

Predicting Relations between Child Language Brokering and Psychological Adjustment  
within Immigrant Chinese Families

by

Josephine Mei Hua  
B.Sc. University of British Columbia, 2000

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### Abstract

Relations between language brokering and psychological adjustment were examined among 183 immigrant Chinese families residing in Canada. Adolescents (average age 15 years, 52% females) reported the frequencies with which they translated or interpreted materials for parents, with their materials varying in their levels of sensitivity. Mothers, fathers and adolescents also independently completed measures hypothesized to affect the emotional context in which language brokering takes place, and measures of individual and relational adjustment. Overall, more frequent language brokering appears to have stronger negative implications for adolescent adjustment and parent-child relationship quality, than for parents' adjustment. Material sensitivity, family obligation values, perceived parental psychological control, and parent versus friend orientation were found to moderate some of these relations. The findings are discussed in the context of the amount of pressure that is associated with language brokering, as well as vulnerabilities that may manifest from the parent-child role reversals inherent in language brokering.

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## Dedication

For my parents, Theresa and Joseph, with appreciation for their love and support,  
and for Rita, Cheryl, and Johnny for their encouragement all along the way.

## Introduction

### *What is Language Brokering?*

Language brokering refers to exchanges in which a third party mediates communication between linguistically and/or culturally different agents (McQuillan & Tse, 1995; Tse 1995; Tse, 1996). It is a phenomenon that typically occurs among immigrants who must adapt to a new environment where the dominant language is different from their own (Morales & Hanson, 2005). While all immigrant family members go through an acculturation process of adjusting to the customs of a new culture, parents and children tend to acculturate at different rates (Costigan & Dokis, 2006a). In most cases, children learn and acquire the host-language more quickly than their parents do. This is in part due to their earlier age of arrival and likely greater exposure and immersion into mainstream language environments such as public school settings (Jia, 2004). Consequently, some immigrant parents rely on their children to serve as language brokers, to translate and interpret for them so that they may more effectively function in the new culture (Morales & Hanson, 2005; Weisskirch & Alva, 2002).

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. Nonetheless, 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 exists. That is, children who are normally dependent and under the authority of their parents are in situations of authority and decision-making where parents must trust and depend on their children (McQuillan & Tse, 1995). The implications of these role reversals and how it relates to the psychological adjustment of family members using and delivering language brokering is the focus of the current study.

### *The State of the Literature*

With its significant beginnings in the mid-1990s, the study of language brokering is relatively new, and the available literature relatively small. In the latest known literature review, Morales and Hanson (2005) identified a total of 24 resources on the topic of language brokering including journal articles, ERIC documents, book chapters,

dissertations and unpublished work. A breakdown of their findings revealed that 57% of this research comprised published peer-reviewed articles, 17% were published book chapters, and 26% were conference papers, dissertations or ERIC documents. This literature is comprised primarily of descriptive and qualitative data, as opposed to quantitative analysis, with a focus on the nature and prevalence of language brokering (Morales & Hanson, 2005). Earlier research was also based primarily on retrospective accounts of having been a child language broker (e.g., McQuillan & Tse, 1995; Tse, 1995; Tse, 1996; Tse & McQuillan, 1996). More recent research has relied less on retrospective recall by surveying children and adolescents who are currently or have recently acted as language brokers (e.g., Buriel, Prez, De Ment, Chavez & Moran, 1998; Chao, 2006; Weisskirch, 2005; Weisskirch & Alva, 2002).

### *Prevalence*

Despite the paucity of literature, studies examining the prevalence of language brokering have consistently determined it to be very common among children of immigrants (Chao, 2006; McQuillan & Tse, 1995; Morales & Hanson, 2005; Tse, 1995; Tse, 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. Among Spanish-speaking Latino youth, Tse (1995) reported that all 35 high school students had language brokered at least once, with all but one participant engaging in continued brokering. In this study, 91% reported brokering for friends and 89% reported

brokering for their parents. In an impressive large scale Los Angeles study consisting of 463 Mexican American, 581 Chinese American, and 557 Korean American ninth graders from eight high schools, Chao (2006) not only asked adolescents whether they had *ever* language brokered for either parent, she also assessed the frequency of translation for mothers and fathers separately, across different settings and type of material translated. Specifically, participants were asked to report the frequency that they translated homework assignments, materials or notices from school, communication between parents and school staff, household financial materials, household materials not related to money, medical or health related issues, immigration papers, media, and issues relevant to parents' work. Almost 70% reported having language brokered for a parent at least once, and overall, adolescents language brokered for mothers significantly more often than for fathers (Chao, 2006). An analysis of the types of materials translated was not reported. Taken together, language brokering appears to be widespread in the United States among children of immigrants from Asian and Latino backgrounds.

#### *Settings and Materials*

Child language brokering appears to take place in a variety of settings with a variety of materials (Morales & Hanson, 2005). In Tse's (1996) survey of 64 language minority students, approximately 80 percent reported language brokering in the home, 66 percent at school, and 17 to 64 percent in various community settings including stores, banks, and government offices. Reports of language brokering in school settings include interpretation for parents and teachers during parent-teacher meetings, orally translating written communication such as announcements, permission slips and report cards, and even communicating issues surrounding academic and disciplinary problems involving

the child language broker (McQuillan & Tse, 1995). Outside of school, language brokering appears to take place in many community settings including in restaurants, on the street, and also in more private settings such as in doctors' offices (Tse & McQuillan, 1996). The materials translated can vary in their level of sensitivity and difficulty, from simple social exchanges to immigration and medical-related materials. Indeed, in Tse and McQuillan's (1996) interviews with previous language brokers, several commented that there were few settings in which they did not broker. Given the range of materials translated, including different levels of sensitivity and/or difficulty, the type of material translated may be important to consider, but this has yet to be examined empirically.

#### *Typical Child Characteristics*

Several characteristics that are typical of children who language broker have been identified. Across three ethnic groups, Chao (2006) found that first-generation youth brokered more frequently than second-generation youth, with the highest proportion of language brokering being performed by first-generation Mexican youth, followed by first-generation Korean youth, then first-generation Chinese youth. Child language brokers are often not highly acculturated into the new society. For example, in a sample of 36 fifth-grade students who were bilingual in English and Spanish, Weisskirch and Alva (2002) found that participants fell within low (46%) or moderate (54%) acculturation groups but not in the high acculturation level group. Also, child language brokers are often the first-born child in the family and reportedly begin to translate and interpret for others at a young age (Morales & Hanson, 2005). While reports of the age at which children of immigrant parents begin to language broker has ranged widely from age 5 to 18 (Tse, 1995), children typically report the start of their language brokering role

between the ages of 8 and 12 (Morales & Hanson, 2005). With respect to gender, Weisskirch and Alva (2002) found no significant differences, but other investigators (Buriel et al., 1998; Chao, 2006) have reported higher rates of language brokering among females. Family size has also been associated with frequency of language brokering. In a sample of Latino children (average household size of eight family members), a larger family size was related to a greater amount of language brokering in school, post office, and medical settings (Weisskirch & Alva, 2002). Finally, Morales and Hanson (2005) suggest that child language brokers are more often good-natured, sociable children who are detail-oriented, good listeners and are able to convey emotions and feelings when translating. Taken together, characteristics of the child language broker may be related to family need or perhaps a reflection of demonstrated or expected devotion from a child to the family. For example, daughters more than sons may be encouraged to assist with family matters. Furthermore, first generation more than second generation children may have stronger ties to their ethnic culture that might encourage a strong sense of family obligation, or they may be more skillful in their ethnic language, or their parents may have a greater need for language brokering assistance. Noteworthy is that findings to date have been based primarily on research that examines Latino Spanish-speaking children in the United States and thus may not generalize across cultures (Morales & Hanson, 2005).

#### *Parent Characteristics*

In addition to qualities that may characterize a typical child language broker, specific qualities may be observed in the parents who rely on their children to provide language-brokering services. Not surprisingly, poor English fluency predicted increased use of language brokering by parents; lower education and an older age of arrival were

also associated with the use of language brokers by parents (Buriel et al., 1998; Chao, 2006). These variables may indeed be related to one another since, for example, there is a consistent finding that second language proficiency declines with increasing age of arrival (Jia, 2004), which may contribute not only to parents' slower acculturation into a new culture, but also to their reliance on a language broker. Interestingly, some typical parent characteristics differ between mothers and fathers. For example, for mothers only, use of language brokering was predicted by being in a single-parent household (Chao, 2006). For fathers only, language brokering was surprisingly predicted by fathers' bilingualism and thus suggests that need for translation may not be the only reason why some parents enlist the assistance of their children (Chao, 2006). It is conceivable that additional usages and purposes for child language brokering may exist, perhaps for disciplinary purposes or for teaching children a sense of family obligation.

#### *Relations Between Language Brokering and Children's Adjustment*

Perhaps the greatest debate in the current literature on language brokering is not what characterizes the child language broker or the individuals who use it, but whether it fosters benefit or harm for the child language broker.

In a statement regarding the positive consequences of language brokering, Halgunseth (2003) argued that language brokering contributed to the advanced cognitive development of child language brokers, as well as the promotion of biculturalism, including maintenance of the heritage language. By mediating communication between parents and English-speaking professionals such as doctors, teachers and lawyers, often at a young age, children must learn various guidelines and terminology to function as a competent language broker. The process of acquiring such knowledge is argued to

accelerate cognitive development and to enhance academic performance (Halgunseth, 2003; Morlaes & Hanson, 2003). This position is supported by qualitative accounts by children who participated in interviews (McQuillan & Tse, 1995; Tse & McQuillan, 1996) as well as in surveys (Tse, 1996). That is, the fact that children reported being involved in the translation and interpretation of complex and adult-like situations was reasoned to demonstrate problem-solving and reasoning abilities in real world contexts normally reserved for adults.

There is also some quantitative evidence for a positive relation between language brokering and academic performance. With a sample of 122 Latino students in Grades 9 and 10, Buriel and colleagues (1998) collected data on the frequency of language brokering for various people, as well as the types of materials and settings of translation. Settings and material type were weighted and given a score to reflect range of translation difficulty, and a total brokering behaviour score was computed by summing participants' scores across the three measures (i.e., frequency, settings, and material type). Total brokering was positively correlated with biculturalism and academic performance (Buriel et al., 1998). It is argued that the requirements to broker in multiple settings may help children to develop and maintain host and ethnic language abilities, at times to a degree of proficiency that is beyond expected levels since such children may not only be translating and interpreting advanced materials such as school letters, bank statements, rental agreements, and immigration forms, but do so in their second language (Buriel et al., 1998; Tse, 1995 & 1996). Despite apparent English proficiency in real-world adult contexts, Tse's (1995) study with Latino students failed to show advanced levels in English ability based on school performance in English courses. Tse (1995) suggested

this may be an indication that traditional school assessment tools lack context and authenticity, thus measuring inaccurately the language abilities of child language brokers.

In contrast to fostering cognitive advancement, Umana-Taylor (2003) argued that child language brokers were potentially at risk for poorer academic and educational outcomes. Although children may be translating and interpreting for their parents in multiple and complex situations, there is a dearth of research regarding the accuracy of their language brokering (Morales & Hanson, 2005). Furthermore, not only do children sometimes make decisions regarding school and family matters for their parents, they sometimes bypass communication with parents entirely (Tse, 1995). For example, they may choose which school letters to show their parents or sign their own permission slips sometimes without the knowledge of their parents (Tse, 1995). Putting children in positions of authority and important decision-making, Umana-Taylor (2003) argued, does not necessarily foster cognitive development, and children may instead be at a disadvantage if decisions are made without parental knowledge, experience and input. McQuillan and Tse (1995) further cautioned that parents' dependence on their children to communicate directly with teachers might prevent the establishment of a proper home-school relationship that would normally cultivate support for student success. The time and devotion required to be a language broker has also been argued to limit opportunities for educational attainment, acculturation, and identity formation (Umana-Taylor, 2003). For example, more translating has been associated with lower levels of acculturation (Weisskirch, 2005).

In addition to cognitive development, the benefits and risks of language brokering for emotional development have been debated. Arguments stressing positive

consequences include the development of strong interpersonal skills through the process of language brokering. Similar to cognitive development, the process of mediating between agents in complex and adult-like situations is thought to promote social and communication skills (Halgunseth, 2003).

Child language brokers not only need to learn social skills, they must make good decisions that produce successful outcomes during negotiations. A commonly cited example describes a father who yells an insult in his native tongue to an English-speaking man in response to a business proposition. Rather than translating the insult, the child language broker chooses to avoid confrontation and simply states that his father does not accept the offer (McQuillan & Tse, 1995). The process of aiding a parent and others, and having the responsibility to oversee and promote the success of an interaction, are said to increase confidence and instill pride in child language brokers (McQuillan & Tse, 1995).

Descriptive accounts include reports of children enjoying language brokering, and as a result, feeling more mature and independent, having higher self-esteem, and feeling a greater sense of trust between parent and child (McQuillan & Tse, 1995; Tse, 1996). Indeed, Buriel and colleagues (1998) found a positive correlation between language brokering and social self-efficacy and suggested that interpersonal interactions with multiple languages and cultures enhanced feelings of confidence in social situations. Language brokering has also been associated with stronger ethnic identity among Latino early adolescents (Weisskirch, 2005). Such benefits may be particularly fruitful for adolescents as they transition from childhood to adulthood (Halgunseth, 2003). Furthermore, language brokering can also be emotionally beneficial through the prevention of potentially embarrassing situations for both the child and the parent

(Halgunseth, 2003). Finally, by helping parents function and succeed, children reap the benefits of tangible rewards such as having bills paid, and having the family financially supported and in good health (for example when children mediate conversation between doctor and parent) (Halgunseth, 2003).

Conversely, concerns about the affective consequences of language brokering for children have surfaced (Chao, 2006; Umana-Taylor, 2003). Particularly with the language brokering of confidential medical, legal, and social services and documents, the pressure to correctly translate or interpret often complex and advanced material can serve as a stressor to children and they may be traumatized by delivering information (for example, information about a serious medical condition) (Morales & Hanson, 2005; Umana-Taylor, 2003). It is because of the sensitivity of these situations and the potential for harm that language brokering has even been legislated in the State of California, preventing children from translating and interpreting in medical, legal and social service settings (Morales & Hanson, 2005). Medical doctors in general practice report being torn between accepting children as informal interpreters and allowing children a "proper" childhood (Cohen, Moran-Ellis & Smaje, 1999). That is, there is a dilemma resulting from a large shortage of available or cost-effective professional interpreters, and an opposing ideal to spare children of worry, embarrassment, and exposure to adult situations in general. General Practitioners reported that their decision to allow child language brokering during medical consultations was dictated by the availability of alternatives and by the sensitivity of each individual case (Cohen et al., 1999).

Cases of children feeling stress and a sense of burden from language brokering are well documented. Descriptive accounts include children who language broker going

to bed well after midnight to accommodate school as well as family obligations, and feeling anxious about the consequences of making mistakes during translation (Hall & Sham, 1998). There are also accounts of children feeling resentment due to strained relationships from the stress and responsibility imposed by family members (Hall & Sham, 1998). Children, for example, may feel a greater sense of independence and maturity from helping their parents, but then frustrated and resentful when parents do not allow them privileges or freedom to make decisions in other aspects of their lives. Chao (2006) directly assessed the relations between child language brokering and children's internalizing and externalizing symptoms and found different results for children of different ethnic backgrounds. A positive association between language brokering and children's experience of internalizing symptoms was found for Chinese American and Korean American youth, but there was no relation among Mexican American youth. There was also a positive relation with externalizing symptoms for Korean American youth, but this was not found in either Chinese American or Mexican American child language brokers. Chao's (2006) results held whether children were providing language brokering for their mothers or their fathers.

Altogether, language brokering has been associated with both benefit and harm for children. Furthermore, research comparing ethnic groups in the United States has revealed that the impact of language brokering may not generalize across different ethnic groups. Clearly, much further research is needed to better understand this language-based phenomenon and how it relates to children's adjustment.

*Parents' Adjustment and the Parent-Child Relationship*

Virtually no empirical research has been conducted on the psychological impact of language brokering on parents or the quality of the parent-child relationship. For many, it may be assumed that since language brokering is performed to assist parents with their language barriers and acculturation struggles, there must only be positive consequences for them. However, discussion of negative aspects of language brokering for parents has begun to emerge. Specifically, parents' dependence on their often young children is argued to potentially diminish the authority that adults have over their children, leading to a reversal of roles within the family. Role reversals may negatively affect parents' well-being and the quality of the parent-child relationship by creating resentment among family members and lower parental respect exhibited by children (Morales & Hanson, 2005; Umana-Taylor, 2003). To test this role reversal hypothesis, Chao (2006) examined the relation between language brokering and children's respect for parents. For Mexican American youth, language brokering was positively associated with adolescents' respect for both parents. This positive relation was found only for fathers among Korean American brokers, and only for mothers among Chinese American brokers. Thus, initial research findings do not support the hypothesis that language brokering weakens children's respect for their parents (Chao, 2006). Still, respect for parents is but one aspect of this possible role reversal dynamic, and the construct of respect only examines the child's perspective.

Language brokering has also been argued to be a risk for parents because the translation of particularly sensitive materials may serve as a stressor to them (Morales & Hanson, 2005; Umana-Taylor, 2003). That is, parents might experience increased anxiety

with having to have personal and sensitive information disclosed to their children, and they also run the risk of tangible consequences if information is not interpreted or translated accurately (Morales & Hanson, 2005; Umana-Taylor, 2003). Indeed, such concerns factor into the dilemma faced by medical doctors, as mentioned previously. Taken together, very little is understood regarding the relation between language brokering and parental well-being or the parent-child relationship. Additional research is needed that directly examines the psychological adjustment of parents and the quality of the parent-child relationship within the language-brokering context.

#### *Language Brokering and Immigrant Chinese Families*

In traditional Chinese culture, influenced by Confucius teachings, there is a strong emphasis on filial piety and hierarchical relationships. Filial piety emphasizes family membership, family obligation, and providing assistance, as well as obedience and respect to family authorities (Chao & Tseng, 2002). In traditional hierarchical relationships, the role of the parent is often synonymous with the role of a trainer, emphasizing the continuous monitoring and guidance of children (Chao, 1994; 2000). Furthermore, according to Chao (2000), many Chinese parents cultivate their children's development and show nurturance through the extent of their involvement and support. The role of the child in these relationships is more subservient. That is, children who are hardworking and who show respect and obedience to their parents and other elders are highly valued. Indeed for many traditional Chinese families, such displays of filial piety and respect for hierarchical relationships by both parents and children are believed to ensure a greater likelihood of these children's future success and reflects positively back onto the family as a whole.

For Chinese individuals and families immigrating to Canada, the difference between Chinese and North American cultures may create significant adjustment difficulties. Circumstances including language barriers, school or employment adjustments, possible changes in values, prejudice, and lack of supports may all add stress that could increase one's risk for poorer functioning. Furthermore, the rate of acculturation and the ways in which individual family members adjust to their new environment may vary, thereby creating disruptions to the usual order of the family unit. This itself can act as an additional source of stress that may result in new areas of conflict within the family (Costigan & Dokis, 2006a). On the other hand, Chinese immigrants have also been represented as a successful "model minority" group because there is some evidence for resilience against such stress within this population (e.g., Beiser, Hou, Hyman & Tousignant, 2002; Ma, 2002; Sue, 2002).

As a result of role reversals that place children in positions of authority and parents dependent on their children, language brokering within Chinese immigrant families may challenge cultural values related to hierarchy and may support values related to fulfilling family obligations. The extent to which the process of language brokering challenges or reinforces strongly held values may influence the emotional climate in which language brokering takes place. For instance, parents may associate language brokering with a threat to Chinese values by way of loss of parental control, disruption in proper family authority or hierarchy, or perhaps failure to fully support or be involved in their children's development. Such challenges to cultural values may foster a negative emotional context surrounding language brokering that may increase risk for poorer adjustment. Conversely, some parents may view the act of language

brokering as quite congruent with their cultural values of filial piety. For example, parents might regard their children's language brokering as a means by which children demonstrate devotion, respect, and even self-sacrifice in support of family members' well-being, particularly if language brokering is in obedience to parental requests for assistance. Such cases of congruence between language brokering and cultural values may facilitate a positive emotional context surrounding language brokering that may promote positive adjustment.

Similarly with children, if language brokering is regarded as an imposition, children may feel burdened or resentful. The demand or pressure to properly broker may be too great, they may not feel a responsibility toward their elders, or they may value greater independence or hold higher esteem towards the values of their peers versus that of their family. Such instances for children could encourage a negative emotional climate to be associated with language brokering that may be associated with poorer adjustment. For other children, language brokering may be regarded neutrally and just part of their expected responsibilities, if acts of filial piety are an assumed part of their daily living. Indeed, children who highly value supporting elders may see brokering as a source of pride. In these instances, language brokering may be associated with a positive emotional climate and psychological adjustment.

Thus, the emotional context, or how language brokering is perceived, may dictate whether it is associated with positive or negative psychological outcomes. The current study aims to better understand the relations between language brokering and psychological adjustment within immigrant Chinese families by more closely examining the possible meaning of language brokering to the person doing or receiving it.

This research is especially crucial today given that Canada's 5.4 million foreign-born individuals represent 18.4% of the total population (Canadian Council of Social Development, 2001), and 20% of new immigrants to Canada are of Chinese ancestry (Wang & Lo, 2004). Thus, the rates of Chinese immigrants to Canada alone warrant increased attention in research.

### *The Current Study*

The prevalence of language brokering among immigrant families, the unclear relation between language brokering and psychological adjustment, and the larger number of Chinese immigrant families in Canada necessitate further research that examines the potential impact of child language brokering on psychological well-being within Chinese immigrant families in Canada. Because the emotional effects of language brokering are believed to be especially salient, the study focuses on the emotional experience of language brokering by examining internalizing symptoms (including depression), feelings of self-esteem, and parent-child relationship quality. Indeed, language brokering may have particularly strong emotional effects compared to other duties such as cleaning the house because language brokering is a task that accesses skills (bilingualism, translation, and interpretation) that children possess to a greater extent than their parents. Thus, greater emotional weight may be placed on the providing or receiving of language brokering compared to other tasks.

Specifically, this study endeavors to better understand the relations between the frequency of adolescents' language brokering and reports of two aspects of adolescent psychological adjustment: internalizing symptoms and feelings of self-esteem. Furthermore, given the relational nature of adolescents' 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 psychological adjustment of the parents and the quality of the parent-child relationship.

To examine the psychological adjustment of parents, symptoms of depression and feelings of self-esteem are examined. The quality of the parent-child relationship is assessed by measuring parent-child conflict, and parent-child understanding and satisfaction (i.e., intergenerational congruence). Thus, for each assessment of psychological adjustment, whether of the adolescents, parents, or the parent-child relationship, a positive and a negative aspect of adjustment are assessed. This offers opportunities to independently examine language brokering in terms of creating risk for distress and promoting healthy development for immigrant Chinese families.

The relation between language brokering and psychological adjustment is examined in the context of the overall emotional climate in which child language brokering for parents is presumed to take place. Therefore, in addition to examining the moderating role of the sensitivity of the materials that are translated or interpreted, the current study examines three moderators that are hypothesized to measure the emotional context of language brokering within immigrant Chinese families. The three proposed moderators are the extent to which each family member values family obligation, the adolescents' perceptions of parental psychological control, and the adolescents' relative emphasis on their parents' opinion over their friends. A schematic of the proposed models of interest are presented in Figure 1.

*Sense of family obligation as moderator.* A strong sense of family obligation, which involves a perceived need or duty to help and support one's family members, is

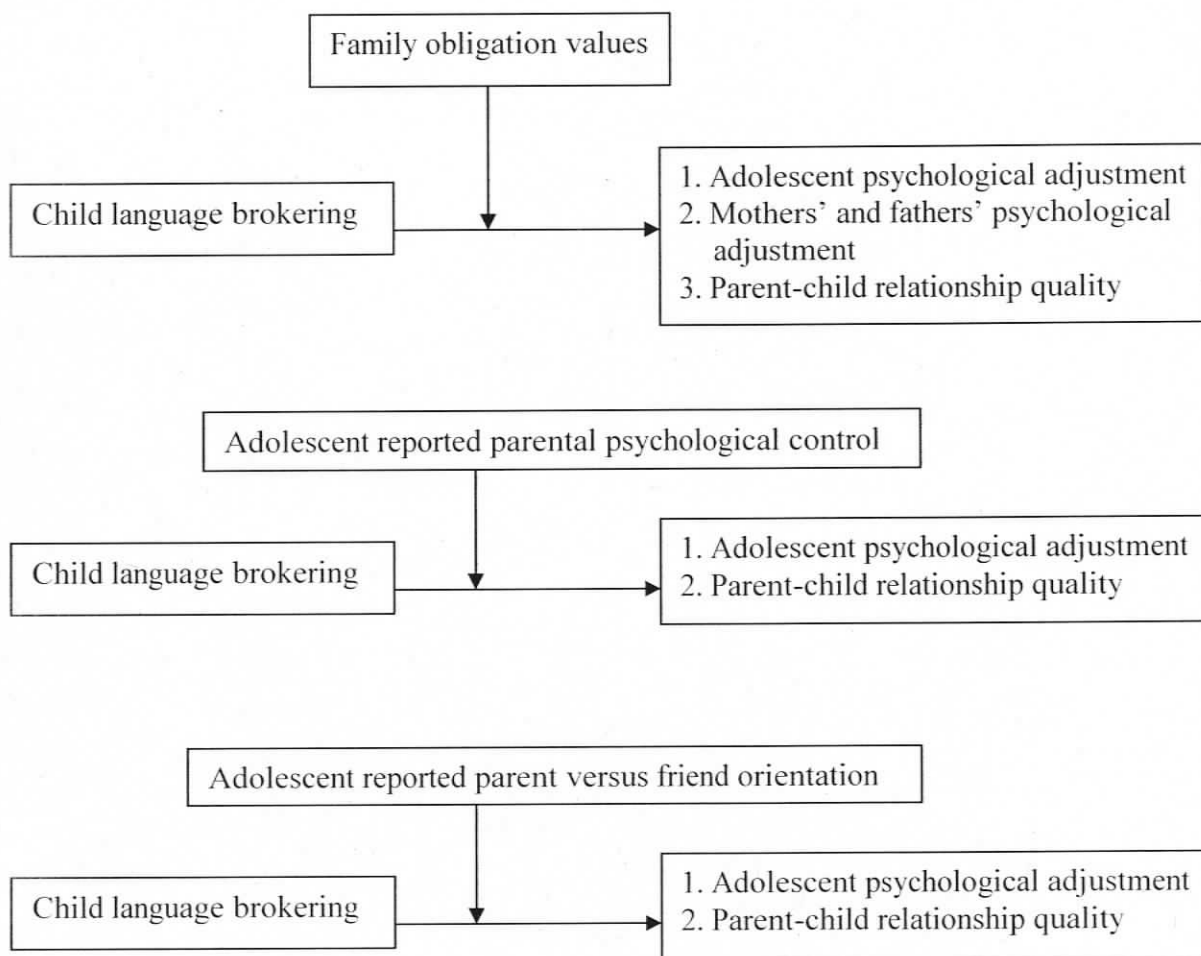


Figure 1. Models of interest.

often observed in collectivistic cultures (Marin & Gamba, 2003; Triandis, 1995).

Consistently, traditional Chinese culture values children who respect and submit to the wishes of their elders while supporting household functioning, and parents who make personal sacrifices for the sake of their children's future (Fuligni, Yip, & Tseng, 2002).

These familial duties may be quite natural in contexts where involvement in family obligations is mainstream. For Chinese immigrant families living within a western culture such as in Canada, however, greater within-group variability may be apparent. Particularly for youth living in a culture that generally values and expects the development of greater independence and autonomy in adolescence, the strength of family obligation values may weaken (although not likely to the same level as these children's Western peers; Fuligni et al., 2002).

In the current study, it is hypothesized that the strength of adolescents' family obligation values will shape the emotional context in which language brokering takes place, which will influence the psychological consequences of language brokering. Specifically, variability in adolescents' valuing of family obligations may influence whether adolescents who language broker associate this service to their parents as a source of pride or as a source of burden. For adolescents with a strong sense of family obligation, language brokering may be perceived as part of their responsibility to assist family members and to support the overall functioning of the family unit. That is, language brokering can be an effective outlet for fulfilling their sense of duty to show respect to elders in a situation where parents are more vulnerable and dependant on their children's higher proficiency in the English language. Thus, when adolescents' sense of family obligation is high, more frequent language brokering is expected to be associated with positive psychological adjustment.

Conversely, adolescents who have a lower sense of family obligation may not perceive a need or sense of duty to help their family members. In these situations, the task of language brokering for parents may not be expected or seen as an opportunity to

express a strongly held cultural value. Therefore, in such cases, it is expected that language brokering will be less strongly related to positive psychological well-being. In fact, for some adolescents in Chinese immigrant families embedded in a Western culture that emphasizes autonomy, having a low sense of family obligation may result in parental expectations and requests for language brokering being perceived as an extra burden. Thus, more negative (or at least neutral) associations between language brokering and adolescent psychological well-being are expected in these instances.

There is virtually no literature that has examined the relation between child language brokering and the psychological well-being of the parents and thus the current study seeks to extend the literature on language brokering by examining these relations. Parents with strong family obligation values are expected to see their children's language brokering as acts of duty that support the overall functioning of the family unit. This in turn is expected to foster a sense of satisfaction with their children and with their own success in instilling family obligation values in them. Thus, it is hypothesized that in these situations, higher levels of child language brokering will be associated with greater self-esteem and fewer depressive symptoms. For parents with a lower sense of family obligation, it is hypothesized that their dependence on their children's assistance through language brokering will be negatively associated with their psychological adjustment. In such cases, parents may feel less effective in their role as providers or feel they are a burden to their children, resulting in lower self-esteem and more depressive symptoms.

For reasons similar to those articulated above, strong family obligation values within the family are also expected to be positively associated with the quality of the parent-child relationship. In contrast, for families with lower family obligation values, the

role reversals inherent in language brokering may be a source of stress and therefore the frequency of language brokering is expected to be associated with a poorer parent-child relationship quality.

*Adolescents' sense of parental psychological control as moderator.* While values related to family obligation encourage responsibility and obedience through an emphasis on the importance of family cohesiveness, parental psychological control is a more direct technique for ensuring children's responsibility and obedience. Parents who exercise high psychological control with their children may use strict disciplinary action, forms of punishment, or restrictive rules to obtain the behaviours they desire, and may make their demands without explanation, reasoning or justification (Barber, 1996). Methods of psychological control over children may also include using an existing parent-child bond as leverage, for example, gaining control through guilt or through the withdrawal of love or affection (Barber, 1996).

According to Barber (1996), such control by parents is consistently associated with poorer psychological adjustment, particularly in the form of internalizing problems. Indeed, in a 6-month longitudinal study examining the role of parental control on early adolescents' psychological functioning in the United States and in China, psychological control predicted decreased emotional well-being and increased emotional distress over time (Wang, Pomerantz, & Chen, 2007). Similarly, perceiving high psychological control in both parents, compared to perceiving high psychological control in only one or no parents, was associated with poorer well-being (more hopelessness, fewer feelings of personal control over own life, less life satisfaction, and less self-esteem) for Chinese adolescents residing in Hong Kong (Shek, 2007). Thus, an adolescent's sense that their

parents are highly controlling will likely make the task of language brokering feel more like an obligatory demand rather than an act of voluntary assistance. Such a perception is hypothesized to be associated with poorer adolescent psychological adjustment and strained parent-child relationships. For adolescents who perceive a lower sense of parental control, it is predicted that language brokering will be neutrally or positively associated with adolescents' psychological adjustment and with the quality of parent-child relationships.

*Adolescents' parent versus friend orientation as moderator.* The extent to which adolescents value the opinion of their parents over their friends is predicted to moderate the relation between language brokering and adolescent psychological adjustment, as well as the quality of parent-child relationships. Children who are strongly oriented towards their parents compared to their friends feel more understood by their parents, are more likely to confide in their parents, identify more closely with their values, and place greater importance on their judgment concerning what they should wear, or even how smart they are, relative to the opinions of their friends.

It is expected that the more strongly adolescents emphasize the importance of their parents' opinions, the more cohesion family members will experience, thus creating a more positive context for language brokering. Thus, the more adolescents value their parents' opinion, the more likely it is that parental requests (such as requests to language broker) will be deemed as reasonable. In these instances, language brokering is expected to be associated with positive psychological adjustment and stronger parent-child relationships. For adolescents who place a weaker emphasis on the opinion of their parents (and a stronger emphasis on the opinion of friends), particularly within a

Canadian society that tends to promote autonomy, language brokering may be incongruent with adolescents' values and perceived as a burden, and thus may be associated with poorer psychological adjustment and lower parent-child relationship quality.

*Adolescents' gender, age, generation status, and the nature of translated materials.* The frequency of child language brokering may vary significantly by factors such as the adolescent's gender, the adolescent's age, the adolescent's generation status, and/or the sensitivity of the materials translated. The current study will investigate whether there are significant differences in the frequency of language brokering by the above variables. Where differences are found, descriptive accounts will be provided and these variables will be included in subsequent analyses.

*Mothers versus fathers.* Previous research focused on parents and their adjustment typically measures the perspective of only one parent (usually the mother) or assesses parents as a unit (mothers and fathers together). However, differences have been noted between mothers' and fathers' styles of parenting, acculturation and psychological adjustment (e.g., Costigan & Dokis, 2006b; Shek, 2000). Therefore, this study will also examine whether the psychological consequences of language brokering is similar or different for mothers and fathers by examining each parent hypothesis separately for mothers and fathers. No specific predictions are made regarding the extent that relations between frequency of language brokering and psychological adjustment within Chinese immigrant families differ for mothers and fathers. These analyses will be exploratory.

*Summary of Hypotheses*

Little is known about whether differences in the frequency of language brokering exist depending on the adolescent's gender, the adolescent's age, the adolescent's generation status, and/or the sensitivity of the materials translated. Therefore, this study will compare the frequency of language brokering performed by girls versus boys, by first versus second-generation (including 1.5 generation) adolescents, and by higher versus lower sensitivity of materials translated. The relation between adolescent age and language brokering will also be examined. For the purposes of this study, second-generation adolescents consist of adolescents who were born in Canada or came to Canada before the age of six. More sensitive materials include the interpretation or translation of bills or financial information, medical or health information, immigration information, and parents' work materials. Less sensitive or everyday materials include the interpretation or translation of materials from school, household issues, and media (such as news items, television, etc.). If differences by adolescents' gender, age, or generation status are found, these variables will be controlled for in subsequent analyses. Furthermore, the extent to which the relations between frequency of language brokering and psychological adjustment differ by material sensitivity will be examined.

1. It is expected that when a higher proportion of sensitive materials are language brokered, more language brokering will be associated with generally poorer psychological adjustment for adolescents (i.e., more internalizing symptoms and lower self-esteem). When a smaller proportion of sensitive materials are language brokered, more language brokering is expected to be

associated with better psychological adjustment for adolescents (i.e., fewer internalizing symptoms and higher self-esteem).

2. Similarly, it is expected that when a higher proportion of sensitive materials are language brokered, more language brokering will be associated with poorer parent-child relationship quality (i.e., more intergenerational conflict and less intergenerational congruence). When a smaller proportion of sensitive materials are language brokered, more language brokering is expected to be associated with better parent-child-relationship quality (i.e., less intergenerational conflict and more intergenerational congruence).
3. For the prediction of parents' adjustment, it is expected that when a smaller proportion of sensitive materials are language brokered, more language brokering will be associated with generally poorer psychological adjustment (i.e., more depressive symptoms and lower self-esteem) because of their dependence on their children to translate and interpret primarily everyday materials. When a higher proportion of sensitive materials are language brokered, parents may feel more justified in seeking help from their children on more complex matters, or if materials are too sensitive, parents may feel vulnerable having to disclose personal information to their children. Thus, no specific predictions are made for relations between language brokering and parents' psychological adjustment when the proportion of sensitive materials language brokered is high.

The hypotheses concerning the moderating role of family obligation values on the relation between language brokering and psychological adjustment are as follows:

4. For adolescent language brokers with a lower sense of family obligation, more language brokering will be associated with negative adolescent psychological adjustment (i.e., more internalizing symptoms and lower self-esteem). For adolescents with a higher sense of family obligation, more language brokering will be associated with positive adolescent psychological adjustment (i.e., fewer internalizing symptoms and higher self-esteem).
5. For parents with a low sense of family obligation, it is expected that more language brokering will be associated with negative parent psychological adjustment (i.e., more depressive symptoms and lower self-esteem). For parents with a higher sense of family obligation, more language brokering will be associated with positive parent psychological adjustment (i.e., fewer depressive symptoms and higher self-esteem).
6. For families where the mother, father and adolescent on average report weaker family obligation values, more language brokering is predicted to be associated with poorer parent-child relationship quality (i.e., more intergenerational conflict and less intergenerational congruence). For families with on average stronger values in family obligation, more language brokering is expected to be associated with better parent-child relationship quality (i.e., less intergenerational conflict and more intergenerational congruence).

The hypotheses concerning the moderating role of adolescent reported parental psychological control on the relation between language brokering and psychological adjustment are as follows:

7. For adolescent language brokers who perceive a higher sense of parental control, more language brokering is predicted to be associated with negative adolescent psychological adjustment (i.e., more internalizing symptoms and lower self-esteem). For adolescents who perceive a lower sense of parental control, it is expected that more language brokering will be associated with neutral or positive adolescent psychological adjustment (i.e., fewer internalizing symptoms and higher self-esteem).
8. The extent to which adolescents perceive their parents as controlling is also expected to be associated with the quality of parent-child relationships. For adolescent language brokers who perceive a higher sense of parental control, more language brokering is predicted to be associated with poorer parent-child relationship quality (i.e., more intergenerational conflict and less intergenerational congruence). For adolescents who perceive a lower sense of parental control, more language brokering is expected to be associated with better parent-child relationship quality (i.e., less intergenerational conflict and more intergenerational congruence).

The hypotheses concerning the moderating role of adolescents' parent versus friend orientation on the relation between language brokering and psychological adjustment are as follows:

9. The less adolescents value the opinions of parents over friends, the more language brokering is predicted to be associated with negative adolescent psychological adjustment (i.e., more internalizing symptoms and lower self-esteem). For adolescents who strongly value the opinions of parents over

friends, more language brokering is expected to be associated with positive adolescent psychological adjustment (i.e., fewer internalizing symptoms and higher self-esteem).

10. Similarly, for adolescents who weakly value the opinions of parents over friends, more language brokering is predicted to be associated with poorer parent-child relationship quality (i.e., more intergenerational conflict and less intergenerational congruence). For adolescents who strongly value the opinions of parents over friends, more language brokering is expected to be associated with better parent-child relationship quality (i.e., less intergenerational conflict and more intergenerational congruence).

## Methods

### *Participants*

The data for this study were collected as part of a larger Intercultural Family Study directed by Dr. Costigan that examines acculturation, parent-child relationships, and adjustment among Chinese immigrant families. Data were collected from 183 immigrant Chinese families. Within these families, data were obtained from 182 adolescents, 180 mothers, and 166 fathers.

Adolescent children were between 11 and 18 years old ( $M = 14.93$  years,  $SD = 1.72$ ). There were approximately equal numbers of female (52.2%,  $n = 95$ ) and male (47.8%,  $n = 87$ ) adolescents, and approximately half came to Canada at or after the age of six (i.e., 54.4% first generation), and half were born in Canada or came to Canada before

the age of six (i.e., 45.6% second generation). The average age of arrival to Canada for foreign-born adolescents was 7.51 years ( $SD = 3.20$ ).

On average, fathers were 47.18 years old ( $SD = 5.72$ ), and mothers were 44.78 years old ( $SD = 4.70$ ). Parents lived in Canada between 2 and 36 years (Fathers  $M = 11.06$  years,  $SD = 7.07$ ; Mothers  $M = 10.61$  years,  $SD = 6.53$ ). Overall, there was a good range of educational levels completed by parents. When asked for the highest level of education completed, 60.6% of fathers and 46.7% of mothers reported having completed a university degree or graduate work; 20.0% of fathers and 32.8% of mothers completed college or vocational school; 10.9% of fathers and 13.9% of mothers completed high school; and only 8.5% of fathers and 6.7% of mothers did not complete high school. Most parents reported being employed (Fathers = 71.1%, Mothers = 60.8%). Most parents were married (98.8% fathers; 92.8% of mothers). For these parents, the average length of marriage was 19.02 years ( $SD = 4.14$ ). A small proportion of parents were single (5.6% mothers; 1.2% fathers). One mother in the sample reported having remarried. All parents emigrated voluntarily from mainland China (65.5%), from Taiwan (21.0%), or from Hong Kong (13.5%). Reports of reasons for immigration to Canada included: for their children's education (Fathers = 49.1.4%, Mothers = 55.8%); to pursue educational and occupational opportunities for themselves (Fathers = 21.7%, Mothers = 15.7%); because their spouse decided to immigrate (Fathers = 14.3%, Mothers = 15.7%); for family reunification (Fathers = 5.6%, Mothers = 7.6%); and for other reasons such as better quality of life (Fathers = 8.1%, Mothers = 5.2%).

*Procedures*

Four criteria were required for families to be eligible for the current 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 immigrate 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 2 years to allow for a sufficient amount of time to have passed so 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. 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.

The identification and recruitment of eligible families was achieved in two ways. The largest proportion of families was randomly recruited from greater Victoria and greater Vancouver, British Columbia (67.2%,  $n = 123$ ). 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 described information about the main goals and procedures of the Intercultural Family Study. Information on parents who expressed interest in participating was shared with the Intercultural Family Study research team. These families were then sent a letter

providing more detailed information about the project. Families were then contacted by a project research assistant to answer any additional questions and to arrange a time for fathers, mothers, and one adolescent from each family to complete their individual questionnaire booklets. A smaller, non-random portion of the sample was obtained by research assistant referrals (32.8%, n = 60). The majority of families were recruited from greater Vancouver (73.8%, n = 135) with the remainder from greater Victoria (26.2%, n = 48).

Two research assistants, with at least one having bilingual abilities, visited each family in their homes. Fathers, mothers and one adolescent child from each family independently completed 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. Approximately 90 minutes was required to complete the entire process with each family. Families were given \$50 as compensation for their time.

This Intercultural Family Study has been 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 among family members. Families were assigned a code so that no

identifying information was anywhere on the questionnaires. Forms with identifying information, including consent forms, were locked and stored separately.

### *Measures*

The measures used for this study represent a small subset of scales contained in the Intercultural Family Study questionnaire booklets completed by mothers, fathers and adolescents.

*Demographic information.* A background questionnaire gathered information about participant characteristics such as age, gender, highest level of education completed, employment status, reasons for immigration, and length of residence in Canada.

*Language brokering.* Adolescents reported on the frequency with which they translated or interpreted for their parents in seven areas that ranged in sensitivity (e.g., materials from school and medical/health information). 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*). The assessment of adolescents' current tasks as language brokers, as opposed to retrospective accounts, is consistent with more recent research methods in the study of child language brokering (e.g., Chao, 2006; Weisskirch, 2005; Weisskirch & Alva, 2002). In the current sample, the reliability of this scale across the seven items was very good ( $\alpha = .89$ ).

Of the seven areas in which language brokering frequency was assessed, four items were considered sensitive materials or materials normally reserved for adults (i.e., bills or financial information, medical or health information, immigration information, and parents' work materials) and three items were considered less sensitive, everyday

items (i.e., materials from school, household issues, and media items). To investigate whether relations between language brokering and psychological adjustment depended on the sensitivity of the materials translated, the proportion of sensitive materials that were language brokered was calculated. A material sensitivity quotient was derived by dividing children's total frequency score on the four sensitive materials by the total frequency score on all language brokered materials. This resulted in a material sensitivity quotient that could range from 0 to 1.0.

*Family obligation values.* Attitudes toward family obligations were surveyed using the average of three subscales that assessed current assistance to the family, respect for the family, and future support to the family as adults (Fuligni, Tseng, & Lam, 1999). The current assistance subscale, comprising 11 activities, measured expectations for how often children should spend time with the family and complete household tasks (e.g., "How much do you think you should run errands that the family needs done?" "How much do you think you should spend holidays with your family?"). These items were rated on a 5-point scale from 1 (*almost never*) to 5 (*almost always*). The respect for the family subscale measured beliefs about the importance of respecting and following the wishes of other family members. This subscale included seven items (e.g., "How important do you think it is to do well for the sake of your family?" "How important do you think it is to treat your parents with great respect?") that were rated on a 5-point scale from 1 (*not at all important*) to 5 (*extremely important*). The future support to family subscale measured beliefs about obligations to support and be near their families in the future. This subscale included six items (e.g., "How important do you think it is to help

our parents financially in the future?") rated on a 5-point scale from 1 (*not at all important*) to 5 (*extremely important*).

Both parents and adolescents completed this measure. The adolescents were asked how important it was to them to fulfill these areas of obligation to their families, and parents were asked how important it was that their children fulfilled these family obligations. Family members' reports were averaged together so that a collective representation of the family unit's values in family obligation could be examined as a moderator of the relation between language brokering and parent-child relationship variables.

Fuligni and colleagues (1999) found good internal consistency for adolescent students on all three subscales (range  $\alpha$ s = .81 to .87). They also found good reliability across Chinese, Filipino, Mexican, Central and South American, and European ethnic groups in all three subscales (range  $\alpha$ s = .69 to .87). Furthermore, research has demonstrated the validity of the family obligation scale as a core Chinese value by demonstrating that Chinese individuals score highly on family obligations compared to individuals from other ethnic groups, and that higher family obligation expectations are associated with psychological adjustment (e.g., Fuligni et al., 1999; 2002; Fuligni & Pedersen, 2002; Fuligni & Zhang, 2004). In the current sample, all family members' reports of family obligation values showed good internal consistency ( $\alpha$  = .80 for fathers,  $\alpha$  = .77 for mothers, and  $\alpha$  = .79 for adolescent children).

*Adolescent reported parental control.* Adolescents' sense of parental psychological control was assessed using Barber's (1996) Psychological Control Scale – Youth Self Report (PCS-YSR). This 8-item scale included measures of invalidating

feelings, constraining verbal expressions, personal attack, and love withdrawal (e.g., “My mom/dad is always trying to change how I feel or think about things;” “My mom/dad is less friendly with me when I have disappointed her/him”), rated on a 3-point scale from 1 (*not like her/him*) to 3 (*a lot like her/him*). Previous research has shown that perceptions of greater parental psychological control predicted children’s poorer emotional functioning in Chinese adolescents (e.g., Wang et al., 2007). Across parent-child dyads, Barber (1996) found good reliability with this scale (range  $\alpha$ s = .80 to .83). Similarly, the current sample showed good internal consistency with the PCS-YSR across both father-child ( $\alpha = .76$ ) and mother-child dyads ( $\alpha = .89$ ).

*Adolescent reported parent versus friend orientation.* The extent that adolescents value the opinions of their parents over those of their friends was examined using an 8-item scale created for the Intercultural Family Study (e.g., “When it comes to your values, who do you identify most closely with?” “Who are you most likely to confide in when you have a problem?” “Who do you feel understands you best?”). Adolescents were asked to rate the items on a 4-point scale: 1 (*mostly my friends*), 2 (*more my friends than my parents*), 3 (*more my parents than my friends*), and 4 (*mostly my parents*). Thus, higher scores indicate a stronger orientation towards parent opinion. Good reliability was found for this scale in the current sample ( $\alpha = .78$ ).

*Adolescent and parent self-esteem.* Mothers, fathers and adolescent children completed the Rosenberg Self-esteem Scale (Rosenberg, 1965) 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  $\alpha$ s = .85 to .88). Furthermore, subsequent studies using the Rosenberg Self-esteem Scale have demonstrated its validity with Chinese samples (e.g., Yuang, 2000). Similarly, the internal consistency of this scale across family members in the current sample was also good ( $\alpha = .86$  for fathers,  $\alpha = .86$  for mothers, and  $\alpha = .89$  for adolescents).

*Adolescent internalizing symptoms.* The Youth Self-Report (YSR) internalizing scale of the Child Behavioral Checklist (Achenbach, 1991) was also used to measure adolescent psychological adjustment. The YSR internalizing scale measured depressive-anxiety symptoms, somatic complaints, and withdrawal using 31 items (e.g., “I cry a lot;” “I feel overtired;” “I am shy”). Participants were asked to report 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 this scale in her study on language brokering among Chinese American, Mexican American and Korean American high-school students and found good internal consistency for her overall sample ( $\alpha = .90$ ). This scale also showed good internal consistency in the current sample ( $\alpha = .89$ ).

*Parent depressive symptoms.* The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) was used to assess parents’ depressive symptoms. The CES-D contains 20 items (e.g., “I was bothered by things that usually don’t bother me;” “I felt that I could not shake off the blues even with help from my family or friends”). Parents reported the frequency of symptoms over the past week on a 4-point scale ranging from 0 (*rarely or none of the time; less than 1 day*) to 3 (*most or all of the time*;

5-7 days). The CES-D scale has been demonstrated to have high internal consistency within the general population ( $\alpha = .85$ ; Radloff, 1977). Subsequent studies have demonstrated the validity and reliability of this scale with Chinese samples (Lin, 1989; Yen, Robins, & Lin, 2000). In the current sample, the internal reliability of this scale was good for both fathers ( $\alpha = .86$ ) and mothers ( $\alpha = .86$ ).

*Intergenerational congruence.* The Intergenerational Congruence in Immigrant Families – Child Scale (ICIF-CS) was used in this study as one of two measures of parent-child relationship quality (Ying, Lee, & Tsai, 2004). This 8-item scale assesses children's levels of understanding and satisfaction with the parent-child relationship. Two adaptations were made for the purposes of this study. First, the original ICIF-CS examined children's feelings about their relationship with mothers and fathers separately. However, because pilot data from the Intercultural Family Study revealed high correlations between adolescents' reports of their relationship with their mothers and their fathers ( $r = .93$ ), the questions were re-worded for the current study to ask about adolescents' relationship with their parents collectively (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"). This adaptation also made the questions on this scale similar to those on the measure of parent-child conflict, described below. 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  $\alpha$ s = .84 to .85), as was one-month test-retest reliability (range  $r$  = .88 to .90). Supporting the scale's validity, Ying and colleagues (2004) found that the scale correlated significantly with measures of overall satisfaction with mothers and fathers.

Parents completed a parallel measure of parent-child congruence. Specifically, the Intergenerational Congruence in Immigrant Families – Parent Scale (ICIF-PS) comprised the same 8 items re-worded to assess parents' perspectives on their relationship with their child (e.g., "My child and I agree on the amount of time we spend together"). The same 5-point scale was used to rate these items. As with the child scale, the psychometric properties of the ICIF-PS were examined with a Chinese-American sample and demonstrated both high internal reliability ( $\alpha$  = .90) and good validity (Ying & Tracy, 2004). Indeed, the scale correlated significantly with measures of overall parental satisfaction with Chinese children. In the current sample, the correlations among family members' reports of intergenerational congruence were significantly positively correlated (range  $r$  = .17 to .31). Thus, a measure of *average* intergenerational congruence was calculated by averaging fathers', mothers', and adolescents' responses. This average measure of intergenerational congruence showed good internal consistency in the current sample ( $\alpha$  = .87), and correlations between average intergenerational congruence and individual family members' reports of intergenerational congruence were significantly positively correlated (range  $r$  = .67 to .73).

*Intergenerational conflict.* Adolescents completed the Intergenerational Conflict Inventory (ICI) to assess parent-child relationship quality (Chung, 2001). This scale measures type and severity of parent-child conflict, from the adolescent's perspective. It

was developed specifically to study conflict between Asian American adolescents and/or young adults and their parents. Adolescents are asked how different topics are a source of conflict between them and their parents. The current study used 10 of the original 23 items/situations on the ICI that were thought to be most relevant to cultural issues and to adolescence (e.g., “lack of communication with your parents;” “your desire for greater independence;” “how much time you spend with your family”). Responses were rated on a 6-point scale that ranged from 1 (*no conflict*) to 6 (*a lot of conflict*). Reliability measures for the original ICI showed good internal consistency (range  $\alpha$ s = .84 to .88) and good 7-week test-retest reliability (range  $\alpha$ s = .81 to .87).

A parallel parent version of the ICI was created for the larger Intercultural Family Study. Specifically, the same 10 items were re-worded to assess parents’ perspectives on the extent of conflict in their relationship with their child (e.g., “lack of communication with your child;” “your child’s desire for greater independence”). The same 6-point scale was used to rate these items. As with intergenerational congruence, the correlations among family members’ reports of intergenerational conflict were significantly positively correlated (range  $r$  = .22 to .36). Thus, a measure of *average* intergenerational conflict was calculated by averaging adolescent, mother, and father responses. The internal consistency of this scale with the current sample was good ( $\alpha$  = .86). The correlations between average intergenerational conflict and individual family members’ reports of intergenerational conflict were significantly positively correlated (range  $r$  = .67 to .74).

## Results

### *Language Brokering: Preliminary Analyses*

Prior to conducting the main regression analyses, the main study construct, language brokering frequency, was examined. A description of its prevalence in this sample, as well as its characteristics based on materials translated or interpreted, and on background variables including adolescent variables (e.g., age and generational status) and parental variables (e.g., English proficiency and length of residence in Canada) are provided below. Table 1 presents the means, standard deviations and observed ranges for language brokering frequency in general and by item.

*Language brokering prevalence.* Adolescents' reports of language brokering frequency ranged from 0 (*never*) to 4 (*daily*). The average reported frequency in this study was relatively low ( $M = 1.06$ , *a few times a year*;  $SD = .83$ ). However, 91.6% of adolescent participants reported having ever language brokered for their parents. Given that the distribution of this continuous variable was substantially skewed, language brokering frequency was log transformed for the remaining analyses ( $M = 0.28$ ,  $SD = .17$ , Range = 0.00-0.70).

*Materials translated and/or interpreted.* The frequency of language brokering also ranged from *never* to *daily* across all everyday and sensitive material items. Predictably, adolescents more frequently reported language brokering for everyday items compared to sensitive items (see Table 1 for means and standard deviations),  $t(177) = -12.50$ ,  $p < .001$ .

Table 1

*Means, Standard Deviations and Observed Range for Language Brokering Frequency*

	Means (and SD)	Observed Range*
Overall		
Child Language Brokering Frequency	1.06 (.83)	0-4
By everyday materials translated/interpreted		
Materials from school	1.53 (1.18)	0-4
Household issues	1.17 (1.18)	0-4
Media	1.63 (1.24)	0-4
By sensitive materials translated/interpreted		
Bills or financial information	0.86 (1.01)	0-4
Medical/health information	1.02 (1.08)	0-4
Immigration information	0.48 (.80)	0-4
Parents' work materials	0.75 (.99)	0-4

\* Range of scale = 0-4

*Adolescent characteristics.* The relations between language brokering frequency and six adolescent background variables (i.e., age, grade level, gender, generational status, length of residence in Canada, and birth order) were examined. Language brokering was significantly positively correlated with adolescents' age ( $r(178) = 0.21, p < .01$ ) and grade level ( $r(176) = 0.21, p < .01$ ), indicating that the older and further educated adolescents were, the more frequently they language brokered. Although a t-test revealed that language brokering did not differ statistically by gender, there was a trend towards boys ( $M = 0.30, SD = .17$ ) language brokering more than girls ( $M = 0.26, SD =$

.16),  $t(176) = 1.69, p < .10$ . Surprisingly, language brokering was not related to adolescents' generational status,  $t(176) = -1.23, ns$ , or their length of residence in Canada,  $r(178) = 0.02, ns$ . Language brokering frequency was also not significantly related to adolescents' birth order,  $F(3,177) = 0.13, ns$ . Finally, the relation between language brokering frequency and the total number of people living in the home nine months or more per year was non-significant,  $r(178) = 0.08, ns$ .

*Parent characteristics.* To better understand the characteristics of the parents in our sample who may have received language brokering, parents' English proficiency, age, level of education, and length of residence in Canada were examined with respect to child language brokering frequency. As expected, mothers who reported speaking little or no English used more language brokering services than mothers who reported being able to speak English,  $t(170) = -2.77, p < .01$ . Language brokering was not statistically related to fathers' English proficiency,  $t(155) = -1.41, ns$ . Language brokering and mothers' age were not statistically related,  $r(172) = 0.07, ns$ , but language brokering was positively related to fathers' age,  $r(160) = 0.15, p < .05$ . Lower levels of education completed by mothers were associated with more child language brokering,  $r(176) = -0.19, p < .01$ . While a trend in the same direction was found with fathers' level of completed education, this was not statistically significant,  $r(160) = -0.15, p < .07$ . Surprisingly, parents' length of residence in Canada was not significantly related to language brokering frequency for fathers,  $r(161) = -0.01, ns$ , or for mothers,  $r(176) = -0.03, ns$ .

#### *Means and Standard Deviations for Moderator and Outcome Variables*

Table 2 presents the means, standard deviations and observed ranges for the remaining predictor variables (i.e., the proposed moderators). On average, adolescents

Table 2

*Means, Standard Deviations and Observed Range for Moderator Variables*

	Means (and SD)	Observed Range
Material Sensitivity <sup>a</sup>	0.35 (.24)	0.00-1.00
Adolescent Family Obligation Values <sup>b</sup>	3.44 (.55)	1.94-4.85
Mother Family Obligation Values <sup>b</sup>	3.22 (.41)	2.06-4.94
Father Family Obligation Values <sup>b</sup>	3.25 (.44)	2.07-4.94
Average Family Obligation Values <sup>b</sup>	3.31 (.31)	2.50-4.49
Maternal Psychological Control <sup>c</sup>	1.61 (.45)	1.00-3.00
Paternal Psychological Control <sup>c</sup>	1.52 (.42)	1.00-2.75
Parent vs. Friend Orientation <sup>d</sup>	2.35 (.57)	1.13-3.88

<sup>a</sup> Range of scale = 0-1<sup>b</sup> Range of scale = 1-5<sup>c</sup> Range of scale = 1-3<sup>d</sup> Range of scale = 1-4

tended to language broker a smaller proportion of sensitive materials compared to the total amount of language brokering they performed ( $M = 0.35$ ), but there was a good range of responses. With respect to family obligation values, adolescents, mothers and fathers all reported moderate levels with good range, although adolescents' reports of family obligation values were significantly higher than both mothers' and fathers' reports,  $F(150) = 10.17, p < .001$ . Adolescents also reported moderate levels of parental psychological control and their responses also showed a good range. The mean report of psychological control was significantly higher for mothers than for fathers,  $t(177) = -$

3.35,  $p < .001$ . In terms of parent versus friend orientation, adolescents' responses ranged widely. On average, adolescents were more oriented towards their friends than their parents, as indicated by a mean of 2.35, which is slightly below the mid-point of the scale.

Table 3 presents the means, standard deviations and observed ranges for the dependent variables. Not surprisingly, the community sample of adolescents reported, on average, a low rate of internalizing symptoms. While there was a good range of responses, the distribution was sufficiently positively skewed to warrant log transforming this variable for further analyses. In terms of positive adjustment, adolescents, on average, reported a fairly high level of self-esteem. Similar to adolescents' internalizing symptoms, the mean reports of mothers' and fathers' depressive symptoms were quite low, falling well below the clinical cut-off score of 16 on the CES-D (11.4% of fathers and 13.4% of mothers reported depressive symptoms above the clinical cut-off). The distribution of parental depressive symptoms also differed substantially from normality; therefore, parent depressive symptoms were log transformed for further analyses. Like their children, parents in this sample reported fairly high levels of self-esteem. Finally, reports of relationship quality, which were an average of mother, father and adolescent reports, demonstrated good range. As shown in Table 3, on average, families reported mild parent-child conflict and moderate levels of parent-child congruence.

#### *Control Variables*

Background variables that showed significant relations with language brokering or the dependent variables were included as control variables in the regression analyses.

Table 3

*Means, Standard Deviations and Observed Range for Dependent Variables*

	Means (and SD)		Observed Range	
	Original	Transformed	Original	Transformed
Adolescent Internalizing Symptoms <sup>a</sup>	12.64 (8.65)	0.98 (.36)	1.00-43.00	0.00-1.63
Adolescent Self-esteem <sup>b</sup>	3.10 (0.53)	-	1.60-4.00	-
Mother Depressive Symptoms <sup>c</sup>	9.51 (6.81)	0.93 (.31)	0.00-34.00	0.00-1.54
Father Depressive Symptoms <sup>c</sup>	8.92 (6.71)	0.89 (.33)	0.00-40.00	0.00-1.61
Mother Self-esteem <sup>b</sup>	3.18 (0.42)	-	2.30-4.00	-
Father Self-esteem <sup>b</sup>	3.15 (0.41)	-	2.30-4.00	-
Intergenerational Conflict <sup>d</sup>	2.18 (0.57)	-	1.10-4.47	-
Intergenerational Congruence <sup>d</sup>	3.78 (0.40)	-	2.61-4.79	-

<sup>a</sup>Original Range of scale = 0-62<sup>b</sup>Original Range of scale = 1-4<sup>c</sup>Original Range of scale = 0-60<sup>d</sup>Original Range of scale = 1-5

First, with respect to analyses predicting adolescent adjustment, associations between adolescent background variables and language brokering frequency (described above) suggested the need to control for adolescent age due to the positive correlation between adolescent age and language brokering. Results showed that adolescent age also correlated significantly with adolescent internalizing symptoms,  $r(180) = 0.18, p < .02$ , and with adolescent self-esteem,  $r(182) = -0.20, p < .01$ . Adolescent grade level also correlated significantly with language brokering frequency, but given that adolescent age and grade level highly correlate with each other,  $r(180) = 0.97, p < .001$ , only adolescent

age was included as a control variable. Neither adolescents' internalizing symptoms,  $t(178) = -0.93$ , *ns*, nor adolescents' self-esteem,  $t(180) = -0.69$ , *ns*, differed by generational status. Similarly, adolescents' reports of internalizing symptoms,  $t(178) = -1.46$ , *ns*, and self-esteem,  $t(180) = -0.23$ , *ns*, did not differ by gender. Taken together, among adolescent background variables, only adolescent age was included as a control variable. Adolescent age was entered in the first step of *all* hierarchical regression analyses predicting adolescent adjustment, parent adjustment, and parent-child relationship quality.

For parent adjustment variables, parent age, education, and length of residence in Canada were examined as possible controls. For mothers, maternal age did not correlate with language brokering frequency (described previously) and also did not correlate with either mothers' depressive symptoms,  $r(175) = -0.08$ , *ns*, or self-esteem,  $r(176) = -0.03$ , *ns*. In addition to mothers' education correlating significantly with child language brokering (described previously), this variable was significantly correlated with mothers' self-esteem,  $r(180) = 0.19$ ,  $p < .01$ , but not mothers' depressive symptoms,  $r(179) = -0.06$ , *ns*. Similar to mothers' education, mothers' length of residence in Canada correlated significantly with mothers' self-esteem,  $r(180) = -0.19$ ,  $p < .02$ , and not mothers' depressive symptoms,  $r(179) = 0.07$ , *ns*. However, since mothers' education and mothers' length of residence in Canada highly correlated with one another,  $r = -0.50$ ,  $p < .001$ , only maternal education was included as a control variable. Fathers' age correlated significantly with language brokering (described previously), but did not correlate significantly with fathers' depressive symptoms,  $r(165) = 0.00$ , *ns*, or self-esteem,  $r(165) = -0.08$ , *ns*. Given that adolescent age was already being controlled for in all hierarchical

analyses, and given the significant correlation between adolescents' age and fathers' age,  $r(164) = 0.32, p < .001$ , and the lack of relations between fathers' age and paternal adjustment variables, fathers' age was not included as an additional control variable predicting fathers' adjustment. Fathers' education did not correlate significantly with fathers' depressive symptoms,  $r(165) = -0.01, ns$ , or with fathers' self-esteem ( $r(165) = 0.07, ns$ ), however, the relation between fathers' education and child language brokering approached significance (discussed earlier). Finally, fathers' length of residence in Canada was not significantly related to fathers' depressive symptoms,  $r(166) = -0.08, ns$ , or to fathers' self-esteem,  $r(166) = -0.05, ns$ . Taken together, mothers' and fathers' education, in addition to adolescent age, were used as control variables for analyses predicting parents' adjustment.

For the relationship quality dependent variables, both adolescent and parent background variables were examined as potential control variables. Adolescent age did not correlate significantly with average intergenerational conflict,  $r(156) = 0.12, ns$ , or congruence,  $r(158) = -0.03, ns$ . Furthermore, neither intergenerational conflict,  $t(154) = 0.60, ns$ , nor intergenerational congruence,  $t(156) = -0.50, ns$ , differed by adolescent generational status. Following the same pattern, intergenerational conflict,  $t(154) = -0.54, ns$ , and intergenerational congruence,  $t(156) = -0.37, ns$ , did not differ by adolescent gender. Next, the relations between fathers' background variables (i.e., age, education, and length of residence in Canada) and average intergenerational conflict and congruence were examined. None of these relationships showed significant correlations: age and parent-child conflict,  $r(155) = 0.06, ns$ ; age and congruence,  $r(157) = -0.01, ns$ ; education and conflict,  $r(155) = -0.03, ns$ ; education and congruence,  $r(157) = 0.00, ns$ ; length of

residence and conflict,  $r(156) = 0.03$ , *ns*; length of residence and congruence,  $r(158) = 0.03$ , *ns*. Finally, none of mothers' background variables (i.e., age, education, and length of residence in Canada) were significantly related to average intergenerational conflict or congruence: age and parent-child conflict,  $r(152) = 0.13$ , *ns*; age and congruence,  $r(154) = 0.04$ , *ns*; education and conflict,  $r(156) = -0.13$ , *ns*; education and congruence,  $r(158) = 0.06$ , *ns*; length of residence and conflict,  $r(156) = 0.11$ , *ns*; length of residence and congruence,  $r(158) = -0.03$ , *ns*. Overall, since no background variables related significantly to the relationship quality dependent variables, only adolescent age was controlled for in these analyses.

#### *Inter-correlations Among Main Study Variables*

The zero-order correlations among all main study variables, as well as the three control variables (i.e., adolescent age, father education, and mother education), are presented in Table 4.

*Predictor variables.* The inter-correlations among language brokering frequency and the proposed moderators were examined. As expected, language brokering frequency was significantly positively correlated with the proportion of sensitive materials language brokered. There was also a trend indicating that higher frequency language brokering was associated with higher levels of perceived maternal psychological control. Given the low to moderate correlations between these two moderator variables, and given that the relations between language brokering and the remaining moderators were non-significant, the issue of multicollinearity was not a concern in subsequent multiple regression analyses.

Table 4

*Inter-correlations among All Study Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Adolescent Age	1	-.19**	.21**	.20**	-.16*	-.04	.13 <sup>a</sup>	-.30***	.18*	-.20*	-.07	-.07	.12	-.03
2. Parent Education	-.08	.62***	-.19**	-.06	-.02	-.03	-.02	.10	-.03	.20*	-.06	.19**	-.13	.06
3. Language Brokering	.21**	-.15 <sup>a</sup>	1	.44***	.04	.05	.13 <sup>a</sup>	-.05	.24**	-.12 <sup>a</sup>	.01	-.01	.30***	-.04
4. Material Sensitivity	.20**	.01	.44***	1	.08	.05	.03	-.02	-.01	-.12	.08	-.03	.13	.02
5. Adolescent Family Obligation	-.16*	-.12	.04	.08	1	.27***	-.09	.41***	-.07	.16*	-.06	.11	.19*	.38***
6. Parent Family Obligation	.021	-.31***	.02	-.06	.08	.31***	-.04	.02	-.02	.15*	.07	.06	.06	.07
7. Parental Psychological Control	.05	.00	.09	.02	-.04	.05	.68***	-.15*	.31***	-.31***	-.03	-.03	.34***	-.16*
8. Parent vs. Friend Orientation	-.30***	.03	-.05	-.02	.41***	.07	-.12 <sup>a</sup>	1	-.22**	.25***	-.01	.08	-.34***	.47***
9. Adolescent Internalizing Symptoms	.18*	.01	.24**	-.01	-.07	-.04	.32***	-.22**	1	-.49***	-.05	.01	.22**	-.19*
10. Adolescent Self-esteem	-.20**	.15*	-.12 <sup>a</sup>	-.12	.16*	.01	-.30***	.25***	-.49***	1	.05	.08	-.29***	.25***
11. Parent Depressive Symptoms	.03	-.01	.00	-.03	.04	-.05	.14 <sup>a</sup>	.01	.11	.00	.29***	-.51***	.14 <sup>a</sup>	-.22**
12. Parent Self-esteem	.00	.07	-.11	-.11	-.03	.09	-.07	-.01	.02	-.02	-.57***	.24**	-.21**	.23**
13. Intergenerational Conflict	.12	-.03	.30***	.13	.19*	.08	.44***	-.34***	.22*	-.29***	.18*	-.17*	1	-.45***
14. Intergenerational Congruence	-.03	.00	-.04	.02	.38***	.21**	-.27***	.47***	-.19*	.25***	-.27***	.23**	-.45***	1

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

<sup>a</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

*Dependent variables.* As expected, adolescent internalizing symptoms and adolescent feelings of self-esteem were significantly negatively correlated with one another, but did not reflect a perfect negative correlation, supporting the use of both distinct variables. Similarly, as shown in Table 4, moderate and significant negative correlations between mother depressive symptoms and mother self-esteem, between father depressive symptoms and father self-esteem, and between average parent-child conflict and average parent-child congruence were found.

*Univariate relations between language brokering and dependent variables.* The overall relations between language brokering frequency and the main dependent variables of psychological adjustment were examined (see Table 4). A higher frequency of language brokering was significantly correlated with higher levels of adolescent internalizing symptoms. There was also a trend towards a higher frequency of language brokering being associated with lower levels of adolescents' self-esteem. Relations between language brokering and parental psychological adjustment (mothers' and fathers' depressive symptoms and self-esteem) were non-significant. Language brokering was found to be significantly positively correlated with average reports of intergenerational conflict, but was unrelated to average intergenerational congruence. Overall, these findings are more consistent with the view in the literature that language brokering presents a risk for poorer adolescent psychological adjustment (e.g., Chao, 2006). These results further suggest that language brokering may negatively affect the parent-child relationship as well as the individual adjustment of adolescent brokers.

### *Regression Analyses*

A series of hierarchical regression analyses were used to evaluate the proposed moderating relations. In total, 28 regression analyses were performed: 8 for the moderator of material sensitivity (2 adolescent adjustment outcomes, 2 mother adjustment outcomes, 2 father adjustment outcomes, and 2 parent-child relationship quality outcomes), 8 for the moderator of family obligation values (similar to material sensitivity), 4 for the moderator of adolescents' perceptions of maternal control (2 adolescent adjustment outcomes and 2 relationship quality outcomes), 4 for the moderator of perceived paternal control, and 4 for the parent versus friend orientation moderator (similar to adolescents' perception of parental control).

In each regression analysis, adolescent age was entered as a control variable in the first step. For regression analyses predicting parent adjustment, parents' education was added in addition to adolescent age in the first step. In the second step, the main effects of language brokering and the relevant moderator variable were entered. In the third step, a cross product between language brokering and the moderator variable was entered to reflect their interaction. A statistically significant interaction term in step 3 was an indication of a moderating relation. Following recommendations by Aiken and West (1991) for evaluating interactions, all predictor variables were centered prior to calculating interaction terms and conducting the analyses. Any significant interactions were then probed according to procedures outlined by Aiken & West (1991) in order to understand the exact nature of the moderating relation.

*Language brokering main effects.* Consistent with univariate correlations, regression analyses predicting adolescent psychological adjustment demonstrated a

significant main effect for language brokering, even after controlling for adolescent age, whereby more frequent language brokering was associated with more adolescent internalizing symptoms. No main effect was found between language brokering frequency and adolescent self-esteem with the exception of the analysis of material sensitivity as a moderator, where more language brokering was significantly associated with less adolescent self-esteem when controlling for adolescent age. After controlling for adolescent age and mothers' education, there were no direct relations between language brokering and mothers' adjustment, which was consistent with univariate correlations. For fathers' adjustment, there was no main effect between language brokering and fathers' depressive symptoms. However, there was a trend for more language brokering being associated with less paternal self-esteem when controlling for adolescent age and fathers' education; this relation was not evident in the univariate correlation. Regression analyses predicting parent-child relationship quality found a significant relation between language brokering and intergenerational conflict, but no relation with intergenerational congruence. These results are consistent with univariate correlations.

*Material sensitivity as a moderator.* The results related to material sensitivity as a moderator are presented in Table 5. The first panel of Table 5 presents the prediction of adolescent adjustment. Overall, the regression equation explained 6% of the variance in adolescent internalizing symptoms and 10% of the variance in adolescent self-esteem. There was no main effect for material sensitivity. Contrary to predictions, the interaction between language brokering and material sensitivity as a predictor of adolescents' internalizing symptoms was not significant,  $t(160) = -0.24, ns$ . However, a significant

Table 5

*Hierarchical Regressions for Material Sensitivity as a Moderator*

Variable	Adolescent Internalizing Symptoms <i>n</i> = 161			Adolescent Self-esteem <i>n</i> = 163		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.03	.02	.13 <sup>a</sup>	-.07	.02	-.21 <sup>**</sup>
Step 2						
Language brokering	.52	.21	.24 <sup>**</sup>	-.64	.32	-.19 <sup>*</sup>
Material sensitivity	-.21	.15	-.15	.26	.23	.12
Step 3a						
Interaction	-.23	.95	-.02	3.73	1.45	.25 <sup>**</sup>
Variable	Mother Depressive Symptoms <i>n</i> = 160			Mother Self-esteem <i>n</i> = 161		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	-.02	.02	-.08	-.01	.02	-.04
Mother education	-.01	.02	-.04	.06	.03	.16 <sup>a</sup>
Step 2						
Language brokering	.14	.20	.07	-.20	.27	-.07
Material sensitivity	-.03	.15	-.02	.21	.19	.12
Step 3b						

Interaction	-1.58	.92	-.17 <sup>a</sup>	2.52	1.20	.21 <sup>*</sup>
	Father Depressive Symptoms <i>n</i> = 146			Father Self-esteem <i>n</i> = 146		
Variable	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.00	.02	.01	.01	.02	.05
Father education	.01	.02	.05	.01	.03	.03
Step 2						
Language brokering	.27	.22	.13	-.46	.27	-.18 <sup>a</sup>
Material sensitivity	-.20	.16	-.15	-.02	.19	-.01
Step 3c						
Interaction	-1.13	.98	-.12	.63	1.21	.06
	Intergenerational Conflict <i>n</i> = 141			Intergenerational Congruence <i>n</i> = 142		
Variable	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.05	.03	.14 <sup>a</sup>	-.01	.02	-.03
Step 2						
Language brokering	1.33	.37	.35 <sup>***</sup>	-.25	.28	-.10
Material sensitivity	-.19	.27	-.08	.18	.20	.11
Step 3d						
Interaction	-1.56	1.71	-.09	.94	1.26	.08

<sup>a</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

interaction was evident as a predictor of adolescents' feelings of self-esteem,  $t(162) = 2.57, p < .01$ . In order to explore the nature of this moderating effect, the interaction was probed and then the relation between language brokering and adolescent self-esteem was plotted at high, medium and low proportions of sensitive materials. Recall that it was hypothesized that language brokering would be associated with poorer adjustment only at high proportions of sensitive materials. The results revealed the opposite pattern. As shown in Figure 2, when the proportion of sensitive materials was high, language brokering frequency was not associated with adolescent self-esteem ( $B = 0.26, ns$ ). When medium or low proportions of sensitive materials were translated or interpreted, more frequent language brokering was associated with lower feelings of self-esteem ( $B = -0.64, p < .05$  at medium level;  $B = -1.54, p < .01$  at low level).

The results related to the role of material sensitivity as a moderator of the relation between language brokering and mothers' adjustment are presented in the second panel of Table 5. Overall, the regression equation explained 3% of the variance in mothers' depressive symptoms and 6% of the variance in mothers' self-esteem. No main effect for material sensitivity was found. The test for material sensitivity as a moderator of the relation between frequency of language brokering and mothers' depressive symptoms approached significance,  $t(159) = -1.714, p < .09$  (see Step 3b). Furthermore, the interaction between language brokering and material sensitivity for predicting mothers' feelings of self-esteem was significant,  $t(160) = 2.096, p < .04$ . Figures 3 and 4 present the relations between language brokering and mothers' depressive symptoms and between language brokering and mothers' self-esteem, respectively, at high, medium and low levels of material sensitivity. It was hypothesized when adolescents language

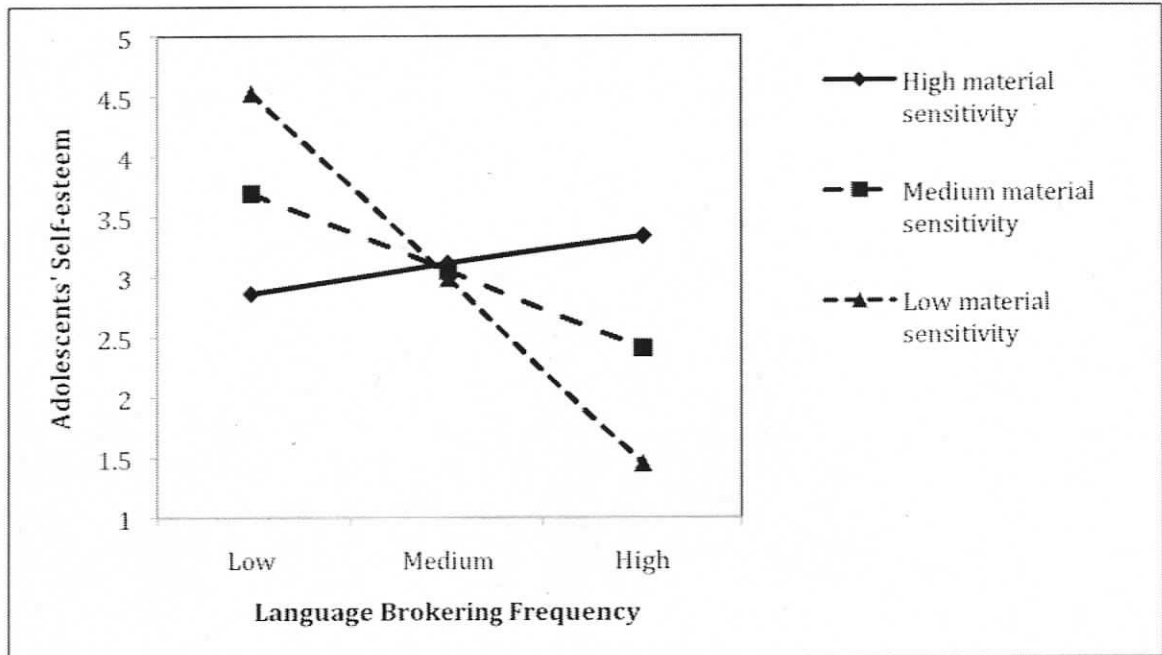


Figure 2. Material sensitivity moderates language brokering and adolescents' self-esteem.

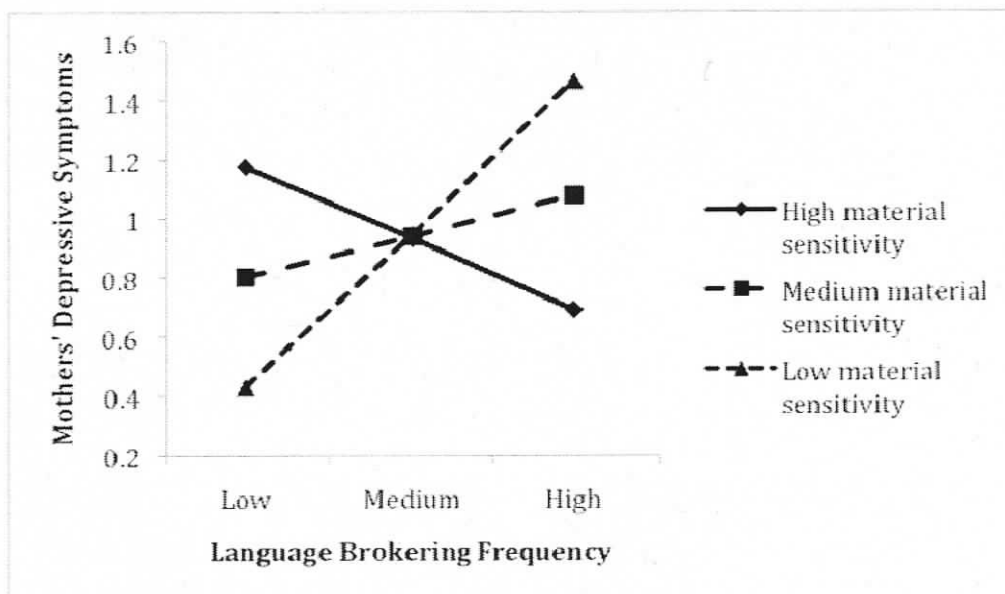


Figure 3. Material sensitivity moderates language brokering and mothers' depressive symptoms.

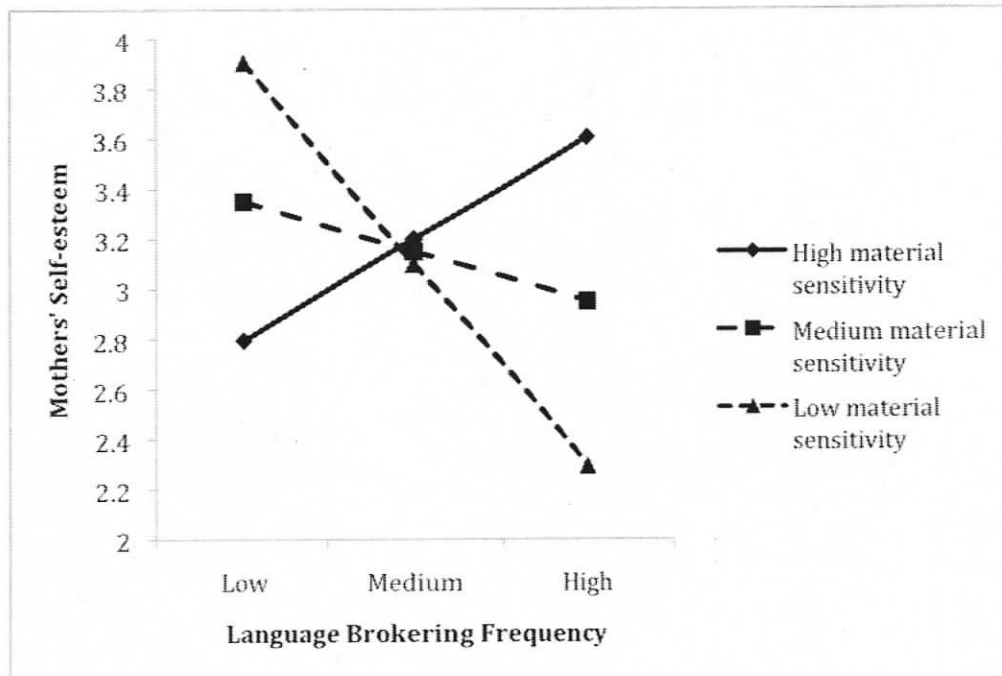


Figure 4. Material sensitivity moderates language brokering and mothers' self-esteem.

brokered a low proportion of sensitive materials, and thus primarily brokered everyday materials, more language brokering would be associated with feelings of dependence on adolescents and thus more depressive symptoms and lower self-esteem. When a higher proportion of sensitive materials was language brokered, no specific predictions were made because more language brokering could be associated with better or worse psychological adjustment depending on whether parents felt more justified or more vulnerable in receiving language brokering services when the material they were struggling with was more complex or important. For the prediction of maternal depressive symptoms, although none of the individual beta weights at any proportion of material sensitivity were statistically significant, the expected pattern for low levels of material sensitivity was found (see Figure 3). When the proportion of sensitive materials was high, language brokering frequency was negatively but non-significantly associated

with depressive symptoms ( $B = -0.24, ns$ ). At medium and low levels of material sensitivity, as predicted, language brokering frequency was positively but non-significantly associated with depressive symptoms ( $B = 0.14, ns$  at medium level;  $B = 0.52, ns$  at low level). The results for the prediction of maternal self-esteem were also consistent with the hypotheses. As shown in Figure 4, as expected, when low proportions of sensitive materials were translated or interpreted, there was a trend for more frequent language brokering to be associated with lower levels of self-esteem ( $B = -0.81, p < .09$ ). At medium and high levels of material sensitivity, language brokering frequency was not related to mothers' self-esteem ( $B = -0.20, ns$  at medium level;  $B = 0.41, ns$  at high level).

The third panel of Table 5 presents the prediction of fathers' adjustment. Overall, the regression equation explained 2% of the variance in fathers' depressive symptoms and 4% of the variance in fathers' self-esteem. There was no direct relation between material sensitivity and fathers' adjustment. Furthermore, in contrast to expectations and as shown in Step 3c of Table 5, the interaction between language brokering and material sensitivity did not predict fathers' depressive symptoms,  $t(145) = -1.16, ns$ , or fathers' feelings of self-esteem,  $t(145) = 0.52, ns$ .

Finally, the fourth and last panel of Table 5 presents the prediction of parent-child relationship quality. Overall, the regression equation explained 12% of the variance in family members' average report of intergenerational conflict and 1% of the variance in intergenerational congruence. Again, there was no main effect found for material sensitivity. In addition, in contrast to expectations, the tests for material sensitivity as a moderator of the relations between language brokering frequency and parent-child

relationship quality were non-significant (Step 3d of Table 5). That is, tests showed that material sensitivity did not moderate the relation between language brokering and average intergenerational conflict,  $t(140) = -0.92, ns$ , or the relation between language brokering and average intergenerational congruence,  $t(141) = 0.75, ns$ .

*Family obligation values as a moderator.* The first panel of Table 6 presents family obligation values as a moderator of the relations between language brokering frequency and adolescent psychological adjustment. Overall, the regression equation explained 11% of the variance in adolescent internalizing symptoms and 7% of the variance in adolescent self-esteem. No direct relation between adolescents' family obligation values and adolescents' internalizing symptoms was found, but there was a significant main effect for adolescent family obligation values as a predictor of adolescents' self-esteem. The more adolescents valued family obligations, the more self-esteem they reported. Furthermore, there was a significant interaction between family obligation values and language brokering for the prediction of adolescent internalizing symptoms,  $t(168) = 2.05, p < .04$ , but not adolescent self-esteem,  $t(170) = -0.72, ns$  (see Step 3a of Table 6). This significant interaction was probed in order to plot the relation between language brokering and adolescent internalizing symptoms at high, medium and low levels of adolescent family obligation values. It had been predicted that more frequent language brokering would be associated with poorer adjustment when family obligations were low, but not when they were high. In contrast to these predictions, there was no relation between language brokering and internalizing symptoms when adolescents reported relatively low levels of family obligation values ( $B = 0.09, ns$ ). Instead, more frequent language brokering was associated with more adolescent

Table 6

*Hierarchical Regressions for Family Obligation Values as a Moderator*

Variable	Adolescent Internalizing Symptoms <i>n</i> = 169			Adolescent Self-esteem <i>n</i> = 171		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.03	.02	.16*	-.05	.02	-.15 <sup>a</sup>
Step 2						
Language brokering	.39	.16	.18*	-.32	.24	-.10
Adolescent family obligation	-.05	.05	-.08	.15	.07	.15*
Step 3a						
Interaction	.53	.26	.15*	-.28	.40	-.05
Variable	Mother Depressive Symptoms <i>n</i> = 174			Mother Self-esteem <i>n</i> = 175		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	-.02	.02	-.09	-.01	.02	-.03
Mother education	-.02	.02	-.07	.06	.03	.17*
Step 2						
Language brokering	.01	.15	.00	.06	.19	.03
Mother family obligation	.05	.06	.07	.06	.08	.06
Step 3b						

	-0.26	.32	-0.06	-0.07	.42	-0.01
	Father Depressive Symptoms <i>n</i> = 156			Father Self-esteem <i>n</i> = 156		
Variable	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	-0.00	.02	-0.00	.02	.02	.07
Father education	-0.00	.02	-0.01	.03	.03	.08
Step 2						
Language brokering	.05	.17	.02	-.36	.20	-.16 <sup>a</sup>
Father family obligation	-.04	.07	-.06	.10	.08	.11
Step 3c						
Interaction	-.33	.43	-.06	.30	.50	.05
	Intergenerational Conflict <i>n</i> = 144			Intergenerational Congruence <i>n</i> = 145		
Variable	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.02	.03	.05	.01	.02	.03
Step 2						
Language brokering	.93	.28	.28 <sup>***</sup>	-.16	.19	-.07
Average family obligation	-.15	.15	-.08	.51	.10	.39 <sup>***</sup>
Step 3d						
Interaction	-.90	.82	-.09	.61	.57	.08

<sup>a</sup> $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

internalizing symptoms when family obligation values were medium ( $B = 0.39, p < .02$ ) or high ( $B = 0.68, p < .001$ ). These results are plotted in Figure 5.

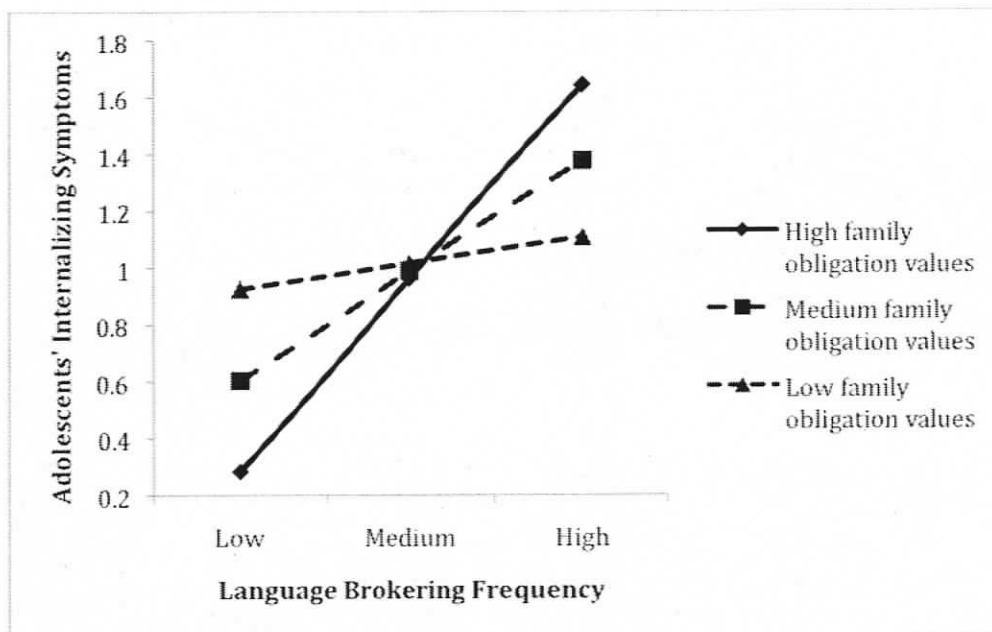


Figure 5. Adolescents' family obligation values moderate language brokering and adolescents' internalizing symptoms.

The second panel of Table 6 presents the prediction of mothers' adjustment. Overall, the regression equation explained 2% of the variance in mothers' depressive symptoms and 3% of the variance in mothers' self-esteem. There was no direct relation between mothers' family obligation values and maternal adjustment. In addition, in contrast to expectations, the interaction term did not predict mothers' depressive symptoms,  $t(173) = 0.82, ns$ , or mothers' self-esteem,  $t(174) = -0.17, ns$  (see Step 3b of Table 6).

The third panel of Table 6 presents the prediction of fathers' adjustment. Overall, the regression equation explained 1% of the variance in fathers' depressive symptoms and 5% of the variance in fathers' self-esteem. No main effects for fathers' family obligation values were evident. Similar to the findings for mothers' adjustment, and in contrast to hypotheses, the interaction between language brokering and fathers' family obligation values did not predict depressive symptoms,  $t(155) = -0.76, ns$ , or self-esteem,  $t(155) = 0.60, ns$ .

Finally, the fourth and last panel of Table 6 presents the prediction of parent-child relationship quality. Overall, the regression equation explained 10% of the variance in family members' average report of intergenerational conflict and 15% of the variance in intergenerational congruence. The families' average family obligation values did not directly predict average parent-child conflict, but it did predict average parent-child congruence (see Step 2, 4<sup>th</sup> panel of Table 6). Specifically, higher average family obligation values were associated with greater parent-child congruence. In contrast to predictions, the tests for average family obligation values as a moderator of the relations between language brokering frequency and parent-child relationship quality were non-significant (Step 3d of Table 6). That is, average family obligation values were not found to moderate either the relation between language brokering and average intergenerational conflict,  $t(143) = -1.09, ns$ , or the relation between language brokering and average intergenerational congruence,  $t(144) = 1.07, ns$ .

*Adolescent reported parental psychological control as a moderator.* Table 7 presents the results related to adolescent reported parental psychological control as a moderator. The first panel of Table 7 presents adolescent reported *maternal*

Table 7

*Hierarchical Regressions for Adolescent Reported Parental Psychological Control as a Moderator*

Variable	Adolescent Internalizing Symptoms <i>n</i> = 176			Adolescent Self-esteem <i>n</i> = 178		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.02	.02	.10	-.04	.02	-.13 <sup>a</sup>
Step 2						
Language brokering	.40	.16	.19 <sup>**</sup>	-.26	.23	-.08
Maternal psychological control	.22	.06	.27 <sup>***</sup>	-.33	.08	-.28 <sup>***</sup>
Step 3a						
Interaction	.28	.33	.06	-1.27	.48	-.19 <sup>**</sup>
Variable	Adolescent Internalizing Symptoms <i>n</i> = 172			Adolescent Self-esteem <i>n</i> = 174		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.03	.02	.13 <sup>a</sup>	-.06	.02	-.17 <sup>*</sup>
Step 2						
Language brokering	.40	.16	.19 <sup>**</sup>	-.21	.24	-.07
Paternal psychological control	.27	.06	.30 <sup>***</sup>	-.36	.09	-.29 <sup>***</sup>
Step 3b						

	.46	.39	.09	-.62	.56	-.08
	Intergenerational Conflict <i>n</i> = 153			Intergenerational Congruence <i>n</i> = 155		
Variable	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.01	.03	.03	.00	.02	-.00
Step 2						
Language brokering	.98	.26	.29 <sup>***</sup>	-.07	.20	-.03
Maternal psychological control	.38	.09	.30 <sup>***</sup>	-.15	.07	-.17 <sup>*</sup>
Step 3c						
Interaction	.83	.55	.11	-.20	.42	-.04
	Intergenerational Conflict <i>n</i> = 153			Intergenerational Congruence <i>n</i> = 155		
Variable	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.02	.02	.06	-.00	.02	-.02
Step 2						
Language brokering	.97	.25	.28 <sup>***</sup>	-.02	.19	-.01
Paternal psychological control	.61	.10	.43 <sup>***</sup>	-.28	.08	-.28 <sup>**</sup>
Step 3d						
Interaction	1.37	.60	.16 <sup>*</sup>	.06	.47	.01

<sup>a</sup>  $p < .10$ , <sup>\*</sup>  $p < .05$ , <sup>\*\*</sup>  $p < .01$ , <sup>\*\*\*</sup>  $p < .001$

psychological control as a predictor of adolescent adjustment. Overall, the regression equation explained 15% of the variance in adolescent internalizing symptoms and 16% of the variance in adolescent self-esteem. There was a significant effect for maternal psychological control predicting both adolescent internalizing symptoms and self-esteem (see Step 2, 1<sup>st</sup> panel of Table 7). The more controlling mothers were perceived to be, the more internalizing symptoms and the less self-esteem was reported. Contrary to predictions, the interaction between language brokering and maternal control as a predictor of adolescents' internalizing symptoms was not significant,  $t(175) = 0.86, ns$ . However, a significant interaction was evident for the prediction of adolescents' feelings of self-esteem,  $t(177) = -2.64, p < .01$  (see Step 3a of Table 7). This significant interaction was probed and the relation between language brokering and adolescent self-esteem was plotted at high, medium and low levels of perceived maternal psychological control (see Figure 6). It was predicted that for adolescents who perceived a high sense of parental control, more language brokering would be associated with poorer adjustment, and that this relation would be less strong when a lower sense of parental control was perceived. As expected, when high levels of maternal psychological control were perceived, more frequent language brokering was associated with poorer adolescent self-esteem ( $B = -0.82, p < .01$ ). Furthermore, there was no relation between language brokering and self-esteem when levels of adolescent reported maternal psychological control were medium ( $\beta = -0.26, ns$ ) or low ( $B = 0.32, ns$ ).

The second panel of Table 7 presents adolescent reported *fathers'* psychological control as a predictor of adolescent adjustment. Overall, the regression equation

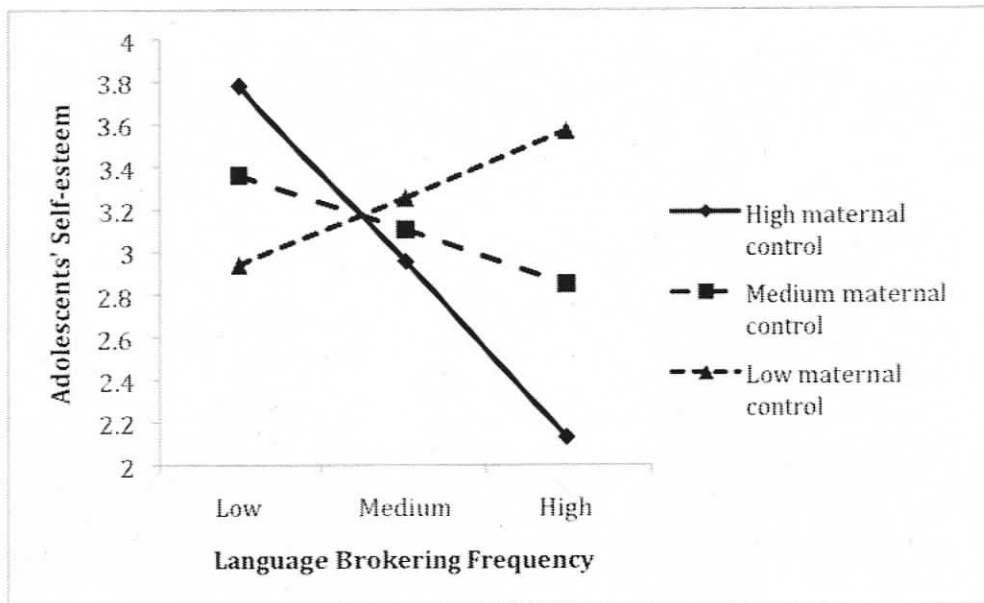


Figure 6. Adolescents' report of maternal psychological control moderates language brokering and adolescents' self-esteem.

explained 17% of the variance in adolescent internalizing symptoms and 13% of the variance in adolescent self-esteem. As with mothers' psychological control, there was a significant effect for fathers' psychological control predicting both adolescent internalizing symptoms and self-esteem (see Step 2, 2<sup>nd</sup> panel of Table 7). Showing a similar pattern, higher perceived paternal control was associated with more internalizing symptoms and less self-esteem. In contrast to expectations, the interaction between language brokering and adolescent perceived paternal psychological control did not predict adolescents' internalizing symptoms,  $t(171) = 1.20, ns.$  or adolescents' self-esteem,  $t(173) = -1.10, ns.$

The third panel of Table 7 presents *mothers'* psychological control as a predictor of parent-child relationship quality. Overall, the regression equation explained 20% of the variance in family members' average report of intergenerational conflict and 3% of the

variance in average intergenerational congruence. There was a significant effect for maternal psychological control predicting both parent-child conflict and parent-child congruence, where higher perceived maternal psychological control was associated with greater parent-child conflict and less parent-child congruence (see Step 2, 3<sup>rd</sup> panel of Table 7). Contrary to expectation, the tests for maternal psychological control as a moderator of the relations between language brokering and parent-child relationship quality were non-significant;  $t(152) = 1.51, ns$  for intergenerational conflict, and  $t(154) = -.047, ns$  for intergenerational congruence.

Finally, the fourth panel of Table 7 presents *fathers'* psychological control as a predictor of parent-child relationship quality. Overall, the regression equation explained 30% of the variance in average intergenerational conflict and 8% of the variance in average intergenerational congruence. There was a significant direct relation between fathers' control and the quality of the parent-child relationship (see Step 2 of 4<sup>th</sup> panel of Table 7). That is, a higher sense of paternal psychological control was associated with greater parent-child conflict and less parent-child congruence. Furthermore, a significant interaction between language brokering and fathers' psychological control was found for the prediction of intergenerational conflict,  $t(152) = 2.30, p < .02$ , but not intergenerational congruence,  $t(154) = 0.13, ns$  (see Step 3d of Table 7). The significant interaction was probed and then the relation between language brokering and average intergenerational conflict was plotted at high, medium and low levels of perceived paternal psychological control (see Figure 7). Recall that it was predicted that for adolescent language brokers who perceived a high sense of parental control, more language brokering would be associated with poorer parent-child relationship quality, and

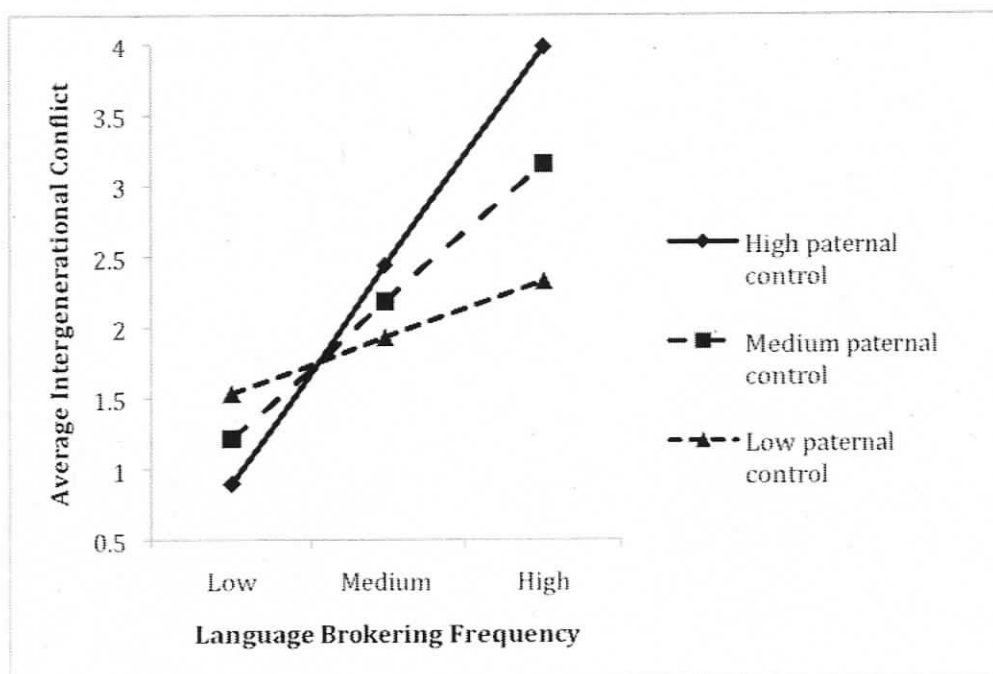


Figure 7. Adolescents' report of paternal psychological control moderates language brokering and average intergenerational conflict.

when perceived parental control was low, more language brokering was expected to be associated with better parent-child relationship quality. At low levels of perceived fathers' psychological control, language brokering frequency was not significantly associated with average intergenerational conflict ( $B = 0.40, ns$ ). As expected, however, when high levels of fathers' psychological control were perceived, more frequent language brokering was associated with greater intergenerational conflict,  $B = 1.54, p < .001$ . Similarly, a significant and positive association between language brokering and parent-child conflict was also found at medium levels of perceived paternal control,  $B = 0.97, p < .001$ .

*Parent versus friend orientation as a moderator.* Table 8 presents the results related to adolescents' orientation towards their parents versus their friends. The first

Table 8

*Hierarchical Regressions for Parent versus Friend Orientation as a Moderator*

Variable	Adolescent Internalizing Symptoms <i>n</i> = 174			Adolescent Self-esteem <i>n</i> = 176		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	.01	.02	.07	-.03	.03	-.11
Step 2						
Language brokering	.45	.16	.21**	-.30	.24	-.09
Parent vs. Friend Orientation	-.13	.05	-.20**	.20	.07	.22**
Step 3a						
Interaction	.46	.26	.13 <sup>a</sup>	-.06	.38	-.01
Variable	Intergenerational Conflict <i>n</i> = 151			Intergenerational Congruence <i>n</i> = 153		
	B	SE B	$\beta$	B	SE B	$\beta$
Step 1						
Adolescent age	-.01	.03	-.02	.03	.02	.11
Step 2						
Language brokering	1.01	.26	.29***	-.12	.17	-.05
Parent vs. Friend Orientation	-.33	.08	-.33***	.34	.05	.50***
Step 3b						
Interaction	-.49	.41	-.09	.34	.27	.09

<sup>a</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

panel presents parent versus friend orientation as a predictor of adolescent adjustment. Overall, the regression equation explained 12% of the variance in adolescent internalizing symptoms, and 9% of the variance in adolescent self-esteem. There was a significant main effect for parent versus friend orientation predicting both adolescent internalizing symptoms and self-esteem (see Step 2, 1<sup>st</sup> panel of Table 8). The more adolescents valued the opinions of parents over friends, the fewer internalizing symptoms and the more self-esteem they reported. In contrast to expectations, the interaction between language brokering frequency and parent versus friend orientation as a predictor of adolescents' self-esteem was not significant,  $t(175) = -0.15, ns$ . However, the interaction as a predictor of adolescents' internalizing symptoms approached significance,  $t(173) = 1.78, p < .08$  (see Step 3a of Table 8). Figure 8 presents the relations between language brokering and adolescents' internalizing symptoms at high, medium and low adolescent-reported parent versus friend orientations. For adolescents who strongly valued the opinions of parents over friends, more language brokering was expected to be associated with positive adolescent adjustment. Similarly, it was hypothesized that for adolescents who valued friend opinion over parent opinion, more language brokering would be associated with poorer child adjustment. In contrast to these predictions, probing this interaction revealed the opposite pattern. Specifically, when adolescents' orientation towards parents versus friends was medium and high, more frequent language brokering was associated with more, not fewer, internalizing symptoms:  $B = 0.45, p < .005$  at medium parent orientation, and  $B = 0.71, p < .001$  at high parent orientation. When orientation to parents versus friends was low, language brokering frequency was not associated with internalizing symptoms ( $B = 0.20, ns$ ).

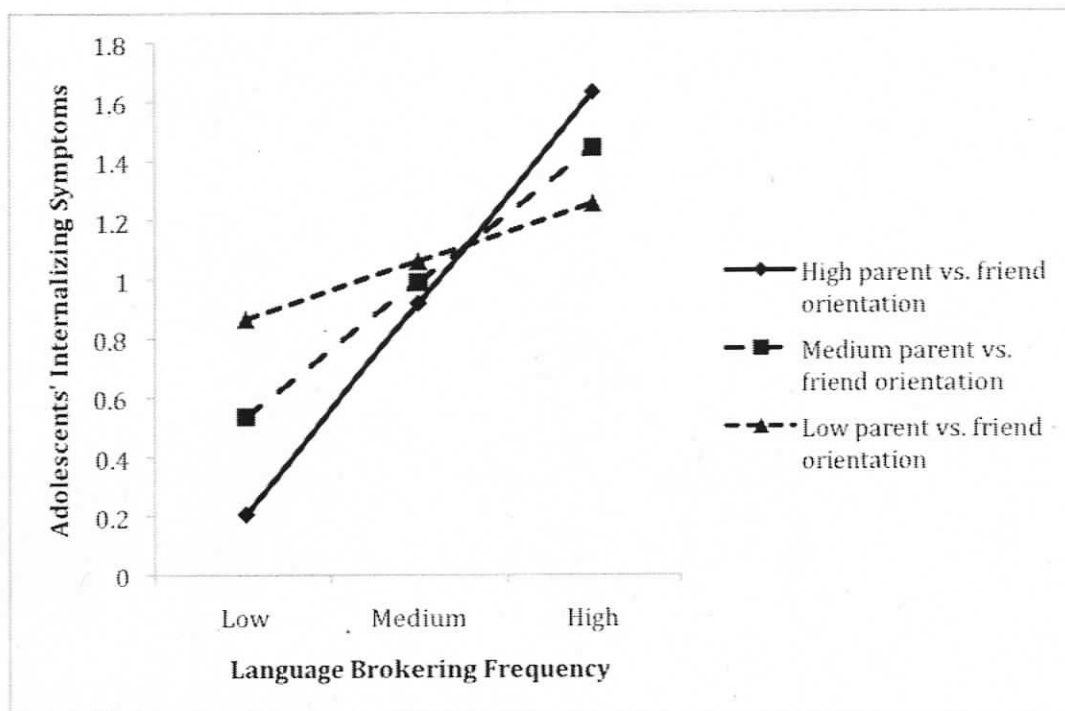


Figure 8. Adolescents' parent versus friend orientation moderates language brokering and adolescents' internalizing symptoms.

The second and final panel of Table 8 presents the prediction of parent-child relationship quality. Overall, the regression equation explained 20% of the variance in average family intergenerational conflict and 24% of the variance in average intergenerational congruence. Significant direct relations between parent versus friend orientation and both intergenerational conflict and congruence were found (see Step 2, 2<sup>nd</sup> panel of Table 8). The more adolescents valued the opinions of parents over friends, the less parent-child conflict, and the more parent-child congruence, were reported by the family. In contrast to predictions, the tests for parent versus friend orientation as a moderator of the relations between language brokering frequency and parent-child relationship quality were non-significant (Step 3b of Table 8). That is, adolescents'

valuation of the opinions of parents over friends was not found to moderate either the relation between language brokering and average intergenerational conflict,  $t(150) = -1.19$ , *ns*, or the relation between language brokering and average intergenerational congruence,  $t(152) = 1.24$ , *ns*.

### Discussion

This study examined the nature and consequences of language brokering among a sample of immigrant Chinese families residing in Canada. The results shed light on the prevalence of language brokering, as well as on characteristics of the adolescent language broker and their parents. Furthermore, the results from this study highlight direct relations between language brokering frequency and psychological adjustment, and how the sensitivity of interpreted and translated materials may moderate these relations. Finally, the results address whether the relations between language brokering and psychological adjustment vary depending on the emotional context in which language brokering takes place, as determined by family obligation values, perceived parental psychological control, and adolescents' orientation towards their parents' opinions over their friends. Thus, by moving beyond the examination of direct relations, results from this study highlight the nuances of language brokering and adjustment. Furthermore, results from this study contribute to the literature by examining the adjustment of parents as well as the quality of parent-child relationships in the context of child language brokering, in addition to investigating adolescent adjustment.

*Language Brokering Basics: A Discussion of the Preliminary Findings*

*The incidence, prevalence, and extent of language brokering.* Across the reviewed literature, past studies on language brokering have consistently determined it to be a common phenomenon among children of immigrants (McQuillan & Tse, 1995; Morales & Hanson, 2005; Tse, 1995; Tse, 1996; Tse & McQuillan, 1996; Werisskirch, 2005). Consistent with other literature, 91.6% of the participants in this study reported language brokering at least once for their parents. Examining the average reported *frequency* of language brokering, however, suggests that it may not be as common in the current sample as is suggested in most literature. On average, adolescent children reported language brokering only a few times a year. This finding, consistent with Chao's (2006) research that also reported relatively low language brokering frequency in Chinese immigrant families, highlights the care that should be taken when measuring language brokering and when drawing conclusions on aspects such as its prevalence. Across seven items that included everyday as well as more sensitive materials, a wide language brokering frequency range was observed. Thus, it appears that, as stated in the reviewed literature, language brokering can and does occur unevenly across families and across a variety of materials including school and home materials/issues, as well as financial, medical and immigration-related information.

*Adolescent characteristics.* Not surprisingly, older and more educated adolescents language brokered for their parents more often than younger and less educated adolescents, suggesting that maturity or competency may be characteristics of the adolescent language broker. The lack of gender differences found in language brokering frequency is consistent with Weisskirch and Alva's (2002) findings. However, it should

be noted that the current study revealed a trend towards higher language brokering frequencies in boys compared to girls. In previous studies where gender differences in language brokering have been found, females language brokered more than males (Buriel et al., 1998; Chao, 2006).

Surprisingly, no differences were observed between first generation and second generation adolescents' reports of language brokering frequency. Furthermore, language brokering was not related to adolescents' length of residence in Canada. Previous research in the United States has found that first-generation youth brokered more frequently than second-generation youth (e.g., Chao, 2006). Consistently, it was expected that stronger ties to Chinese culture, or greater skill in the Chinese language, would result in higher frequency language brokering among first-generation adolescents. The lack of differences based on generational status and length of residence in Canada may perhaps be a by-product of multiculturalism in Canada. For example, perhaps this study's sample of adolescent children does not differ significantly by generational status or length of Canadian residence in their ties to their ethnic culture and language. Indeed, in an Intercultural Family Study paper using data from a different sample, Su and Costigan (in press) found no differences in Chinese Canadian children's reports of ethnic identity based on their length of residence in Canada. Furthermore, in Chow's (2004) study, two-thirds of 515 Chinese Canadian adolescents attending Chinese language schools were second-generation youth. Therefore, although first-generation children may typically have greater knowledge of their ethnic culture and language from greater experience with their heritage country, second generation youth may take advantage of opportunities within Canada to participate in classes or organizations that promote participation and

knowledge of their ethnic culture and language, thus removing significant generational differences. In addition, competence and success in language brokering involves knowledge of both host and ethnic cultures and languages. Thus, in the case of language brokering in Canada, second-generation youths' greater knowledge of Canadian culture and the English language may balance out any lack of experience with their ethnic culture.

Being a first-born child has also been associated with greater language brokering frequency (Morales & Hanson, 2005), but adolescents' birth order was not significantly related to language brokering in the current study. It is possible that adolescents' older age and higher education, as opposed to their birth order, may more accurately characterize children's qualifications in language brokering. In addition, it is noteworthy that a high proportion of this study's sample comprised only children (37%) as well as oldest children (33%). Thus, perhaps the lack of relations between language brokering and adolescents' birth order can be attributed to lower variability in birth order compared to other samples. Finally, language brokering frequency was not associated with the total number of people living in the home. Although previous research has found larger family size to be related to greater language brokering (Weisskirch & Alva, 2002), this was found in a sample of Latino children where the average household consisted of eight family members. In contrast, the average household in the current study consisted of four family members. Thus, it is possible that the lack of relations between language brokering and household size be attributed to lower variability in the number of people living in the home compared to other samples.

*Parent characteristics.* Consistent with the logical expectation that parents who use language brokering services more frequently would have a greater need for language brokering assistance, previous research found that parents with lower proficiency in English and less education were more likely to use their children's language brokering services (e.g., Buriel et al., 1998; Chao, 2006). In the current study, this was clearly evident for mothers, and although non-significant, the same trends were observed for fathers. Additionally, older age was found to be associated with greater use of language brokering by fathers, but not by mothers.

*Language brokering main effects.* Preliminary analyses were conducted to examine direct relations between language brokering frequency and the psychological adjustment of Chinese adolescents and their immigrant parents, as well as the quality of the parent-child relationship. Previous research limited to examining the adjustment of child language brokers has resulted in mixed findings. There have been arguments that language brokering is beneficial, and other arguments that language brokering is harmful to the affective development of child language brokers. Results from univariate analyses with the current sample found that the more adolescents language brokered, the more internalizing symptoms they experienced. Furthermore, a similar trend was observed for adolescents' self-esteem; more language brokering was associated with less adolescent self-esteem. These findings held even after controlling for adolescents' age. Although no univariate relations were found between language brokering and parents' psychological adjustment, a trend was found associating a higher frequency of language brokering with lower self-esteem in fathers, when controlling for adolescents' age and fathers' education. At the relationship level, more language brokering was associated with more

parent-child conflict. Therefore, at least with a sample of Chinese immigrant families in western Canada, the findings of this study support the literature that suggests negative consequences of language brokering (e.g., Chao, 2006; Hall & Sham, 1998; Umana-Taylor, 2003; Weisskirch & Alva, 2002). These findings also offer a first glimpse into the direct relations between language brokering and adjustment that extend beyond the adjustment of the adolescent language broker. That is, all relations found suggest that language brokering may signal problems in individual and family well-being.

A common argument in the literature that may explain this pattern of risk points to the implications of reversal of roles within the family, whereby, through language brokering, authority normally reserved for parents is passed on to children instead (Chao, 2006; Morales & Hanson, 2005; Umana-Taylor, 2003). The risk associated with such a role reversal may be particularly prominent in this study's sample given how important hierarchical relationships are in traditional Chinese culture. Indeed, transitioning from Chinese to Canadian culture requires a dramatic cultural shift that creates a need for language brokering. Child language brokers may have difficulty normalizing the act of language brokering for their parents, and tensions between parents and children may arise.

The focus on *adolescent* language brokers may further exacerbate the risk of role reversals inherent in language brokering. Adolescence is a developmental period that, particularly in North American cultures, is marked by autonomy development (Beyers, Goossens, Vansant, & Moors, 2003; Goossens, 2006). As adolescents develop independence and navigate into Canadian culture, discrepancies between immigrant parents and children likely exist beyond their levels of English proficiency. It is possible

that other North American values, including the valuation of autonomy, may influence adolescent language brokers to seek activities and opportunities that are separate from their parents. Thus, adolescents may resent language brokering tasks more than younger children, or the negative relations associated with language brokering may be more apparent among this sample of adolescents. Adolescents typically also have desires to fit in with their peers. Therefore it is possible that having to language broker more frequently may seem particularly burdensome to adolescents, if their language brokering duties set them apart from their Canadian peers.

If cultural background does exacerbate risks associated with role reversals inherent in language brokering, then the finding of negative psychological consequences of language brokering may differ across ethnic groups. Indeed, there exists literature, much of which has examined Latino American language brokers, where language brokering was not associated with poor child adjustment and at times has been associated with positive adjustment including feelings of self-efficacy and greater self-esteem (e.g., Buriel et al., 1998; McQuillan & Tse, 1995; Tse, 1996). Supporting the expectation of cultural differences in the effects of language brokering, Chao (2006) found relations between more language brokering and more internalizing symptoms among Chinese American and Korean American youth, but not among Mexican American youth. Although cultural similarities exist between traditional Hispanic and Asian families, traditional Asian families, more than Hispanic families, may place greater importance on hierarchical relationships and on the humility and obedience of children. Traditional Hispanic families, in contrast, may place greater importance on family member reciprocity and solidarity (Marin & Gamba, 2003). With respect to language brokering,

perhaps Chinese families regard language brokering less positively as an act performed out of obligation, whereas perhaps Hispanic families associate language brokering more neutrally or positively.

Providing a different explanation for cultural differences than cultural values, Chao (2006) speculated that Mexican American youth, compared to Chinese American youth, view language brokering as more normative. Consistently, in a recent examination of Latino children's development through adolescence, no evidence was found to support the role reversal model and these United States immigrants tended to view language brokering as a normative way to help the family (Dorner, Orellana & Jimenez, 2008). Perhaps systematic cultural differences exist, such as differences between Latino and Asian immigrant parents' English language abilities upon arrival to North America. A greater need for language brokering services or a greater willingness to ask their children for language brokering assistance may normalize the act of language brokering among Latino immigrant families. In contrast, Asian parents, perhaps out of fear of losing authority, may be less likely to ask for assistance, resulting in language brokering being less normative, and potentially more problematic. Such explanations without cross-cultural data, however, are clearly speculative.

It is also important not to generalize variability in findings solely to the cultural background itself. For example, negative psychological correlates of language brokering have been found in Latino samples as well (e.g., Weisskirch and Alva, 2002). The sample in the current study represents a group of Chinese families with an average of four family members per household, residing in a host-country that promotes multiculturalism. In contrast, the sample in Weisskirch and Alva's (2002) study consisted of Latino children

whose families immigrated from Mexico, with an average family size of eight members, residing in the United States. Yet in Weisskirch and Alva's (2002) study, similar to the findings of the current study, more language brokering was associated with greater psychosocial stress. Therefore, additional as-yet unidentified factors must play a role.

Finally, studies of language brokering also differ in the ways in which language brokering and adjustment are assessed, which may lead to different conclusions. For example, studies differ in whether they adopt qualitative or quantitative methods, and in whether they adopt current or retrospective reports of language brokering. These methodological issues may contribute to the diversity of findings.

#### *Moderating Relations between Language Brokering and Adolescent Adjustment*

Adolescents' family obligation values, their perception of parental psychological control, and their orientation towards their parents over their friends were examined as possible moderators of relations between language brokering and adolescents' psychological adjustment. These constructs were thought to affect the emotional context in which language brokering was experienced. Overall, the results from the current study provide mixed support that aspects of the emotional context of language brokering relate to adolescents' psychological adjustment.

According to the results of the hierarchical regression analyses, the strength of adolescents' family obligation values significantly influenced the relation between adolescents' language brokering and their internalizing symptoms, but not their self-esteem. However, these results were not in the direction that was hypothesized. It was expected that for adolescents with a strong sense of family obligation, language brokering would be an effective outlet to fulfill their sense of duty to their parents, resulting in

positive relations between language brokering and adjustment at high levels of family obligation values, and negative relations between language brokering and adjustment at low levels of family obligation values. Instead, when adolescents reported high and even medium levels of family obligation values, more language brokering was associated with more, not fewer, internalizing symptoms. The relation between language brokering frequency and internalizing symptoms was not significant when adolescents' family obligation values were low.

The unexpected relation between language brokering frequency and poorer adjustment among adolescents with high family obligation values suggests that adolescent children who feel a sense of duty to help and support family members (as evidenced by high family obligation values), may place great importance on their role as language brokers which may add a sense of pressure on the self to either successfully aid their parents or just not harm them through ineffective or inaccurate translation or interpretation. As a result, the more frequently they are asked to language broker to assist their parents, the more they may experience internalizing symptoms, including a sense of being overwhelmed, anxious, or even sad. In contrast, when adolescents report low family obligation values, perhaps the absence of such added pressure relieves any association between language brokering and adjustment, resulting in no significant relations between language brokering frequency and adolescents' psychological adjustment.

A similar pattern of findings emerged examining parent versus friend orientation as a moderator of the relations between language brokering frequency and adolescents' psychological adjustment. It was expected that for adolescents' who strongly emphasize

the importance of their parents' opinions over their friends, the respect for parents' opinions would set a positive emotional context for language brokering, and thus would be associated with fewer internalizing symptoms. Instead, the reverse was found. That is, contrary to expectations, more language brokering was associated with more internalizing symptoms when adolescents reported medium and high orientations towards their parents over their friends. It appears that, as with high family obligation values, placing a greater importance on the opinion of parents compared to friends may actually create situations of risk for poorer adolescent psychological adjustment. It may be that closeness to parents and a valuing of their opinion adds additional pressure on adolescent language brokers because they care what their parents think of them and their performance. Thus, as adolescents language broker more frequently for their parents, there are more instances in which they may potentially fail or disappoint their parents, adding increased pressure and stress which can lead to more internalizing symptoms.

Other research supports the idea that close relationships between the language broker and the recipient may intensify the stress of language brokering. Weisskirch and Alva (2002) examined language brokering for people and circumstances outside of the home as well as for parents and found that language brokers reported feeling the least comfortable language brokering for their parents and other close relatives. They observed that the closer the relationship between the language broker and the person receiving this assistance, the more distressed the child felt acting as a language broker.

In the same study, the children also tended to disagree with statements regarding the helpfulness of their language brokering activities. In fact, children tended to report negative associations with language brokering (Weisskirch & Alva, 2002). For example,

children tended to agree with statements that language brokering hindered their parents' learning of the English language and knowledge of American culture, and they tended to disagree with statements that language brokering helped them feel more grown up, or helped them to learn other languages or cultures. Rather than seeing positive aspects of language brokering, perhaps these children perceive dependence and vulnerabilities in their parents who require language brokering assistance. This may be particularly true for adolescents who have strong family obligation values and/or who place great emphasis on the opinion of their parents because beliefs and comfort in a hierarchical family system may be challenged. That is, the more they must language broker, the clearer the indication of their parents' dependence and vulnerabilities, and the more vulnerable adolescents feel regarding the stability and strength of their family unit as a whole.

Adolescents' sense of parental psychological control was also examined as a possible moderator of the relations between language brokering frequency and adolescents' psychological adjustment. As expected, there was evidence supporting the hypothesis that perceiving one's parent as highly controlling would set a negative and demanding stage for the act of language brokering, whereby more language brokering was associated with adolescents' poorer psychological adjustment. Interestingly, only adolescents' sense of *maternal* psychological control was found to moderate the relation between language brokering frequency and adolescents' adjustment, and this was only true for levels of adolescents' self-esteem, and not for their levels of internalizing symptoms. As predicted, when adolescents perceived their mothers to be highly psychologically controlling, more language brokering was indeed associated with poorer adolescent self-esteem, whereas no relation was evident when adolescents perceived low

maternal psychological control. Therefore, in addition to medium and high levels of family obligation values and of parent-versus-friend orientation creating a pressure-filled context in which to language broker, it appears that high levels of maternal psychological control may also create a sense of pressure among adolescents who frequently language broker, thus creating risk for poorer psychological adjustment.

Taken together, the results suggest that high levels of family obligation values, parent-versus-friend orientation, and adolescents' perceived maternal control may set a stressful context in which to language broker. Interestingly, with strong family obligation values and with a strong orientation towards the opinion of parents over friends, this pressure appears to be self-imposed. In contrast, the pressure of having a mother who is perceived as highly controlling may be more characteristic of an external pressure. Thus, it appears that in the context of self-imposed or internal pressure, more language brokering may be associated with increased distress (such as more internalizing symptoms), whereas in the context of perceived external pressures, more language brokering is associated with a loss of well-being (such as less self-esteem). This pattern of findings needs to be replicated in future studies before firm conclusions can be drawn.

The finding that mothers' but not fathers' psychological control predicted relations between language brokering frequency and adolescents' psychological adjustment suggests that perhaps mothers make a greater impression on children's evaluations of their own worth. Traditionally, Chinese mothers take on the role of children's primary caretaker (Chao & Tseng, 2002) and as a result they may form closer relationships with their children than fathers, such that the pressure they impose has a greater impact on children's psychological well-being. Fathers, on the other hand,

traditionally take on the role of primary decision-maker and disciplinarian in the family (Chao & Tseng, 2002). With fathers in charge of ensuring proper family conduct, perhaps there are normative expectations for fathers to exhibit more controlling behaviour such that adolescents' perceptions of high psychological control in fathers are consistent with the disciplinarian role typical of traditional Chinese fathers, and thus have less impact on adolescents' psychological adjustment.

The results examining material sensitivity as a possible moderator suggest that *too little* pressure can also be a condition in which language frequency is associated with poorer adolescent adjustment. In past literature, the sensitivity of the materials translated by child language brokers has often been suggested as key in influencing its impact on psychological adjustment (Morales & Hanson, 2005; Umana-Taylor, 2003). Material sensitivity was found to moderate the relation between language brokering and adolescents' feelings of self-esteem. Contrary to expectations, language brokering was not associated with poorer adjustment when high proportions of sensitive materials were translated or interpreted; no relation was found between language brokering frequency and adolescents' self-esteem at high levels of material sensitivity. Instead, more frequent language brokering was associated with lower feelings of self-esteem when the proportion of sensitive materials that were translated or interpreted was medium or low.

Since a low proportion of sensitive materials language brokered is also a high proportion of everyday materials language brokered, the results suggest that when adolescents language broker medium or high proportions of *everyday* materials, more language brokering may be associated with poorer self-esteem. Perhaps a high proportion of everyday materials is experienced by adolescents as a lack of challenge or importance

in their language brokering duties. For example, perhaps the demands on adolescents to language broker frequently, but primarily with materials that the adolescents do not feel are of consequence, build a degree of dissatisfaction with language brokering, or even resentment towards parents. Adolescent children may perceive that at least with highly sensitive materials, their parents' need to entrust them with important and worthwhile activities is justified. Alternatively, knowing that their parents are requiring a high frequency of everyday language brokering assistance may be experienced as a clear indicator of their parents' dependence rather than experiencing language brokering as a valuable service used in exceptional circumstances. To the adolescent language broker, a needy or dependent parent may signify a vulnerable or lower functioning family, which may translate to their own lower self-worth.

#### *Moderating Relations between Language Brokering and Parent Adjustment*

The theme of family vulnerability in parents' dependence on their children was also evident from the results examining material sensitivity as a possible moderator of relations between language brokering frequency and *parent* adjustment. Specifically, material sensitivity was found to predict relations between language brokering frequency and the psychological adjustment of mothers. The overall pattern that surfaced was congruent with the expectation that in situations where the proportion of sensitive materials language brokered was low, high frequency language brokering would be associated poorer psychological adjustment. This pattern of findings supports the reasoning that, as receivers of language brokering assistance, mothers in particular may feel more hopeless and less effective in their role as a primary caregiver when their

dependence on their children is evident in their need for translation and interpretation assistance for everyday materials.

Paralleling the findings for adolescents, it appears that both the providers and receivers of language brokering assistance adjust more poorly when more frequent language brokering assistance consists primarily of translating and interpreting everyday materials. While adolescents may adjust poorly when their parents appear to be dependent on them for language brokering in everyday situations, mothers too may feel discouraged and less efficacious as a caregiver when they must rely on their children to translate or interpret even basic materials required in everyday situations. Such dependence may conflict greatly with traditional Chinese parenting practices that value a hierarchical family system whereby parents lead and guide their children and where children, not parents, are dependent. Thus the results support arguments that the role reversals that occur between adolescents and their parents in the act of language brokering may create a context for poor adjustment for both parents and their children (e.g., Umana-Taylor, 2003).

Contrary to predictions, parents' family obligation values did not predict relations between language brokering frequency and parents' psychological adjustment. It was predicted that for parents with a high sense of family obligation, parents would view high frequency language brokering as a medium in which their children fulfill family obligations and would feel positively about their effectiveness in instilling such family values in their children. It was further predicted that when parents' family obligation values are low, more language brokering would be associated with poorer adjustment in parents because without that sense of purpose, parents would feel less effective as parents

due to a perceived dependence on their children. These hypotheses were not supported, suggesting that language brokering may be an act of duty that is already expected of adolescents and thus has minimal impact on parents' sense of pride or effectiveness.

*Moderating Relations between Language Brokering and Parent-Child Relationship Quality*

Few predictors of parent-child relationship quality were evident. The results revealed that the significant main effect showing higher language brokering frequency to be associated with more intergenerational conflict was qualified in only one instance. Specifically, only adolescents' sense of fathers' psychological control was found to be a significant moderator. As predicted, at high and medium levels of perceived paternal psychological control, more language brokering was associated with poorer parent-child relationship quality in the form of greater intergenerational conflict. Perhaps a highly controlling father adds greater pressure on the child to language broker as a means to improve or maintain family functioning. The existing weight of this responsibility on the adolescent may be exacerbated when adolescents view their fathers as harsh or controlling, creating a strained relationship and disharmony between parents and their children.

It is interesting that perceptions of mothers' psychological control predicted relations between language brokering and *adolescents'* adjustment, whereas perceptions of fathers' psychological control predicted relations between language brokering and *family* adjustment. The implications of perceived psychological control, then, may differ depending on whether control is exhibited by mothers or fathers. These findings are consistent with traditional Chinese parenting roles. With traditional mothers primarily

responsible for the nurturing and caring for the children (Chao & Tseng, 2002; Ho, 1987), perhaps the impact of mothers' psychological control may have larger bearing on children's individual well-being. In contrast, since the father is traditionally viewed as the official head of the household and fathers often take on a larger role in establishing and setting family rules (Chao & Tseng, 2002; Ho, 1987), perhaps the impact of fathers' psychological control has a larger bearing on family disagreement and parent-child conflict. Such patterns, however, require replication.

Taken together and coupled with the lack of moderation found with the other examined constructs (i.e., material sensitivity, family obligation values, and parent versus friend orientation), the results demonstrate that the relation between language brokering frequency and intergenerational conflict is robust. That is, the finer nuances of the emotional context in which language brokering takes place were relatively unimportant in influencing the impact of language brokering frequency on parent and child conflict. These findings strengthen the overall pattern of results suggesting negative effects associated with language brokering, including the likely influence of pressure on the relations between language brokering and adjustment. Furthermore, the extent of agreement or shared opinions in the family (i.e., intergenerational congruence) appears to be independent of the frequency with which adolescent children language broker. Thus, the negative effects associated with language brokering on the quality of the parent-child relationship manifests more as the creation of specific areas of conflict as opposed to the eroding of a general sense of connection between parents and adolescents.

### *Conclusions and Implications*

All relations found in this study suggest negative consequences of adolescent language brokering in Chinese immigrant families, as evidenced by poorer adjustment in adolescents and by greater parent-child conflict. Thus, the risks associated with language brokering should not be underestimated, particularly among a population often stereotyped as a minority group marked by resilience. In both Canada and the United States, immigrant Chinese youth have been given the label of “model minority,” based on higher school achievement despite risk factors associated with immigration (Li, 2001; Xu, Connelly, He, & Phillion, 2007). Consequently, the model minority stereotype has resulted in a general attitude that Chinese children do not need programs or resources and are less deserving of practice or policy attention (Xu et al., 2007). The current language brokering findings suggest otherwise.

The risks associated with language brokering may be especially pronounced during adolescence, a stage of development marked by significant change. In adolescence, patterns of interaction between parents and children begin to shift, often resulting in greater instances of parent-child conflict (Collins & Laursen, 2004). The developmental period is also marked by an increase in internalizing symptoms (Graber, 2004). These factors, and increasing pulls for the adolescent child to orient outside the family such as with peers (Brown, 2004), may all be at odds with language brokering demands.

The examination of possible moderators of the relations between language brokering frequency and psychological adjustment suggests that the emotional context in which language brokering takes place can be important. Specifically, relations between

language brokering and poorer adjustment in adolescent children appear to be most evident in contexts of higher family obligation values, greater emphasis on parents' opinions, and perceptions of high parental psychological control. All of these conditions may set a stressful context in which to language broker. Underlying this pattern of risk may be a reversal of parent and child roles that contrasts drastically with traditional Chinese culture. Furthermore, findings from the current study suggest that an added sense of external or self-imposed pressure on the language broker is plausible.

Perceiving one's parents as highly psychologically controlling created a context in which more language brokering was associated with poorer adolescent adjustment and greater parent-child conflict. Thus, programs that teach effective parenting practices without the use of psychological control and that are also considerate of traditional cultural family practices and values, language barriers, and the stress of adjusting to a new culture, should be made more accessible to immigrant parents. This would be a challenging endeavor, however, particularly if cultural patterns negatively affect service utilization.

Furthermore, while endorsing high family obligation values has generally been linked with positive adjustment among adolescents (e.g., Fuligni et al., 1999; 2002; Fuligni & Pedersen, 2002; Fuligni & Zhang, 2004), the current results indicate one instance in which high family obligation values may be a risk for poorer adjustment, since language brokering performed by adolescents who held strong family obligation values was associated with poorer adolescent adjustment. Similar relations were found for adolescents who greatly valued the opinions of their parents over their friends. Thus, family members (particularly parents who may be less aware of the impact of language

brokering), and schools should be made sensitive to the pressure language brokering may add on adolescents. Psychoeducational programs facilitated by children's schools or through community organizations could create greater awareness of some of the risks associated with child language brokering, and could assist parents and children in monitoring the stress of language brokering activities or identifying alternative language brokers.

More language brokering was also associated with poorer adolescent and maternal adjustment when the proportion of *everyday* materials translated or interpreted was high (and hence, the proportion of *sensitive* materials translated or interpreted was low). These findings suggested that parents' need for basic language brokering assistance may highlight family vulnerabilities and impact parents' (specifically, mothers') and adolescents' adjustment. A preventative approach to reducing the negative psychological impact that is associated with language brokering would be to reduce the need for child language brokering services. As expected, the use of language brokering assistance by parents was associated with their poorer English proficiency. Therefore, promoting and making available English as a Second Language (ESL) programs to assist parents in learning English could be beneficial in alleviating some of parents' need for their children's language brokering services. Furthermore, making available adult interpreters in schools, and in medical and community environments, and having translated materials more readily available in the community could also alleviate language brokering needs. Assisting parents to reduce their need for language brokering at least in simpler, everyday situations through the availability of ESL programs and professional translation/interpretation services, would be congruent with Canada's policy on

supporting multiculturalism and, importantly, would likely protect the well-being of child language brokers and their parents alike.

Finally, it is important to acknowledge that many of the constructs thought to predict language brokering and psychological adjustment in Chinese immigrant families did not reach statistical significance. For example, language brokering by adolescents with high family obligation values or high values in parents' opinions did not predict self-esteem. Family obligation values and parent versus friend orientation did not predict parent-child relationship quality, and parents' family obligation values did not predict parents' adjustment. Material sensitivity did not predict fathers' adjustment or parent-child relationships. Furthermore, there was considerable variability in the frequency of language brokering. In other words, it appears that language brokering frequency is quite variable in its relations with adjustment, and these relations further depend on a variety of constructs that shape the context in which language brokering takes place. With such within-group differences, researchers should be cautioned against making global statements about language brokering and its impact on the psychological health of Chinese immigrant families.

#### *Limitations and Future Directions*

There are several limitations to this study. First, adolescents in this study reported language brokering for their parents collectively and therefore it was not possible to differentiate translation and interpretation for mothers and fathers separately. Assessing language brokering for mothers and fathers separately would allow for a more detailed examination of adolescents' psychological adjustment associated with language

brokering for mothers compared to fathers. In addition, it would also allow for a separate analysis of mothers' and fathers' use of language brokering assistance.

The findings in this study were based on cross-sectional data, and thus, causal conclusions cannot be drawn. Although it was assumed that more language brokering led to poorer adolescent adjustment and more intergenerational conflict, it is theoretically possible that adolescents who report poorer psychological well-being perceive language brokering more often. Similarly, when intergenerational conflict is high, adolescents may perceive language brokering more often. In the same way, it was assumed that language brokering frequency in certain emotional contexts led to poorer psychological adjustment for adolescents and parents, and to poorer parent-child relationship quality. However, within the limits of correlational analyses, it is possible that family members' poorer psychological well-being or experiences of intergenerational conflict may have led them to frame language brokering in a negative context. This explanation is consistent with a recent study that examined family relations among Mexican American adolescents and proposed that negative language brokering experiences may be symptomatic of poorer family functioning or poorer individual intrapsychic states (Weisskirch, 2007). However, Weisskirch (2007) also used cross-sectional data and therefore experiences the same limitations in drawing causal conclusions. Such questions regarding directionality, however, highlight the need for future studies that assess participants over time. Longitudinal research would be better able to assess the direction of the relations among language brokering frequency, family processes, and psychological adjustment. It would also be possible to examine change in the strength of these relations over time to more fully address the effects of child language brokering on psychological adjustment.

Longitudinal studies 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.

The findings also raise questions regarding the operationalization of material sensitivity in the current study. Specifically, it was difficult to differentiate between the sensitivity and the difficulty of the materials language brokered. In the current study, more language brokering was associated with poorer adjustment in mothers and adolescents when material sensitivity was *low*, but no significant relations were found when material sensitivity was high. This pattern of results suggested that perhaps predictors of the relations between language brokering and adjustment lie in the lack of challenge or the lack of importance of the language brokered materials. However, the lack of challenge or importance could be the result of materials being either too easy or too common. Therefore, future studies interested in the moderating role of the nature of materials translated or interpreted would benefit from designing measures of language brokering that are better able to disentangle material sensitivity from material difficulty. For example, future research could directly assess *children's perceptions* of the materials language brokered to determine which items are considered more or less sensitive, and which are considered more or less difficult. Such a differentiation in future work will contribute to a clearer picture of the predictors of relations between language brokering and the psychological adjustment of child language brokers and their parents.

The current study took place in Canada where a policy for multiculturalism is generally embraced, and where Chinese communities and resources for this ethnic group can be prominent. Therefore, questions may arise regarding how the current results may

or may not generalize to different contexts. Possibilities for future research could include comparative studies contrasting language brokering within Chinese immigrant families across neighbourhoods that vary in ethnic composition. For example, language brokering in communities with few ethnic supports outside of the family may result in a greater need for children's language brokering services. This may create an extra burden on children and other family members. Thus, future studies that compare language brokering in various contexts would provide a clearer understanding of how different contexts, such as the ethnic composition of one's neighbourhood, may influence the psychological impact of language brokering.

In addition to examining language brokering in a variety of ethnic minority communities, cross-cultural studies should also be conducted. Future studies that broadly assess factors that may vary across cultures, such as parenting styles and value systems, would be beneficial in highlighting whether the contexts found to moderate relations between language brokering and adjustment in the current study generalize to other cultures, or whether other factors that may be relatively more important in other cultures have a greater impact on how language brokering is perceived and experienced in terms of psychological adjustment.

Although the current study is limited by a number of factors, it also presents a number of strengths. First, this study moves beyond the examination of direct relations between language brokering and adjustment, and examines possible moderators of these relations among Chinese immigrant families residing in Canada. Such an approach to the study of language brokering is rare in the literature, and the results of the current study revealed that relations between language brokering and adjustment can indeed depend on

constructs such as the sensitivity of language brokered materials and the emotional context in which language brokering takes place.

Second, while the majority of early studies on language brokering tended to measure retrospective accounts of whether children of immigrant families had ever language brokered, this study examined *current* language brokering. Thus, it was possible to be more confident that the psychological adjustment associated with language brokering was current rather than perhaps a perspective that changed over time as one reflected on past services to parents.

Third, independent reports were obtained from fathers, mothers and adolescent children. As a result, it was possible to examine the relations between language brokering and the psychological adjustment of parents and the quality of parent-child relationships, in addition to examining adolescent adjustment. To date, few studies have examined the adjustment of parents or the quality of parent-child relationships in the context of language brokering, and those that have were limited to children's perspectives.

Finally, another strength of the current study is its representative sample. The majority of families were randomly recruited. This has important implications regarding the generalizability of the current findings. Thus, while cross-cultural generalizations cannot be made, the current results are representative of Chinese immigrant families from greater Victoria and greater Vancouver, British Columbia.

Collectively, the findings from the current study highlight specific constructs hypothesized to affect the emotional context in which language brokering takes place. Specifically, it was found that material sensitivity, family obligation values, parental psychological control, and parent versus friend orientation have a significant influence on

the relations between language brokering and psychological adjustment among Chinese immigrant families residing in Canada. Furthermore, the pattern of findings suggests stronger negative consequences of language brokering on adolescents' adjustment and on the quality of the parent-child relationship, than on their parents' adjustment. Poorer adjustment related to language brokering may manifest in the context of too much or too little pressure, or in the face of vulnerability that results from the parent-child role reversals inherent in language brokering.

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## Appendix A: Language Brokering Questionnaire

How often do **you translate or interpret** (speech or writing) for either of your parents?

	Never	A few times a year	About once a month	A few times a week	Daily
a. Materials from school	0	1	2	3	4
b. Bills or financial information	0	1	2	3	4
c. Household issues	0	1	2	3	4
d. Medical/health information	0	1	2	3	4
e. Immigration information	0	1	2	3	4
f. Media (news items, TV, etc.)	0	1	2	3	4
g. Parents' work materials	0	1	2	3	4

## Appendix B: Family Obligations – Child Questionnaire

	How much do <u>you</u> think you should do the following things?					What do your <u>parents</u> expect of you?				
	Almost never	Not Often	Some of the time	Often	Almost always	Almost never	Not Often	Some of the time	Often	Almost always
1. Spend time with your grandparents, cousins, aunts, and uncles?	1	2	3	4	5	1	2	3	4	5
2. Spend time at home with your family?	1	2	3	4	5	1	2	3	4	5
3. Run errands that the family needs done?	1	2	3	4	5	1	2	3	4	5
4. Help your brothers or sisters with their homework?	1	2	3	4	5	1	2	3	4	5
5. Spend holidays with your family?	1	2	3	4	5	1	2	3	4	5
6. Help out around the house	1	2	3	4	5	1	2	3	4	5
7. Spent time with your family on weekends	1	2	3	4	5	1	2	3	4	5
8. Help take care of your brothers and sisters	1	2	3	4	5	1	2	3	4	5
9. Eat meals with your family	1	2	3	4	5	1	2	3	4	5
10. Help take care of your grandparents	1	2	3	4	5	1	2	3	4	5
11. Do things together with your brothers and sisters	1	2	3	4	5	1	2	3	4	5

	How important do you think it is to do the following?	How important do your parents think it is for you to do the following?
	Not at all important Fairly Unimportant Somewhat Important Very important Extremely important	Not at all important Fairly Unimportant Somewhat Important Very important Extremely important
12. Treat your parents with great respect	1 2 3 4 5	1 2 3 4 5
13. Follow your parents' advice about choosing friends.	1 2 3 4 5	1 2 3 4 5
14. Do well for the sake of your family.	1 2 3 4 5	1 2 3 4 5
15. Follow your parents' advice about choosing a job or major in college.	1 2 3 4 5	1 2 3 4 5
16. Treat your grandparents with great respect.	1 2 3 4 5	1 2 3 4 5
17. Help your parents financially in the future.	1 2 3 4 5	1 2 3 4 5
18. Respect your older brothers and sisters	1 2 3 4 5	1 2 3 4 5
19. Make sacrifices for your family	1 2 3 4 5	1 2 3 4 5
20. Live at home with your parents until you are married.	1 2 3 4 5	1 2 3 4 5
21. Help take care of your brothers and sisters in the future.	1 2 3 4 5	1 2 3 4 5
22. Spend time with your parents even after you no longer live with them.	1 2 3 4 5	1 2 3 4 5
23. Live or go to college near your parents.	1 2 3 4 5	1 2 3 4 5
24. Have your parents live with you when you get older.	1 2 3 4 5	1 2 3 4 5

## Appendix C: Family Obligations – Parent Questionnaire

How often do you **expect** your child to engage in the following activities?  
 (Do **NOT** indicate how often your child **actually** does these activities)

	<b>Almost never</b>	<b>Not Often</b>	<b>Some of the time</b>	<b>Often</b>	<b>Almost Always</b>
1. Spend time with his/her grandparents, cousins, aunts, and uncles.	1	2	3	4	5
2. Spend time at home with the family.	1	2	3	4	5
3. Run errands that the family needs done.	1	2	3	4	5
4. Help his/her brothers or sisters with their homework.	1	2	3	4	5
5. Spend holidays with the family.	1	2	3	4	5
6. Help out around the house.	1	2	3	4	5
7. Spent time with the family on weekends.	1	2	3	4	5
8. Help take care of his/her brothers and sisters.	1	2	3	4	5
9. Eat meals with the family.	1	2	3	4	5
10. Help take care of his/her grandparents.	1	2	3	4	5
11. Do things together with his/her brothers and sisters.	1	2	3	4	5

*Family Obligations, continued*

How important is it that your child does the following?

	Not at all important	Fairly Unimportant	Somewhat important	Very important	Extremely important
12. Treat you with great respect.	1	2	3	4	5
13. Follow your advice about choosing friends.	1	2	3	4	5
14. Do well for the sake of the family.	1	2	3	4	5
15. Follow your advice about choosing a job or major in college.	1	2	3	4	5
16. Treat his/her grandparents with great respect.	1	2	3	4	5
17. Help you financially in the future.	1	2	3	4	5
18. Respect his/her older brothers and sisters.	1	2	3	4	5
19. Make sacrifices for the family.	1	2	3	4	5
20. Live at home with you until he/she is married.	1	2	3	4	5
21. Help take care of his/her brothers and sisters in the future.	1	2	3	4	5
22. Spend time with you even after he/she no longer lives with you.	1	2	3	4	5
23. Live or go to college near you.	1	2	3	4	5
24. Have you live with him or her when you get older.	1	2	3	4	5

## Appendix D: Parental Psychological Control – Child Questionnaire

How well do the following statements describe your mother and father?

	My MOM			My DAD		
	Not like her	Somewhat like her	A lot like her	Not like him	Somewhat like him	A lot like him
1. Is always trying to change how I feel or think about things.	1	2	3	1	2	3
2. Changes the subject whenever I have something to say.	1	2	3	1	2	3
3. Often interrupts me.	1	2	3	1	2	3
4. Blames me for other family members' problems.	1	2	3	1	2	3
5. Brings up past mistakes when he/she criticizes me.	1	2	3	1	2	3
6. Is less friendly with me if I do not see things her/his way.	1	2	3	1	2	3
7. Will avoid looking at me when I have disappointed him/her.	1	2	3	1	2	3
8. If I have hurt her/his feelings, stops talking to me until I please her/him again.	1	2	3	1	2	3

## Appendix E: Parent versus Friend Orientation – Child Questionnaire

	Mostly my friends	More my friends than my parents	More my parents than my friends	Mostly my parents
1. Whose opinion do you rely on when you judge <u>how smart you are</u> ?	1	2	3	4
2. When it comes to your <u>values</u> , who do you identify most closely with?	1	2	3	4
3. When you make a <u>new friend</u> , whose opinion of that friend matters most?	1	2	3	4
4. Overall, who do you want to <u>model yourself after</u> ?	1	2	3	4
5. When it comes to choosing <u>clothes</u> , whose opinion is most important?	1	2	3	4
6. Who are you most likely to <u>confide in</u> when you have a problem?	1	2	3	4
7. Who do you feel <u>understands you best</u> ?	1	2	3	4
8. Who do you prefer to <u>spend your free time with</u> ?	1	2	3	4

## Appendix F: Child and Parent Self-Esteem Questionnaire

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

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
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 G: Youth Self Report Internalizing Items

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 **2** if the item is *very true or often true* of you. Circle **1** if the item is *somewhat or sometimes true* of you. If the item is *not true* of you, circle the **0**.

0 = Not True	1 = Somewhat or Sometimes True	2 = Very True or Often True
1. There is little that I enjoy	0	1 2
2. I cry a lot	0	1 2
3. I am afraid of certain animals, situations, or places, other than school	0	1 2
4. I am afraid of going to school	0	1 2
5. I am afraid I might think of do something bad	0	1 2
6. I feel that I have to be perfect	0	1 2
7. I feel that no one loves me	0	1 2
8. I feel worthless or inferior	0	1 2
9. I would rather be alone than with others	0	1 2
10. I am nervous or tense	0	1 2
11. I am too fearful or anxious	0	1 2
12. I feel dizzy or lightheaded	0	1 2
13. I feel too guilty	0	1 2
14. I feel overtired without good reason	0	1 2
15. <i>Physical problems without known medical cause: Aches or pains (not stomach or headaches)</i>	0	1 2
16. <i>Physical problems without known medical cause: Headaches</i>	0	1 2
17. <i>Physical problems without known medical cause: Nausea, feel sick</i>	0	1 2
18. <i>Physical problems without known medical cause: Problems with eyes (not if corrected by glasses)</i>	0	1 2
19. <i>Physical problems without known medical cause: Rashes or other skin problems</i>	0	1 2
20. <i>Physical problems without known medical cause: Stomachaches</i>	0	1 2
21. <i>Physical problems without known medical cause: Vomiting, throwing up</i>	0	1 2
22. <i>Physical problems without known medical cause: Other</i>	0	1 2
23. I refuse to talk	0	1 2
24. I am secretive or keep things to myself	0	1 2
25. I am self-conscious or easily embarrassed	0	1 2
26. I am too shy or timid	0	1 2
27. I think about killing myself	0	1 2
28. I don't have much energy	0	1 2
29. I am unhappy, sad, or depressed	0	1 2
30. I keep from getting involved with others	0	1 2
31. I worry a lot	0	1 2

## Appendix H: Depressive Symptoms – Parent Questionnaire

Please circle the number for each statement which best describes how often you felt or behaved this way during the past week. During the **past week** ...

	Rarely or none of the time ( <u>&lt;1 day</u> )	Some or a little of the time ( <u>1-2 days</u> )	A lot of the time ( <u>3-4 days</u> )	Most or all of the time ( <u>5-7 days</u> )
1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.	0	1	2	3
9. I thought my life has been a failure.	0	1	2	3
10. I felt fearful.	0	1	2	3
11. My sleep was restless.	0	1	2	3
12. I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3
16. I enjoyed life.	0	1	2	3
17. I had crying spells.	0	1	2	3
18. I felt sad.	0	1	2	3
19. I felt that people disliked me.	0	1	2	3
20. I could not get "going" (or motivated).	0	1	2	3

## Appendix I: Parent-Child Congruence – Child Questionnaire

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

<b>Strongly disagree</b> <b>1</b>	<b>Somewhat disagree</b> <b>2</b>	<b>Neither agree nor disagree</b> <b>3</b>	<b>Somewhat agree</b> <b>4</b>	<b>Strongly agree</b> <b>5</b>		
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

## Appendix J: Parent-Child Congruence – Parent Questionnaire

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

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

## Appendix K: Parent-Child Conflict – Child Questionnaire

How much is each area a source of conflict between you and your parents?

<b>No conflict</b>	<b>A little conflict</b>	<b>Medium-low conflict</b>	<b>Medium-high conflict</b>	<b>Pretty high conflict</b>	<b>A lot of conflict</b>	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
1. Lack of communication with your parents	1	2	3	4	5	6
2. Your desire for greater independence	1	2	3	4	5	6
3. Following cultural traditions	1	2	3	4	5	6
4. Pressure to learn your Chinese language	1	2	3	4	5	6
5. How much time you spend with the family	1	2	3	4	5	6
6. How much to help around the house	1	2	3	4	5	6
7. Importance of academic achievement	1	2	3	4	5	6
8. Being compared to others	1	2	3	4	5	6
9. When to begin dating	1	2	3	4	5	6
10. Whom to date	1	2	3	4	5	6

## Appendix L: Parent-Child Conflict – Parent Questionnaire

How much is each area a source of conflict between you and your child?

	No Conflict 1	Mild Conflict 2	Medium-Low Conflict 3	Medium-High Conflict 4	Pretty much Conflict 5	A lot of Conflict 6
1. Lack of communication with your child	1	2	3	4	5	6
2. Your child's desire for greater independence	1	2	3	4	5	6
3. Following cultural traditions	1	2	3	4	5	6
4. Wanting your child to learn your Chinese language	1	2	3	4	5	6
5. How much time your child spends with the family	1	2	3	4	5	6
6. How much your child helps around the house	1	2	3	4	5	6
7. Importance of academic achievement	1	2	3	4	5	6
8. Comparing your child to others	1	2	3	4	5	6
9. When to begin dating	1	2	3	4	5	6
10. Whom to date	1	2	3	4	5	6