	.92	-.02	-.07	.10	-.06	.26 ^{**}	.08	.28
Negative LB Feelings for Fathers	-.21 [*]	.11	-.20	.98	1.38	.07	1.29	1.29	.11	.04	.15	.03	-.21 ^a	.12	-.17
Fathers' Autonomous Childrearing Goals	.19	.13	.13	-2.21	1.68	-.12	-1.29	1.57	-.08	.04	.18	.02	-.11	.14	-.06
Fathers' Use of Reasoning	.03	.05	.06	-.80	.62	-.12	-1.07 ^a	.58	-.18	-.03	.07	-.04	.19 ^{***}	.05	.31
Step 3: Interactions	n/a			n/a			n/a			n/a			n/a		

^a $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Autonomy support from mothers. As shown in Step 2 of Table 8, and consistent with univariate analyses, mothers' endorsement of autonomous childrearing goals did not predict any of the outcome variables of interest. However, in these multivariate regression analyses, adolescents' reports of more maternal reasoning predicted fewer adolescent externalizing symptoms, less intense mother-adolescent conflict, and better intergenerational congruence.

Step 3 examined autonomy-supportive contexts as a potential moderator of relations between language brokering for mothers and adjustment. A total of four interactions were found to be significant. All of the significant interactions involved reports of language brokering feelings; there was no evidence that language brokering frequency for mothers interacted with any of the autonomy-supportive context variables to predict adjustment.

Specifically, mothers' autonomous childrearing goals were found to moderate relations between negative feelings and adjustment in two instances (i.e., in the prediction of externalizing symptoms, $t(139) = -2.57, p = .01$, and in the prediction of intergenerational congruence, $t(140) = -3.07, p = .003$). These significant interactions were probed (according to Aiken and West, 1991) and the relations between negative language brokering feelings for mothers and the respective adjustment variables were plotted at high and low levels of maternal reports of autonomous childrearing goals (see Figures 6 and 7). As seen in Figure 6, as expected, when mothers' autonomous goals were low, higher levels of negative language brokering feelings related to higher levels of externalizing symptoms ($B = 5.49, p < .001$). In contrast, negative language brokering

feelings were unrelated to externalizing adjustment when endorsement of autonomous childrearing goals was high ($B = .93, p = .49$).

Figure 6. Mothers' autonomous childrearing goals moderate negative language brokering feelings for mothers and adolescent externalizing symptoms.

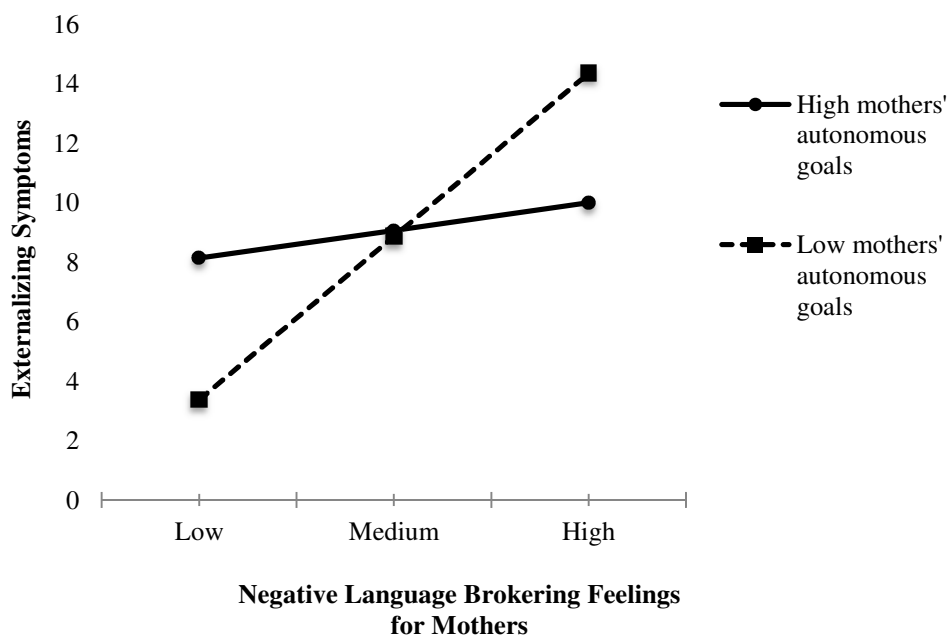


Figure 7. Mothers' autonomous childrearing goals moderate positive language brokering feelings for mothers and intergenerational congruence.

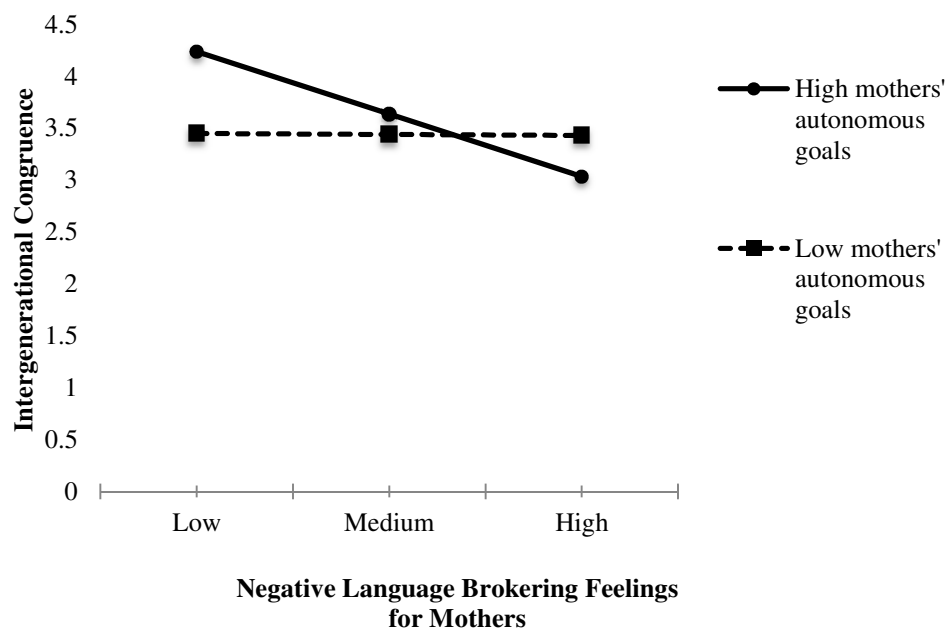


Figure 7 shows the probed interaction between negative feelings and mothers' autonomous childrearing goals in predicting intergenerational congruence. I had hypothesized that when autonomous childrearing goals were high, risks associated with negative language brokering feelings would be buffered; relations between negative feelings adjustment would be less strong or not significant. When mothers' endorsement of autonomous childrearing goals was low, I hypothesized that there would be a significant positive relation between negative feelings and poorer adjustment. However, there was no significant relation between negative feelings and congruence when autonomous childrearing goals were low ($B = -.01, p = .95$). Instead, intergenerational congruence tended to be low overall and independent of the extent to which adolescents

reported negative feelings about language brokering for their mothers in the context of low autonomous childrearing goals. As expected, more negative language brokering feelings were associated with lower levels of relational congruence, but contrary to expectations, this occurred only in contexts where autonomous childrearing goals were high ($B = -.60, p < .001$).

The remaining two significant interactions involved the moderating role of mothers' use of reasoning on relations between feelings about language brokering for mothers and mother-adolescent conflict intensity. These interactions, the first involving negative language brokering feelings towards mothers ($t(139) = -2.11, p = .04$) and the second involving positive feelings ($t(139) = -2.59, p = .01$) were probed and are presented in Figures 8 and 9. As seen in Figure 8, as expected, the relation between negative language brokering feelings and parent-child conflict intensity was strongest when maternal reasoning was perceived by adolescents as low ($B = .42, p < .001$), whereas negative feelings were unrelated to conflict when reasoning was high ($B = .12, p = .43$).

Interestingly, the interaction between positive language brokering feelings and reasoning in the prediction of mother-adolescent conflict intensity showed the same pattern (see Figure 9). Specifically, contrary to predictions, when maternal reasoning was particularly low, higher levels of *positive* language brokering feelings were associated with more intense conflict ($B = .29, p = .002$). In contrast, positive feelings were unrelated to conflict intensity and levels of conflict were consistently low in this high autonomy-supportive context, regardless of the adolescents' feelings about language brokering for mothers ($B = .001, p = .99$). Together, these results suggest that in low

autonomy-supportive contexts, both negative and positive language brokering feelings are associated with higher levels of mother-adolescent conflict intensity.

Figure 8. Mothers' use of reasoning moderates negative language brokering feelings for mothers and mother-child conflict intensity.

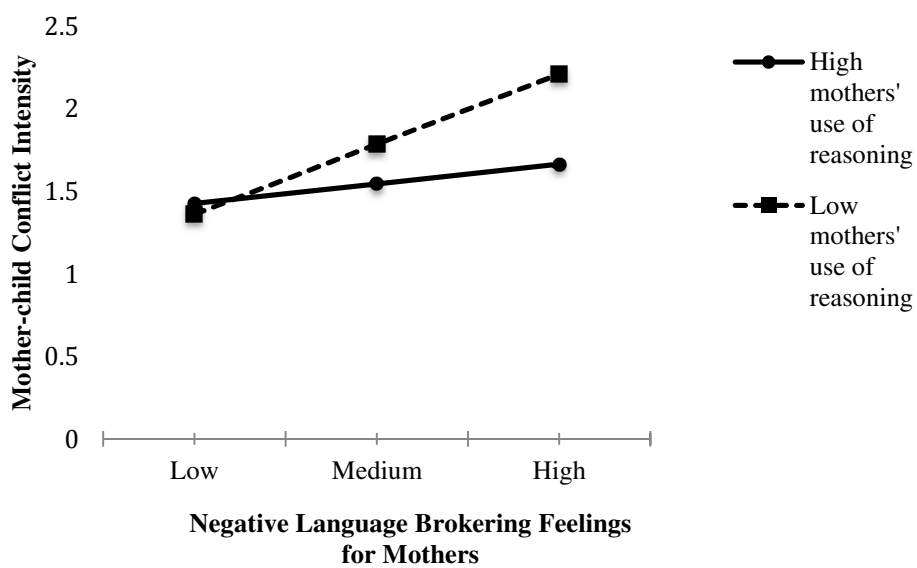
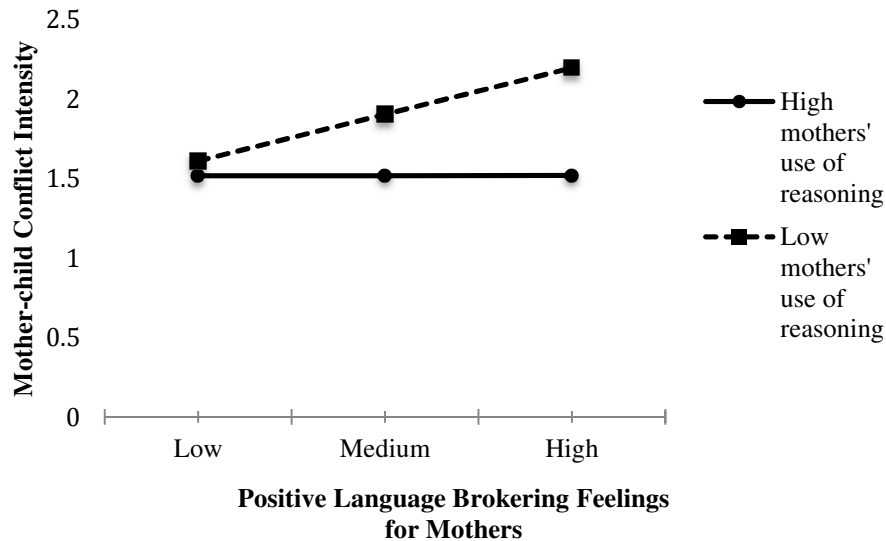


Figure 9. Mothers' use of reasoning moderates positive language brokering feelings for mothers and mother-child conflict intensity.



Autonomy support from fathers. As shown in Step 2 of Table 9, and consistent with univariate analyses, fathers' endorsement of autonomous childrearing goals did not predict any of the outcome variables of interest. While univariate analyses found more adolescent-reported paternal reasoning to be associated higher levels of self-esteem, fewer internalizing and externalizing symptoms, and more intergenerational congruence, the multivariate analyses found fathers' use of reasoning predicted intergenerational congruence only. Furthermore, none of the interactions between any of the language brokering constructs and the autonomy-support variables significantly predicted any of the adjustment measures. Thus, all five models stopped at Step 2 and, contrary to expectations, there was no evidence supporting the hypothesis that autonomy-supportive contexts moderated relations between language brokering for fathers and individual or

relational adjustment. Support for autonomy supportive contexts as a moderator was found with respect to language brokering for mothers only.

Discussion

The results from the current study revealed a complex array of relations among language brokering frequency, negative and positive feelings about language brokering, autonomy-supportive contexts, and adjustment within immigrant Chinese families in Canada. Although prior research has examined behavioural as well as attitudinal aspects of language brokering, these constructs have rarely been distinguished from one another. This has contributed, in part, to the mixed findings in the current literature, which has fostered debate as to whether language brokering creates risks or benefits for adolescent language brokers. By simultaneously considering frequency and feelings, distinguishing between language brokering for mothers versus fathers, evaluating autonomy support in the family environment, and considering a range of adjustment indicators, the results from the current study provide new insights into the circumstances in which language brokering may be associated with psychological risks versus benefits. Importantly, the complex findings emphasize the need to differentiate language brokering constructs rather than consider language brokering as a unitary construct. The unique interrelations found among various language brokering constructs, autonomy-supportive contexts, and both positive and negative indicators of individual and relational adjustment are discussed below, as are the limitations of these results and implications for future research, policy, and clinical practice.

Disentangling Language Brokering Frequency and Feelings

When language brokering frequency, and positive and negative feelings about language brokering were examined simultaneously as predictors of adjustment, language brokering feelings, and in particular negative language brokering feelings, were more

predictive of adjustment than language brokering frequency. Specifically, when language brokering for mothers and fathers evoked negative feelings, such as feeling stressed or embarrassed about providing interpretation and translation services, adolescents were more likely to report lower levels of self-esteem and poorer parent-child relational congruence. In addition, negative language brokering feelings towards mothers predicted more intense mother-adolescent conflict. When language brokering for mothers and fathers evoked positive feelings, such as feeling proud, respectful, or helpful, adolescents were more likely to report greater relational congruence. With respect to language brokering frequency, more frequent brokering for fathers was associated with more intense father-adolescent conflict, but frequency for mothers was unrelated to adjustment when simultaneously considering the emotional aspects of language brokering. Thus, the frequency in which adolescents language broker may matter relatively less than the emotional experience of language brokering for parents since there were more significant relations associated with language brokering feelings than with frequency.

The results from examining interactions between language brokering frequency and feelings and between all brokering constructs and autonomy-support variables on adjustment (i.e., Objective 1 and 2 moderation results) provide further evidence of the relative unimportance of brokering frequency as a predictor of adjustment. Of the 20 regression analyses examining the moderating role of language brokering feelings or of autonomy support on relations between frequency and adjustment, only one interaction was statistically significant. Thus, not only was brokering frequency less predictive of adjustment compared to brokering feelings with respect to main effects, but the lack of moderation suggests that frequency is also not predictive of adjustment even in the more

restrictive contexts of high or low language brokering emotions and high or low autonomy support. This overall finding in the current study is consistent with previous literature examining Latino populations that emphasized the relative importance of language brokering-related emotions and the time burden of language brokering compared to the frequency of language brokering (Kam & Lazarevic, 2014; Weisskirch, 2013).

Also consistent with past literature (e.g., Kam, 2011; Weisskirch, 2007), negative feelings about language brokering tended to predict poorer adjustment while positive feelings about language brokering tended to predict positive adjustment. The findings generally suggested that the more adolescents endorsed negative feelings about brokering, the more the act of language brokering may be a risk for lower self-esteem and poorer emotional ties with their parents. The more positive adolescents feel about brokering, the more they perceive a greater sense of understanding and satisfaction with respect to their relationship with their parents. Thus, the hypotheses that language brokering frequency and negative feelings would predict poorer adjustment while positive feelings would predict positive adjustment were generally supported, but evidence for language brokering feelings was stronger than evidence for frequency.

Another key finding of the current study was that adolescent language brokering frequency for mothers and fathers was directly linked to the emotional experience of language brokering. Although on average the adolescents in this study language brokered fairly infrequently and endorsed feeling only “a little” positive and negative about language brokering, the results revealed that the more often adolescents engaged in language brokering assistance for either their mother or father (e.g., on a daily basis or a

few times per week), the more they experienced language brokering with higher levels of emotional intensity. As predicted, adolescent reported language brokering frequency for mothers and fathers was significantly positively correlated with negative language brokering feelings, but interestingly and unexpectedly, brokering frequency was positively associated with positive language brokering feelings as well. Thus, regardless of its prevalence, language brokering should not be regarded as a neutral or benign experience. Indeed, the results indicate that the act of language brokering for both parents evokes general emotional intensity, which can relate to the adolescent language broker's adjustment and the quality of their relationship with their parents.

In the current study, there was no evidence of a strong inverse relation between positive and negative language brokering. In fact, positive and negative brokering feelings were statistically unrelated. This finding, combined with results relating brokering frequency with both positive and negative brokering feelings, and results demonstrating differential relations with adjustment, emphasizes positive and negative language brokering feelings as independent constructs that co-exist. Importantly, this dispels a common assumption that positive and negative brokering feelings are opposite constructs. It also has implications for future research. For example, in Tilghman-Osborne and colleagues' (2016) study on language brokering feelings, positive feelings about language brokering were determined by inverting measures of negative language brokering feelings, assuming that low levels of negative feelings were indicative of high positive feelings. The current study reveals that the absence of negative or positive feelings does not necessarily equate to the presence of the other.

The results further suggest that the construct that has been called “positive feelings” in the current study may not be as unqualifiedly positive as the label implies. In some instances, positive feelings and negative feelings behave similarly. For example, as shown in Figures 8 and 9 of the current study, relations between language brokering feelings towards mothers and mother-adolescent conflict intensity varied depending on whether adolescents perceived high versus low levels of maternal reasoning, but the pattern of findings were the same for both positive and negative language brokering feelings. Specifically, when maternal reasoning was particularly low, higher levels of negative *and* positive language brokering feelings were associated with more intense conflict. When maternal reasoning was particularly high, *both* negative and positive feelings were unrelated to conflict intensity and levels of conflict were consistently low. Thus, the complicated nature of the findings involving positive language brokering feelings in this study suggests that, rather than be unqualifiedly “positive,” feeling proud, helpful, grown-up and respectful may represent more complicated emotions that include concern or pressure alongside positive affective elements. While these positive feelings about language brokering are associated with feeling “good” and relate to more congruence within parent-adolescent relationships, perhaps these same feelings (e.g., feeling helpful and grown-up) are also associated with pressures related to a strong sense of responsibility (e.g., getting the translation right or having a strong sense of obligation to obey and respect parents).

The interaction between positive feelings and frequency for fathers in the prediction of father-adolescent conflict is another instance that exemplifies the complicated nature of positive brokering feelings in the current study. As shown in

Figure 5, the nature of moderation showed that it was not so much that positive feelings set a context for improved adjustment, but that the *absence* of positive feelings created a context of risk for conflict intensity with fathers. Specifically, in the context of low positive feelings towards fathers, adolescents' report of conflict intensity with their fathers tended to be consistently high, regardless of the frequency of language brokering. This suggests that the absence of positive language brokering feelings (e.g., feeling unhelpful, disrespectful of parents, or the absence of feeling proud and grown-up) can create risk for greater conflict between adolescents and their fathers. It was only in the context of high positive feelings that the frequency of language brokering for fathers related to intense conflict intensity (with more frequent language brokering relating to more father-adolescent conflict intensity when positive feelings are high). Thus, the findings related to positive language brokering feelings are complex and greater attention should be paid to how positive language brokering feelings are defined and are related to other aspects of the language brokering experience.

Adolescent Language Brokering for Mothers versus Fathers

Adolescents tended to language broker more frequently for their mothers compared to their fathers, perhaps a reflection of adolescents engaged in more translation and interpretation responsibilities within the home and community where traditionally maternal parenting roles prevail. They also tended to report feeling more positive language brokering for their mothers compared to their fathers, whereas no mother-father differences were found with respect to adolescents' negative feelings about language brokering. Few other studies have examined how adolescents differ in their language brokering experiences for their mothers versus their fathers. Consistent with mother-

father differences in adolescents' positive language brokering feelings in the current study, Wu and Kim (2009) found Chinese-American adolescents reported a stronger sense of efficacy (defined by feeling independent, mature, useful, competent or capable) when brokering for their mothers than when brokering for their fathers. In contrast with my findings, adolescents in Wu and Kim's (2009) study reported a greater sense of burden when brokering for their mothers versus their fathers.

Upon close examination of the results, a general pattern emerged in which relations between *frequency* and adjustment appeared more significant for *fathers*, while relations between *feelings* and adjustment appeared to matter more with respect to language brokering for *mothers*.

Frequency of language brokering for fathers. The results suggest that language brokering more frequently for fathers may present greater challenges than language brokering frequently for mothers. As mentioned previously, regression analyses found language brokering frequency for fathers to be predictive of greater father-adolescent conflict intensity while brokering frequency for mothers did not relate to any measures of adjustment. Because language brokering for mothers was more commonplace and experienced more positively than for fathers, it could be that language brokering for mothers is more normative and does not significantly contribute to adolescents' sense of individual or relational well-being. In contrast, language brokering more frequently for fathers may be a rarer and less positive experience, which may threaten notions of family roles and hierarchy. For example, adolescents may perceive providing more frequent assistance in interpretation and translation for fathers as an indication of their father's slower acculturation to Canada or ineffectiveness in navigating

issues on behalf of the family, resulting in adolescents experiencing more intense conflict with fathers.

An alternative possibility as to why language brokering more often might be associated with more conflict with fathers compared to mothers may relate to the reasons adolescents are asked to language broker for fathers versus mothers. In the current study, language brokering frequency for mothers, but not for fathers, related significantly with lower proficiency in the English (i.e., host country's) language. Relatedly, Chao (2006) found language brokering frequency to be associated with bilingualism in fathers, but not in mothers. Thus, a need for more frequent translation and interpretation assistance as a result of poorer proficiency in the English language would be a reasonable and logical conclusion that is seen in mothers but not in fathers. This need may also be associated with more positive language brokering feelings towards mothers including feeling helpful and grown-up, whereas more frequent brokering for fathers may elicit more father-adolescent conflict because the reasons fathers enlist adolescents in language brokering are less clear. For example, perhaps fathers engage children in language brokering services to give them experiences with family-community negotiations or to teach a sense of family obligation, rather than because they *need* language brokering assistance. Such circumstances may evoke more opportunities for disagreement when asked to language broker, raising questions to adolescent language brokers as to how helpful they are when language brokering for fathers.

Interestingly, recall that the one incidence in which language brokering feelings was found to moderate relations between frequency and adjustment pertained to the same variables discussed (i.e., positive brokering feelings and language brokering frequency

for fathers in the prediction of father-adolescent conflict intensity). The moderation results found that when adolescents reported particularly low levels of positive language brokering feelings, father-adolescent conflict intensity was consistently high, regardless of how often they language brokered for their fathers. This is consistent with the above reasoning that in the absence of feeling particularly helpful or grown-up (i.e., positive) about language brokering, possibly as a result of being asked to language broker for reasons other than need which may be more apparent with mothers, this context may create risk for more intense conflict and disagreement between adolescents and their fathers. It was only in the context of high positive feelings that adolescents experienced less intense conflict with their fathers when they brokered less frequently. Thus, the extent to which adolescents perceive their language brokering duties as worthwhile may be a key factor in determining whether language brokering less frequently for fathers can be influential in reducing the intensity of disagreement within father-adolescent relationships.

Feelings about language brokering for mothers. There were no significant differences in direct relations between *positive* language brokering feelings and adjustment by parents' gender; more positive feelings language brokering for both parents related to more relational congruence. In addition, there was one instance of moderation in which positive feelings related to more conflict intensity with mothers only (see Figure 9).

Adolescents' *negative* language brokering feelings towards fathers and mothers related significantly to less adolescent self-esteem and less parent-adolescent congruence, (i.e., lower personal and relational potential as evidenced by links to less positive

adjustment). However, negative feelings towards mothers but not fathers related to less relational congruence specifically when mothers were high in autonomy support. Additionally, negative feelings while language brokering for mothers but not fathers related to mother-adolescent conflict intensity and adolescent externalizing symptoms in particular contexts of autonomy support. Thus, although there were no statistical mean differences in the extent to which adolescents reported experiencing negative feelings for fathers compared to mothers, the examination of direct as well as indirect relations between negative language brokering feelings and adjustment suggests that, compared to fathers, negative feelings about language brokering for mothers may have greater implications on adjustment, particularly with respect to mother-adolescent relationships quality.

Perhaps with mothers, where language brokering is more commonplace, there are more situations in which positive and negative language brokering feelings result in greater disagreement and conflict. For example, in their more frequent interactions language brokering for mothers, adolescents may also feel more comfortable disagreeing with their mothers, whereas they may be more careful or selective before disclosing disagreements and initiating conflict with fathers. Interestingly, autonomy-supportive contexts significantly moderated relations between language brokering feelings and adjustment for mothers only. Findings related to the role of autonomy-supportive contexts are discussed in greater detail below, but these findings highlight the ways in which adolescent language brokering experiences may differ by the parents' gender. They also underscore the advantage of examining language brokering constructs for mothers and fathers separately.

Autonomy Support

Consistent with SDT, adolescents' perceptions of autonomy-support related significantly to more positive adjustment and less maladjustment. This was particularly evident with respect to adolescents' perceptions of mothers' compared to fathers' autonomy support, and with respect to relational versus individual outcomes. Specifically, when adolescents perceived their mothers as high in their use of reasoning, adolescents also tended to report fewer externalizing symptoms, less intense mother-adolescent conflict, and more relational congruence with parents. Adolescent perceptions of fathers' greater use of reasoning predicted greater relational congruence. Interestingly, there were no significant links between parent-reported autonomous childrearing goals and any of the outcome variables of interest, suggesting that adolescents' perceptions of receiving autonomy support matters more than parents' intentions to be autonomy-supportive.

The results from the current study provided mixed support regarding the extent to which autonomy-supportive contexts moderate how language brokering constructs relate to adjustment. The prediction that autonomy-supportive contexts would moderate relations between language brokering *frequency* and adjustment was unsupported. Based on the ten hierarchical regression analyses which examined language brokering frequency, and positive and negative language brokering feelings concurrently, there was no evidence that relations between frequency and adjustment depended on the extent that parents had autonomous childrearing goals or that adolescents perceived parental reasoning.

With respect to significant interactions between negative language brokering feelings and autonomy-supportive contexts, there was evidence supporting the hypothesis that contexts low in autonomy support would enhance links between negative language brokering feelings and *maladjustment* while contexts high in autonomy support would have a buffering effect. As expected, when mothers' autonomous goals were low, higher levels of negative language brokering feelings related to higher levels of adolescent externalizing symptoms. When mothers' autonomous childrearing goals were high, negative feelings were unrelated to externalizing symptoms. Similarly, when adolescents perceived maternal reasoning as low, the relation between negative feelings and mother-conflict intensity was strongest, whereas in the context of high maternal reasoning, the relation between negative feelings and conflict was buffered and not significant. Of note and mentioned previously, only *mothers'* autonomy support was found to moderate relations between negative language brokering feelings and adjustment. Furthermore, this was only true for adolescent externalizing symptoms and mother-adolescent conflict intensity. These findings support the idea that when adolescents do not experience an overall context that is supportive of their autonomy, the stress or pressure they feel about language brokering for their mothers may spill over into more externalizing problem behaviours or more conflictual relationships with mothers. However, adolescents and their relationship quality with mothers have the potential to be protected from this spillover when autonomy support by mothers is high.

There was one instance in which autonomy support moderated the relations between negative language brokering feelings and indicators of *positive* adjustment (i.e., adolescent self-esteem and intergenerational congruence). In contrast to the expectation

that relations between negative feelings and low congruence would be weak when autonomy support was high, relations between negative feelings and poorer congruence were amplified when mothers' autonomous childrearing goals were high. When mothers' autonomous childrearing goals were low, no significant relation between negative feelings and relational congruence was found. Rather, adolescents reported poorer relational congruence in low autonomy-support contexts compared to high autonomy-support contexts when they also reported less intense positive brokering feelings. Mothers who have parented with strong goals to develop their children's autonomy may have emphasized self-regulation and self-expression, and encouraged their children to trust in their own judgment. When adolescents of such mothers have strong negative feelings about language brokering, they may be more comfortable voicing their opinions, including disagreement with their parents. Viewed in another way, when mothers have high autonomous childrearing goals, the less adolescents feel negatively about language brokering, the more they also report relational congruence. In contrast, in contexts very low in autonomy support, where mothers may value compliance over self-regulation and self-expression, adolescents are more likely to report poorer intergenerational congruence regardless of how negatively they feel about language brokering for their mothers.

Finally, contrary to expectations, positive feelings about language brokering were significantly and positively associated with mother-adolescent conflict when maternal reasoning was particularly low. In contrast, when maternal reasoning was high, levels of conflict intensity remained consistently low and positive feelings were unrelated to conflict. This finding suggests that adolescents who feel positive and grown-up about language brokering for their mothers, but are told what to do with little explanation (i.e.,

perceive their mothers as low in autonomy support), experience more intense conflict with their mothers. Recall that the same pattern of moderation was found between negative feelings and mother-adolescent conflict. Thus, these adolescents, who have generally strong feelings about their language brokering responsibilities for their mothers, may perceive their mothers as particularly unfair when they make rules unilaterally or do not explain the reasons for their decisions because this context of low autonomy support does not recognize the maturity, burden and contributions the adolescents make through their language brokering assistance. As a result, these adolescents may engage in more heated disagreements and conflict with their mothers in an effort to gain more autonomy. However, in contexts in which adolescents perceive their mothers as high in their use of reasoning when parenting, relations between language brokering feelings (both positive and negative) and greater mother-adolescent conflict intensity is buffered such that neither positive nor negative feelings relate significantly to conflict.

Taken together, the significant interactions found between language brokering feelings and autonomy support were partially congruent with SDT in the sense that they highlighted instances in which language brokering feelings related to poorer adjustment in contexts low in autonomy support. Evidence of moderation was found with respect to mothers' autonomy support only, highlighting the influential role that mothers play in fostering a rearing environment that promotes autonomy development in their adolescent children. Specifically, the results emphasize potential costs associated with environments especially lacking in maternal autonomy support. Mothers' autonomy support may be particularly influential given mothers' traditional role as the main figure in direct childrearing. Still, this pattern of findings should be interpreted with caution in light of

the finding that a larger majority of interactions between autonomy support and language brokering feelings were found not to be significant in the prediction of adjustment. The above pattern of findings should be replicated before firm conclusions can be drawn, but initial findings bring awareness to familial contexts that may pose greater risk for adolescents engaged in language brokering activities.

Adolescent Language Brokers in Chinese immigrant families in Canada

Most research on language brokering and adjustment to date has been with Latino populations in the United States. Although Canada has one of the highest rates of immigration in the world and Chinese populations have consistently represented one of the largest groups of immigrants in the country (Statistics Canada, 2013), relatively few studies have examined the acculturation of Chinese families and even fewer studies have examined language brokering within Chinese immigrant families, let alone in Canada.

Consistent with most language brokering studies to date, the majority of the adolescents in the current study reported language brokering for their mother or father at least once. In this study, adolescents also tended to language broker relatively infrequently (i.e., only a few times a year), although the range of reported frequency varied greatly across families. Similarly, a wide range of responses were offered with respect to the extent that adolescents endorsed positive and negative feelings while language brokering for their mothers and fathers, but overall, this community sample tended to report lower levels of both positive and negative feelings about their language brokering activities. These findings offer initial support that for many Chinese immigrant families in Canada, language brokering may be a relatively rare and innocuous activity. In the cities of Vancouver and Victoria, from which the study's data were collected,

resources for this ethnic group and access to community support through other Chinese Canadian families may be more available than in communities where there is a lower ethnic density of Chinese-Canadian families. As a result, language brokering behaviours and related emotional experiences may be less prevalent. Still, as the findings from this study exemplify, this does not preclude Chinese-Canadian adolescents from influences on individual psychological adjustment and parent-adolescent relationship quality when they language broker frequently or when they experience intense feelings about the language brokering they engage in. In both Canada and the United States, immigrant Chinese adolescents have been labeled “model minorities,” based on a stereotype stressing higher school achievement in spite of risk factors associated with immigration (Li, 2001; Xu, Connelly, He, & Phillon, 2007). For Chinese immigrant adolescents and families that would benefit from support, the risks resulting from a model minority stereotype that promotes a general attitude that all Chinese adolescents and families are in less need or less deserving of programs, resources, or policy attention can be significant.

A review of the relevant literature revealed that the typical characteristics of language brokers, especially those who may feel more positive or more negative about their language brokering experiences, remains mixed or largely unknown. In the current study, I did not find any significant relations between language brokering frequency or positive language brokering feelings and adolescent background variables. Negative feelings were more likely among adolescents from families with a larger number of children and second-generation adolescents (i.e., born or arrived in Canada after the age of 6 years). Perhaps when there are more children in the family, there is a greater likelihood that language brokers will compare their language brokering responsibilities

with those of their siblings. It may even be more difficult to keep track of the extent to which each child engaged in family assistance such as language brokering or brokers may wonder why they were asked to engage in language brokering activities rather than one of their siblings. It is conceivable that in these situations, there may be greater opportunity for adolescents to feel more negative (e.g., burdened or annoyed) about their language brokering responsibilities.

Second-generation compared to first-generation youth may also more likely experience negative language brokering feelings because they may possess stronger ties to Canadian culture. Thus, language brokering responsibilities may be less normative to second-generation adolescents, who, for example, may have fewer friends who can relate to language brokering or other responsibilities unique to adolescents in immigrant families.

Limitations and Future Directions

A limitation of the current study is that results were based on cross-sectional data, and thus causal conclusions cannot be drawn. Although the theoretical model posits that language brokering frequency or feelings predict individual and relational adjustment, it is possible that adolescents' sense of well-being, maladjustment, and relationship quality with mothers and fathers may influence the frequency in which they engage in language brokering and how they experience and perceive such language brokering tasks.

Similarly, it was assumed that relations between language brokering and adjustment depended on autonomy-supportive contexts, however, it is possible that relations between perceptions of autonomy support and adjustment depend on the extent adolescents feel positive or negative about language brokering. Such questions regarding directionality

highlight the need for longitudinal research, which would allow analyses of participants over time and would confirm or question causal inferences regarding the effects of language brokering on individual and relational adjustment among Chinese-Canadian immigrant families. Longitudinal research conducted across adolescence would be particularly fruitful, as this would capitalize on a developmental period marked by significant changes in both parent-child relationships and acculturation into the dominant society. For example, Tilghman-Osborne and colleagues' (2016) longitudinal study found that the influence of parent-adolescent closeness on language brokering attitudes appeared stronger in early adolescence versus in middle or late adolescence, and only in Latino males (versus females). With respect to directionality, their study also suggested that relational closeness predicted language brokering attitudes versus attitudes being predictors of closeness. Thus, with longitudinal research, future studies could more precisely investigate the impact of change across time, including the effect of parents and children having more time to adjust to a host country, becoming more familiar with and accessing available resources, or the influence of Canadian culture or new peers (perhaps towards greater autonomy and independence).

The findings also emphasize the importance for subsequent research to distinguish between language brokering constructs, including frequency, and positive and negative feelings. In the current study, positive feelings about language brokering for both mothers and fathers were only significantly related to greater relational congruence, whereas negative feelings were significantly related to poorer relational congruence, less adolescent self-esteem, and more intense mother-adolescent conflict intensity. This highlights the unique associations of various feelings with adjustment. Furthermore, no

relations were found between negative and positive language brokering feelings and more frequent language brokering was associated with more negative feelings (as predicted), but was also associated with more positive feelings (which was unexpected).

Importantly, this suggests that both positive and negative feelings about language brokering may co-exist and that the absence of negative or positive feelings does not necessarily equate to the presence of the other, which has been assumed in past literature. Thus, the current study findings add to the existing literature that emphasizes the importance of assessing and distinguishing between multiple dimensions of language brokering and their relations to adjustment. This includes distinguishing between frequency from feelings and between positive and negative language brokering feelings. In the current study, more frequent language brokering for both mothers and fathers predicted more intense feelings in general, and the results highlight the distinct ways in which positive and negative feelings about language brokering predict adjustment.

As mentioned above, I found that “positive feelings” in the current study may not be as unqualifiedly positive as the label implies. Therefore, future studies should pay greater attention to how measures of “positive” language brokering feelings are defined and labeled, and ideally move towards consensus of terminology within the language brokering research community. For example, Kam and Lazarevic’s (2014) measure of “positive brokering feelings” included feeling proud and good when interpreting; Wu and Kim’s (2009) measure of “sense of (brokering) efficacy” included feeling mature and useful; and Kim, Hou, Shen and Zhang (2016) proposed a Subjective Language Brokering Experiences Scale which includes subscale items of “socioemotional benefits of language brokering” such as feeling mature and useful, as well as subscale items of

“efficacy of language brokering” such as being good at, skilled and effective at brokering. All of these items may be considered “positive” language brokering experiences, but as the results of the current study suggest, may relate uniquely to adjustment. The creation of refined language brokering constructs, which distinguish (for example) socioemotional feelings from feelings of efficacy or responsibility, may help clarify the nature of positive feelings. Doing so may also further an understanding of the potential benefits and risks of language brokering more generally.

In the current study, the hypothesis that language brokering feelings would moderate relations between language brokering frequency and adjustment were largely unsupported. Given the significant links between frequency and feelings and the relative importance of feelings over frequency found in the prediction of adjustment, future studies interested in further disentangling the influence of frequency and feelings on adjustment might consider alternative models, including the examination of language brokering feelings as a mediator of relations between frequency and adjustment in Chinese immigrant families.

Another limitation to this study is its smaller sample size of 152 families. Strengths of this sample include data that was largely randomly collected and that include information and perspectives from multiple members of the same family; this type of sample is rare and difficult to obtain. Still, with a larger sample size and greater statistical power, significant relations may be more easily detected and analyses designed to investigate more complex models, such as structural equation modeling, could be used.

Parents’ responses on their autonomous childrearing goals were restricted in variance and this could have been an influential factor in the finding that neither mothers’

nor fathers' autonomous children rearing goals were significantly related to any adjustment outcomes. Autonomous childrearing goals were also the only main variables in this study that represented parents' perceptions (versus those of adolescents). It is possible that some parents' responses reflected social desirability issues. In addition, parents' reports of childrearing goals were collected 18 months prior to all of the other data, and this may have weakened the strength of some correlations. Thus, replication studies are needed before conclusions can be drawn regarding the relative importance of adolescents' perceptions of autonomy support over parents' intentions to be autonomy-supportive.

Finally, while the examination of autonomy support as a moderator of relations between language brokering feelings and adjustment received partial support, a limitation of this study is the inability to consistently apply SDT as a theoretical framework for understanding the mixed findings associated with language brokering. Certainly, there was no evidence to support the moderating role of autonomy-supportive contexts on relations between frequency and adjustment, and no evidence was found with respect to language brokering for fathers. Furthermore, while some significant interactions fully supported hypotheses, others showed mixed support, and others still were not significant. Future research could consider alternative measures of autonomy-supportive contexts, perhaps directly assessing adolescent's perceptions of the extent to which their language brokering activities feel volitional or forced. Such measures of autonomy support might provide a clearer picture regarding the importance and application of SDT in better understanding language brokering within Chinese immigrant families residing in Canada.

In spite of these limitations, the results from the current study support the need to

expand the lens through which language brokering experiences are viewed to incorporate multiple aspects of the experience. Indeed, the findings revealed a complex array of unique relations among language brokering frequency, negative and positive feelings about language brokering, autonomy-supportive contexts, and adjustment within immigrant Chinese families in Canada.

Implications for Practice and Policy

One of the key findings of the current study was the relative importance and unique contributions of language brokering frequency and feelings in predicting the individual psychological adjustment of adolescent language brokers and their relationship with their mothers and fathers. As brokering frequency, and to a greater extent negative brokering feelings, were identified as risk factors for poorer adjustment, exploring programs, interventions and policies in efforts to reduce the need for adolescent language brokering behaviours and to alleviate feelings of anxiety, stress, and embarrassment associated with brokering should be considered.

Taking a preventative approach, the need for adolescent language brokering could be reduced by making adult interpreters available in the community (e.g., at schools, medical clinics, and hospitals), and by having translated materials readily available (e.g., brochures in multiple languages). As poorer education in both parents and poorer English proficiency in mothers were associated with language brokering constructs, promoting and making available English as a Second Language (ESL) and other education programs to assist parents in learning English or increasing awareness of available resources could also alleviate some of parents' need for their adolescents' language brokering assistance. Psychoeducational programs facilitated by schools or

through community organizations could create greater awareness of some of the risks associated with adolescent language brokering, as well as how the promotion of positive feelings may be beneficial.

In addition, more targeted approaches could be applied with the aim to directly support adolescents and families identified as experiencing individual and relational difficulties associated with language brokering. Given the relative importance of language brokering feelings over frequency in predicting adjustment, it may be helpful to consider ways for adolescents and their families to access counselling, peer, or community supports that are culturally and developmentally sensitive and skilled in helping adolescents and families explore and cope with more intense language brokering feelings. Indeed, I found that both positive and negative brokering feelings can co-exist and the general intensity of a myriad of emotions about language brokering may be especially complex and best addressed in clinical practice.

The findings also suggest that language brokering experiences can differ depending on the gender of the parent and that fathers more than mothers may enlist adolescents to language broker for reasons other than need. Therefore, clinical service providers who are equipped to work with families may be especially well positioned to support immigrant families engaged in language brokering. Specifically, clinicians with sensitivity to unique family member roles and to relationship dynamics within the family system, and who are proactive in exploring the reasons adolescents and their immigrant parents engage in language brokering in the navigation of heritage and host cultures would likely be valuable for families in need of more targeted supports.

Finally, the moderation findings exploring the role of autonomy-supportive

contexts offer initial evidence congruent with SDT. The results indicate that low autonomy support by mothers may be especially undermining of children's sense of feeling authoritative in their role as language brokers and may exacerbate the complexity of feelings when language brokering for parents. The findings highlight new contexts in which there are risks associated with language brokering, but they also suggest that if parents can provide a strong autonomy-supportive environment to their adolescents, they may directly impact well-being, potentially lessening the relative importance of how Chinese-Canadian adolescents feel about language brokering. Thus programs that teach effective parenting practices that bring awareness to the benefits of autonomy-supportive parenting as well as the costs associated with the absence of autonomy-support should be made more accessible.

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Appendices

Appendix A: Language Brokering Frequency Questionnaire

How often do **you translate or interpret** (English speech or writing) for your mother and your father?

	For my MOTHER					For my FATHER				
	Never	A few times a year	About once a month	A few times/ week	Daily/ Most Days	Never	A few times a year	About once a month	A few times/ week	Daily/ Most Days
a. School-related issues (discussions with teachers, notices, report cards, etc.)	0	1	2	3	4	0	1	2	3	4
b. Household bills or financial information	0	1	2	3	4	0	1	2	3	4
c. Household issues (operating manuals, flyers, emails, etc.)	0	1	2	3	4	0	1	2	3	4
d. Medical/health information (medication, doctor's visit, etc.)	0	1	2	3	4	0	1	2	3	4
e. Immigration or citizenship information	0	1	2	3	4	0	1	2	3	4
f. Media (news items, TV programs, etc.)	0	1	2	3	4	0	1	2	3	4
g. Parent's work or business materials	0	1	2	3	4	0	1	2	3	4
h. Informal conversations (at the grocery store, repair person, neighbours, etc.)	0	1	2	3	4	0	1	2	3	4

Appendix B: Language Brokering Feelings Questionnaire

If you ever translate or interpret for your mother and father, how much do you feel _____ because of it:

	With my MOTHER				With my FATHER			
	Not at all	A little	A fair amount	A great deal	Not at all	A little	A fair amount	A great deal
a) Stressed	1	2	3	4	1	2	3	4
b) Proud	1	2	3	4	1	2	3	4
c) Embarrassed	1	2	3	4	1	2	3	4
d) Helpful	1	2	3	4	1	2	3	4
e) Annoyed	1	2	3	4	1	2	3	4
f) Grown-up	1	2	3	4	1	2	3	4
g) Nervous	1	2	3	4	1	2	3	4
h) Respectful	1	2	3	4	1	2	3	4

Appendix C: Childrearing Goals Questionnaire

Parents often have specific ideas about the qualities they are trying to instill in their children. How important is it to you for your child...

	1 Not at all important	2 Fairly unimpor- tant	3 Somewhat important	4 Very Important	5 Extremely important
1. to be self-expressive and verbal	1	2	3	4	5
2. to remain in a group if needed even if he/she is unhappy with the group	1	2	3	4	5
3. to have high self-esteem	1	2	3	4	5
4. to be respectful	1	2	3	4	5
5. to be very sociable and get along well with others	1	2	3	4	5
6. to sacrifice self-interest for his/her group	1	2	3	4	5
7. to be very confident about his/her abilities	1	2	3	4	5
8. to establish his/her independence from parents	1	2	3	4	5
9. to respect decisions made by his/her group	1	2	3	4	5
10. to be able to speak up to you and other authority figures	1	2	3	4	5
11. to be cooperative	1	2	3	4	5
12. to do what he/she thinks is right for him/herself	1	2	3	4	5
13. to trust his/her own judgment	1	2	3	4	5
14. to maintain harmony in his/her group	1	2	3	4	5
15. to be strong willed and independent	1	2	3	4	5

Appendix D: Parenting Experiences Questionnaire

Please circle the number that best indicates how your **MOM** and **DAD** relate to you and what kind of expectations they have of you.

1= Never 2= Almost never 3= Not often 4= About 1/2 of the time 5= Fairly often 6= Almost always 7= Always

	MOM							DAD						
1. Does your parent smile at you?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
2. Do you talk with your parent about what is going on in your life?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
3. Does your parent give you as much freedom as you want?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
4. When you go out, does your parent really know where you are?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
5. Do you feel satisfied with the relationship you have with your parent?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
6. Does your parent let you do anything you would like to do?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
7. In the course of the day, how often does your parent really know where you are?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8. Is your parent affectionate with you?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
9. Does your parent give you reasons for his/her decisions?	1	2	3	4	5	6	7	1	2	3	4	5	6	7

1= Never 2= Almost never 3= Not often 4= About 1/2 of the time 5= Fairly often 6= Almost always 7= Always

	MOM							DAD						
10. Does your parent really know how you spend your money?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
11. Do you think your parent enjoys talking things over with you?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
12. Does your parent let you go out any evening you want?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
13. Do you feel your parent understands what you are really like?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
14. Does your parent ask you what you think before making decisions that affect you?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
15. Does your parent know who you are really with when you are away from home?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
16. When you have troubles, does your parent comfort and help you?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
17. Does your parent let you go anyplace you please without asking?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
18. Does your parent discipline you by reasoning, explaining, or talking to you?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
19. Does your parent really know if you came home or were in bed on time?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
20. Is your parent cheerful when he/she is with you?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
21. Does your parent really know who your friends are?	1	2	3	4	5	6	7	1	2	3	4	5	6	7

Appendix E: Self-Esteem Questionnaire

How well do the following statements apply to you generally? (circle one)

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I feel that I'm a person of worth, at least on an equal basis as most other people.	1	2	3	4
2. I feel that I have a number of good qualities.	1	2	3	4
3. On the whole, I am satisfied with myself.	1	2	3	4
4. I am able to do things as well as most other people.	1	2	3	4
5. I take a positive attitude toward myself.	1	2	3	4
6. All in all, I am inclined to feel that I'm a failure.	1	2	3	4
7. I feel that I do not have much to be proud of.	1	2	3	4
8. I wish I could have more respect for myself.	1	2	3	4
9. I certainly feel useless at times.	1	2	3	4
10. At times I think I am no good at all.	1	2	3	4

Appendix F: Youth Self-Report (YSR)

Below is a list of items that describe kids. For each item that describes you *now* or *within the past 6 months*, please circle the best number to say how often you do it. Circle the 1 if you have it *sometimes* or *occasionally* and the 2 if the item is not true of you. Circle the 3 if you have it *often*.

0 = Not True			1 = Sometimes or Occasionally True			2 = Very True or Often True		
0	1	2	1. I act too young for my age	0	1	2	33. I feel that no one loves me	
0	1	2	2. I drink alcohol without my parents' approval (describe): _____	0	1	2	34. I feel that others are out to get me	
0	1	2	3. I argue a lot	0	1	2	35. I feel worthless or inferior	
0	1	2	4. Still do things things that I don't want to	0	1	2	36. I usually get along with my friends	
0	1	2	5. There are only kids that I hang out with	0	1	2	37. I get a lot of things	
0	1	2	6. I hang out with _____	0	1	2	38. I get a lot of things	
0	1	2	7. I hang out with _____	0	1	2	39. I hang around with kids who get in trouble	
0	1	2	8. I have trouble concentrating or paying attention	0	1	2	40. I hang around with kids that other people think aren't doing anything	
0	1	2	9. I can't get my mind off certain thoughts (describe): _____	0	1	2	41. I feel like I'm not supposed to be here	
0	1	2	10. I have trouble getting off	0	1	2	42. I would rather be alone than with other kids	
0	1	2	11. I have a hard time making friends	0	1	2	43. I hang out with _____	
0	1	2	12. I hang out with _____	0	1	2	44. I hang out with _____	
0	1	2	13. I hang out with _____	0	1	2	45. I hang out with _____	
0	1	2	14. I argue a lot	0	1	2	46. I hang out with _____	
0	1	2	15. I am really nervous	0	1	2	47. I hang out with _____	
0	1	2	16. I am nervous all the time	0	1	2	48. I am not liked by other kids	
0	1	2	17. I get a lot of things	0	1	2	49. I am not certain things better than most kids	
0	1	2	18. I deliberately try to hurt or kill myself	0	1	2	50. I am too fearful or anxious	
0	1	2	19. I try to get a lot of attention	0	1	2	51. I feel like I'm not doing anything	
0	1	2	20. I hang out with _____	0	1	2	52. I feel like I'm not doing anything	
0	1	2	21. I hang out with _____	0	1	2	53. I feel like I'm not doing anything	
0	1	2	22. I disobey at school	0	1	2	54. I feel like I'm not doing anything	
0	1	2	23. I don't get me well at school	0	1	2	55. I feel like I'm not doing anything	
0	1	2	24. I don't get along with other kids	0	1	2	56. I feel like I'm not doing anything	
0	1	2	25. I don't think I'm doing anything	0	1	2	57. I feel like I'm not doing anything	
0	1	2	26. I don't think I'm doing anything	0	1	2	58. I feel like I'm not doing anything	
0	1	2	27. I hang out with _____	0	1	2	59. I feel like I'm not doing anything	
0	1	2	28. I break rules at home, school, or elsewhere	0	1	2	60. I feel like I'm not doing anything	
0	1	2	29. I am afraid of certain animals, situations, or places, other than school (describe): _____	0	1	2	61. I feel like I'm not doing anything	
0	1	2	30. I am afraid of going to school	0	1	2	62. I feel like I'm not doing anything	
0	1	2	31. I am afraid I might think or do something bad	0	1	2	63. I feel like I'm not doing anything	
0	1	2	32. I feel that I have to be perfect	0	1	2	64. I feel like I'm not doing anything	
				0	1	2	65. I feel like I'm not doing anything	
				0	1	2	66. I feel like I'm not doing anything	
				0	1	2	67. I feel like I'm not doing anything	
				0	1	2	68. I feel like I'm not doing anything	
				0	1	2	69. I feel like I'm not doing anything	
				0	1	2	70. I feel like I'm not doing anything	
				0	1	2	71. I feel like I'm not doing anything	
				0	1	2	72. I feel like I'm not doing anything	
				0	1	2	73. I feel like I'm not doing anything	
				0	1	2	74. I feel like I'm not doing anything	
				0	1	2	75. I feel like I'm not doing anything	
				0	1	2	76. I feel like I'm not doing anything	
				0	1	2	77. I feel like I'm not doing anything	
				0	1	2	78. I feel like I'm not doing anything	
				0	1	2	79. I feel like I'm not doing anything	
				0	1	2	80. I feel like I'm not doing anything	
				0	1	2	81. I feel like I'm not doing anything	
				0	1	2	82. I feel like I'm not doing anything	
				0	1	2	83. I feel like I'm not doing anything	
				0	1	2	84. I feel like I'm not doing anything	
				0	1	2	85. I feel like I'm not doing anything	
				0	1	2	86. I feel like I'm not doing anything	
				0	1	2	87. I feel like I'm not doing anything	
				0	1	2	88. I feel like I'm not doing anything	
				0	1	2	89. I feel like I'm not doing anything	
				0	1	2	90. I feel like I'm not doing anything	
				0	1	2	91. I feel like I'm not doing anything	
				0	1	2	92. I feel like I'm not doing anything	
				0	1	2	93. I feel like I'm not doing anything	
				0	1	2	94. I feel like I'm not doing anything	
				0	1	2	95. I feel like I'm not doing anything	
				0	1	2	96. I feel like I'm not doing anything	
				0	1	2	97. I feel like I'm not doing anything	
				0	1	2	98. I feel like I'm not doing anything	
				0	1	2	99. I feel like I'm not doing anything	
				0	1	2	100. I feel like I'm not doing anything	

Please print. Be sure to answer all items.

0 = Not True			1 = Somewhat or Sometimes True			2 = Very True or Often True		
0	1	2	57. I physically attack people	0	1	2	84. I do things other people think are strange	
0	1	2	58. I pick up things other people drop	0	1	2	85. I have thoughts that other people would think are strange (describe)	
0	1	2	59. I can be pretty friendly	0	1	2	86. I am stubborn	
0	1	2	60. I like to try new things	0	1	2	87. My moods or feelings change suddenly	
0	1	2	61. My school work is poor	0	1	2	88. I enjoy being with people	
0	1	2	62. I am poorly coordinated or clumsy	0	1	2	89. I am suspicious	
0	1	2	63. I would rather be with older kids than kids my own age	0	1	2	90. I swear or use dirty language	
0	1	2	64. I would rather be with younger kids than kids my own age	0	1	2	91. I think about killing myself	
0	1	2	65. I refuse to talk	0	1	2	92. I use or abuse other people's things	
0	1	2	66. I exhibit certain fears over and over (describe)	0	1	2	93. I talk too much	
0	1	2	67. I run away from home	0	1	2	94. I tease others a lot	
0	1	2	68. I scream a lot	0	1	2	95. I have a hot temper	
0	1	2	69. I am secretive or keep things to myself	0	1	2	96. I think about sex too much	
0	1	2	70. I see things that other people think aren't there (describe)	0	1	2	97. I threaten to hurt people	
0	1	2	71. I get well-complimented easily (describe)	0	1	2	98. I like to help others	
0	1	2	72. I get well-complimented easily (describe)	0	1	2	99. I smoke, chew, or sniff tobacco	
0	1	2	73. I get well-complimented easily (describe)	0	1	2	100. I have trouble sleeping (describe)	
0	1	2	74. I get well-complimented easily (describe)	0	1	2	101. I am nervous or jittery	
0	1	2	75. I am well-coordinated with my hands	0	1	2	102. I don't have much energy	
0	1	2	76. I shoot off or scream	0	1	2	103. I am unhappy, sad, or depressed	
0	1	2	77. I am too shy or timid	0	1	2	104. I am louder than other kids	
0	1	2	78. I sleep more than most kids	0	1	2	105. I am often in a bad mood (describe)	
0	1	2	79. I have more than reasonable things they wonder about (describe)	0	1	2	106. I like to be fair to others	
0	1	2	80. I am independent or easily detached	0	1	2	107. I enjoy a good joke	
0	1	2	81. I have a speech problem (describe)	0	1	2	108. I like to make the easy	
0	1	2	82. I am a heavy eater	0	1	2	109. I try to help other people when I can	
0	1	2	83. I eat at home	0	1	2	110. I get a kick out of the opposite sex	
0	1	2	84. I eat breakfast every third night	0	1	2	111. I have been getting together with others	
0	1	2	85. I take up too many things I don't need (describe)	0	1	2	112. I worry a lot	

Please be sure you answered all items.

Appendix G: Parent-Adolescent Conflict Intensity Questionnaire

Below is a list of things that sometimes get talked about at home. For each topic that you and your parent have discussed during THE LAST TWO WEEKS, indicate how angry the discussions were (circle the best number). If a topic has not been discussed, circle 0.

Topic	Discussions with <u>MOM</u>						Discussions with <u>DAD</u>					
	Not Discussed	Calm	Angry	Very Angry	Very Angry	Not Discussed	Calm	Angry	Very Angry	Very Angry	Not Discussed	
1. telephone calls	0	1	2	3	4	5	0	1	2	3	4	5
2. cleaning up bedroom	0	1	2	3	4	5	0	1	2	3	4	5
3. doing homework	0	1	2	3	4	5	0	1	2	3	4	5
4. putting away clothes	0	1	2	3	4	5	0	1	2	3	4	5
5. using the TV	0	1	2	3	4	5	0	1	2	3	4	5
6. cleanliness (showers, brushing teeth)	0	1	2	3	4	5	0	1	2	3	4	5
7. which clothes to wear	0	1	2	3	4	5	0	1	2	3	4	5
8. how neat clothes look	0	1	2	3	4	5	0	1	2	3	4	5
9. how money is spent	0	1	2	3	4	5	0	1	2	3	4	5
10. picking books or movies	0	1	2	3	4	5	0	1	2	3	4	5
11. going places without parents (e.g., movies, shopping)	0	1	2	3	4	5	0	1	2	3	4	5
12. drugs	0	1	2	3	4	5	0	1	2	3	4	5
13. drinking beer or other liquor	0	1	2	3	4	5	0	1	2	3	4	5
14. buying records, games, and things	0	1	2	3	4	5	0	1	2	3	4	5

Appendix H: Intergenerational Congruence Questionnaire

How much do you agree with these statements about your relationship with your parents?

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
1. My parents and I agree on the aims, goals, and things believed to be important in life.	1	2	3	4	5
2. My parents and I agree on friends.	1	2	3	4	5
3. My parents and I agree on the amount of time we spend together.	1	2	3	4	5
4. My parents and I agree on how we demonstrate our affection for each other.	1	2	3	4	5
5. My parents and I generally talk things over together.	1	2	3	4	5
6. My parents and I agree on how to behave in a predominantly Canadian setting.	1	2	3	4	5
7. My parents and I agree on how to behave in a predominantly Chinese setting.	1	2	3	4	5
8. I am satisfied with my relationship with my parents.	1	2	3	4	5