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Language Brokering and Adjustment among Chinese and Korean American Adolescents: A Moderated Mediation Model of Perceived Maternal Sacrifice, Respect for the Mother, and Mother-Child Open Communication

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Abstract

Asian American adolescents often language broker for their immigrant parents. Using a two-wave sample of Chinese American (*n* = 237; average age at W1 = 14.65, *SD* = .68) and Korean American (*n* = 262; average age at W1 = 14.72, *SD* = .69) adolescents, this study examined a culturally relevant conditional mechanism through which language brokering may contribute to lower levels of internalizing/externalizing problems. Results suggested that language brokering for the mother was associated with perceived maternal sacrifice, which was in turn associated with respect for the mother, which was eventually associated with lower levels of externalizing problems (but not internalizing problems) in the adolescents. Moreover, the indirect effect was conditional on the level of mother-child open communication. With a lower level of open communication, the indirect effect of language brokering on externalizing problems became stronger. Results indicate that interventions designed to reduce Asian American adolescent language brokers' externalizing problems may be effective if they target adolescents' perception of parental sacrifice and respect for parents, especially for those adolescents experiencing a low level of parent-child open communication. At the same time, increasing open communication within the family may also ultimately reduce adolescent externalizing problems.

Keywords

language brokering; parental sacrifice; respect for parents; open communication; Asian American adolescents

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Asian American adolescents often translate and interpret for their parents who have limited English skills; this activity is known as language brokering (McQuillan & Tse, 1995). About 70–80% of Asian American adolescents language broker for their parents (Chao, 2006; Tse, 1996). Language brokering, which is a complex and challenging duty, can lead to heightened conflicts between adolescents and their parents (Jones & Trickett, 2005; Trickett & Jones, 2007) and more internalizing and externalizing problems (Chao, 2006). However, language brokering is not invariably harmful to adolescents, as language brokering has also been found to be associated with increased understanding and respect for parents (Chao, 2006; DeMent, Buriel, & Villanueva, 2005; Orellana, Dorner, & Pulido, 2003) and high academic self-efficacy (Buriel, Perez, DeMent, Chavez, & Moran, 1998). It may be that there are multiple competing mechanisms and processes, both positive and negative, through which language brokering impacts parent-child relationships and adolescents' psychosocial adjustment. Whereas some negative mechanisms have already been identified (e.g., Kam, 2011), little is known about when and how language brokers benefit from brokering. If the specific pathways and their conditions are identified, it will be possible to design more effective intervention programs to help Asian American adolescent language brokers.

The Mediating Roles of Perceived Parental Sacrifice and Respect for Parents

Chao (2006) has speculated that the mechanism behind the association between language brokering and respect for parents may be explained by the adolescents' deeper understanding of parental sacrifices gained through brokering activities. Indeed, there is some initial, qualitative evidence suggesting that language brokering helps adolescents better understand their parents' struggles and sacrifices, resulting in feelings of compassion and respect (DeMent, et al., 2005). However, no study seems to have directly tested the relations among language brokering, perceived parental sacrifice and respect for parents together in one theoretical model using longitudinal data. Asian immigrant parents tend to express their love by providing instrumental support and ensuring that their children's daily needs are met (Chao & Tseng, 2002; Pyke, 2000). Therefore, as adolescents become more directly involved in their parents' lives through translating for them – everything from school materials, to household bills, to parents' work information – they are more likely to realize how much their parents sacrifice for them on a daily basis, and to feel greater respect for them as a result.

Both perceived parental sacrifice and respect for parents may insulate adolescents from internalizing/externalizing problems. In Asian cultures, appreciation of parental devotion and sacrifice has been found to have a protective function in adolescents' psychological adjustment, as it reduces the negative impact of parent-child cultural dissonance on adolescents' internalizing problems (C. Wu & Chao, 2011). Similarly, respect for parents may also serve as protection against adolescent problems. It is plausible to expect Chinese and Korean American adolescents who have more respect for their parents to behave in ways they believe will bring honor to their parents. In fact, ethnic minority girls' respect for maternal authority has been found to be a predictor of less parent-child conflict (Dixon, Graber, & Brooks-Gunn, 2008), a significant risk factor for both externalizing and

internalizing problems (e.g., Choi, He, & Harachi, 2008; Formoso, Gonzales, & Aiken, 2000).

Taken together, perceived parental sacrifice and respect for parents may be sequential mediators through which Asian American adolescents' language brokering for parents may influence their later internalizing/externalizing problems. That is, more language brokering experiences may lead adolescent brokers to perceive more parental sacrifice, which may in turn elicit more respect for parents, which may eventually result in lower levels of internalizing/externalizing problems in the adolescent. Moreover, the proposed mediational mechanism may be applicable for both Chinese and Korean American adolescents, given their similar cultural backgrounds.

The Moderating Role of Parent-Child Open Communication

As scholars have noted, when investigating the relation between language brokering and adolescents' psychological adjustment, it is important to understand the moderating role of the family context (Hua & Costigan, 2012; Oznobishin & Kurman, 2009). However, extant studies have not explicitly tested the moderation within a mediational mechanism of language brokering. In this study, parent-child open communication is examined as a family context, which is hypothesized to interact with the indirect effect of language brokering on adolescents' internalizing/externalizing problems.

Although traditional Asian families tend to withhold free expression of feelings and avoid open communication (Rhee, Chang, & Rhee, 2003; Uba, 1994), some Asian families living in a Western cultural context may adopt the Western value of open communication. Open communication between parents and children has far-reaching benefits for adolescents because it helps to establish close relationships within the family (Riesch, Anderson, & Krueger, 2006; Tulloch, Blizzard, & Pinkus, 1997). It is possible that open communication may also have an impact on the relation between language brokering and parent-child relationships, thereby conditioning the potential indirect association between language brokering and internalizing/externalizing problems as well. For example, adolescents' frequent language brokering may provide an avenue towards greater understanding of parental sacrifice only when open communication with the parent is otherwise limited. With adequate communication with the parent, adolescents may be able to understand parental sacrifices regardless of how often they engage in language brokering. In that case, open communication, and not language brokering activities per se, is the avenue through which children may develop increased respect for parents and decreased internalizing/externalizing problems.

Current Study

Using a two-wave sample of Chinese and Korean American adolescents, the current study empirically examines a culturally relevant conditional mechanism of the effect of language brokering on adolescent internalizing/externalizing problems. The hypotheses can be summarized as follows: (1) More language brokering for the mother is indirectly associated with lower levels of internalizing/externalizing problems in the adolescent. Specifically, more language brokering for the mother is associated with more perceived maternal

sacrifice; more perceived maternal sacrifice, in turn, is associated with more respect for the mother; and more respect for the mother is eventually associated with lower levels of internalizing and externalizing problems in the adolescent. (2) Mother-child open communication further moderates the indirect effect of language brokering for the mother on adolescents' internalizing/externalizing problems by moderating the relation between language brokering for the mother and perceived maternal sacrifice: the lower the level of mother-child open communication, the stronger the indirect association between language brokering for the mother and internalizing/externalizing problems via perceived maternal sacrifice and respect for the mother. (3) Because no a priori hypotheses regarding group differences can be made, this study simply tests the null hypotheses, which assume that the relationships will not be significantly different across Chinese and Korean Americans.

Methods

Participants

The current sample of Chinese and Korean American language brokers comes from a larger longitudinal study of ethnically diverse families and adolescents. In 2003, adolescents in ninth grade were recruited from eight high schools in the Los Angeles area, and a second wave of data was collected in 2004. The original sample consisted of 673 Chinese American adolescents and 660 Korean American adolescents, but this study used two additional inclusion criteria.

First, only those adolescents who reported the primary caretaker to be the mother were included in this study. This was because the questions related to parenting (e.g., parental sacrifice) asked the adolescents to think about the person who took care of them most of the time to answer the questions, and most participants reported that this person was the mother (79.5% among Chinese Americans and 78.0% among Korean Americans). Only 9.8% of Chinese Americans and 7.7% of Korean Americans reported the father as the primary caretaker, and the remaining participants reported someone other than one of their parents to be the primary caretaker. These participants were therefore excluded from further analyses. χ^2 -tests and *t*-tests showed that those who reported the mother as the primary caretaker and those who did not were not significantly different with respect to gender, generational status, age, whether the adolescent was the eldest child, number of siblings, single-parent status, mother’s age upon arrival in the U.S., or mother’s highest level of education.

The second inclusion criterion was that the adolescent had to report having translated at Wave 1, given that this study focuses on adolescent language brokers. Of the adolescents who responded to the question about whether they had ever translated for their parents (450 Chinese Americans and 449 Korean Americans), 65.6% of Chinese and 73.1% of Korean American adolescents answered in the affirmative at Wave 1. χ^2 -tests and *t*-tests revealed significant differences between translators and non-translators. Compared to non-translators, the language brokers were more likely to be females (χ^2 (1) = 6.19, $p = .01$), first-generation (χ^2 (2) = 45.55, $p < .01$) and older ($t(896) = 2.03$, $p = .05$), and their mothers, on average, had received less education ($t(741) = -2.60$, $p = .01$) and arrived in the U.S. at an older age ($t(468) = 7.98$, $p < .01$).

The final sample consisted of 237 Chinese Americans and 262 Korean Americans at Wave 1, and 180 of the same Chinese Americans and 180 of the same Korean Americans participated at Wave 2. The entire sample was either first generation (foreign-born, with foreign-born parents) or second generation (U.S.-born, with foreign-born parents). Among Chinese American adolescents (45.2% male), 40.5% were first generation, while among Korean American adolescents (44.7% male), 31.3% were first generation. On average, Chinese American adolescents had 1.32 siblings (*SD* = 1.04; 33.8% were first-born); Korean American adolescents had 1.21 siblings (*SD* = 0.70; 29.8% were first-born). At Wave 1, the Chinese adolescents were on average 14.65 years old (*SD* = 0.68), and the Korean adolescents were on average 14.72 years old (*SD* = 0.69). For both ethnic groups, mothers on average had completed some college, and their average age upon arrival in the U.S. was about 30. Among Chinese immigrant mothers, 15.6% were single mothers; among Korean immigrant mothers, 11.5% were single mothers.

Procedure

Adolescent participation was acquired with passive consent from the parents, who were asked to send back the postage-paid, self-addressed consent form only if they did *not* wish their child to participate in this study. This procedure was approved by the Institutional Review Board at the University of California at Riverside. The consent letter was available in English, Chinese and Korean. Adolescents were also provided with an assent statement on the cover page of the survey. Adolescents were given 50 minutes during one of their class periods to complete paper-and-pencil surveys in English. After completion of the surveys, students received snack bars to thank them for their participation. Attrition analyses were conducted to examine whether those who dropped out of the study after Wave 1 were significantly different from those who remained at Wave 2. None of the demographic variables was significantly related to attrition.

Measures

Language brokering for the mother—Only the data for Wave 1 language brokering were used in the current study. The measure for language brokering consisted of nine items about the frequency of translation provided for the adolescent's mother (Chao, 2006), including translating for homework/assignments, other materials from school, meetings/conversations between parents and school staff, household bills/financial materials, nonmonetary household matters, medical/health information, immigration/naturalization papers, media, and parent's work/business materials. Frequency of translation was rated on a 5-point scale, ranging from 0 (*not at all*), to 1 (*a few times a year*), to 2 (*a few times a month*), to 3 (*a few times a week*), to 4 (*daily*). Scores for language brokering were obtained by averaging the nine items. The internal consistency of the scale was strong, with $\alpha = .89$ for Chinese Americans and .90 for Korean Americans.

Mother-child open communication—Only the data for Wave 1 mother-child open communication were used in the current study. The measure for open communication was adapted from the Open Family Communication subscale of the Parent Adolescent Communication Scale (PACS) (Barnes & Olson, 1982). The measure consisted of eight items (e.g., "I find it easy to discuss problems with my mother"). The response scale ranged

from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency for this scale was . 85 for Chinese Americans and .82 for Korean Americans.

Perceived maternal sacrifice—Perceived maternal sacrifice was assessed at both waves using six items developed for a larger study on parenting among Asian immigrants (Chao & Kaeochinda, 2010). The items capture the child's recognition of parents' sacrifices and hard work for a better life of the child, and the child's gratitude for such parental sacrifices. Sample items include, "My parent has made many sacrifices to give me a better life" and, "I feel I owe a lot to my parent for everything s/he has tried to do for me." In this study, adolescents' responses about the "parent" referred to the mother. The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale possessed strong internal consistency, with an alpha of .90 at both waves for Chinese Americans, and .86 at Wave 1 and .91 at Wave 2 for Korean Americans.

Respect for the mother—Respect for the mother was assessed at both waves using eight items adapted from the Parental Identification measure (Bowerman & Bahr, 1973). In addition to capturing adolescents' identification with a parent, the new measure also captures their respect for, and obedience to the parent. Sample items are, "(e.g., "I have a high regard for my parent," "I try to honor my parents by living up to their expectations of me," and, "I try to be obedient to my parents". Responses were about the mother, and the scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency for the scale was .90 at Wave 1 and .89 at Wave 2 for Chinese Americans, and was .87 at Wave 1 and .88 at Wave 2 for Korean Americans.

Internalizing problems—Adolescents' internalizing problems were assessed at both waves using the internalizing scale of the Youth Self-Report (YSR) form of the Child Behavioral Checklist (CBCL; Achenbach, 1991). The scale contains 32 items such as "I feel lonely", "I feel overtired", and "I am shy." Responses for the items ranged from 0 (*not true*), to 1 (*somewhat or sometimes true*), to 2 (*very true or often true*). The score for internalizing problems was created by averaging all the items included in the scale. The scale possessed good internal consistency, with alphas of .89 for Chinese Americans at both waves and .90 for Korean Americans at both waves.

Externalizing problems—Externalizing problems were assessed at both waves using the externalizing scale of the Youth Self-Report (YSR) form of the Child Behavioral Checklist (CBCL; Achenbach, 1991). The externalizing scale consists of 31 items such as, "I am mean to others" and "I lie or cheat." Responses for the items ranged from 0 (*not true*), to 1 (*somewhat or sometimes true*), to 2 (*very true or often true*). The score for the externalizing scale was the overall average of all items comprising the scale. The internal consistency for this scale was .87 at Wave 1 and .88 at Wave 2 for Chinese Americans and .88 at both waves for Korean Americans.

Covariates—Several covariates were controlled for in the analyses, including adolescents' gender, age, generational status, number of siblings, mothers' highest level of education, mothers' age upon arrival in the U.S., and single parent status. There was also a dummy coded variable indicating whether or not the adolescent is the eldest child. Mothers' highest

level of education was obtained using adolescent report, using a scale ranging from 1 (*no formal schooling*) to 8 (*finished graduate degree*). Child gender was coded as 0 (*female*) or 1 (*male*). Child generational status was coded as 0 (*first generation*) or 1 (*second generation*). The number of siblings was coded as 3 when the adolescent had three or more siblings.

Results

Data Analyses

Data were analyzed in three steps. First, descriptive and correlational analyses were conducted for study variables and control variables (see Table 1). None of the variables exceeded the cutoff values for skewness (>2) and kurtosis (>7) identified by West et al. (1995) as violating normal distribution in structural equation modeling. Second, using path analysis, the hypothesized mediation model was tested simultaneously for Chinese and Korean American adolescents (see Figure 1). To test whether the hypothesized model was an equally good fit for both Chinese and Korean American adolescents, parameters related to study variables were constrained to be equal across groups, one at a time, provided that there was no significant drop in model fit. Covariates were then added to the final model as independent variables, and were allowed to be estimated freely for each ethnic group. Third, the moderator was then added to the mediation model, and the moderation of both the direct and the indirect effect was tested. Parameters involving the moderator were constrained to be equal across groups, one at a time, provided that the model fit did not significantly worsen. Fourth, the significant interaction found in step three was then probed (see Figure 3a and 3b), following procedures outlined by Aiken and West (1991).

Tests for the Indirect Effects

Path analysis was used to examine the hypothesized mediation model (see Figure 1) using Mplus 7 (Muthén & Muthén, 1998–2012). Both concurrent and longitudinal links, as well as direct and indirect effects among the model variables, were tested simultaneously. Full information maximum likelihood (FIML) estimation method was used to handle missing data (Muthén & Muthén, 1998–2012). FIML does not estimate the values of the missing data, but instead directly fits the available covariance structure to the observed data for each participant (Enders, 2001). For result robustness, maximum likelihood estimation with robust standard errors (MLR) was used. The model was simultaneously tested for Chinese American and Korean American adolescents as a two-group model. The independent variable was the frequency of language brokering, the mediating variables were perceived maternal sacrifice and respect for the mother, in sequence, and the outcome variables were internalizing or externalizing problems.

The model was first tested with all paths allowed to be freely estimated for Chinese and Korean American adolescents. Fit indices for this initial model suggested a good fit: $\chi^2(14) = 11.54$, $p = .64$; RMSEA = .00; CFI = 1.00, SRMR = .03. Individual paths of the model were then constrained, one at a time, to determine if they were significantly different across groups. The Satorra-Bentler Chi-Square Difference Test was conducted to determine whether a more constrained model fitted the data significantly worse than a less constrained

one. All but two path coefficients could be constrained to be equal without significantly worsening model fit (Wave 1 respect regressed on Wave 1 perceived sacrifice: $\chi^2(1) = 5.60$, $p = .02$; Wave 2 externalizing problem regressed on Wave 1 externalizing problem: $\chi^2(1) = 11.08$, $p = 0.001$). These paths were left to be estimated freely for each group. This partially invariant model was a good fit: $\chi^2(41) = 24.03$, $p = .98$; RMSEA = .00; CFI = 1.00, SRMR = .04. Covariates were then included in the model as independent variables, which included adolescent's gender, age, generational status, whether the adolescent was the eldest sibling, number of siblings, mother's educational level, single parent status, and mother's age upon arrival in the U.S. All paths involving the covariates were allowed to be estimated freely. The final mediation model indicated a good fit to the data: $\chi^2(41) = 26.37$, $p = .96$; RMSEA = .00; CFI = 1.00, SRMR = .02.

Figure 1 shows the final model with standardized coefficients. Although not depicted in the figure, covariates were all controlled for in the model. Four indirect effects leading to externalizing problems (but not internalizing problems) were significant for both Chinese Americans and Korean Americans, delineated by the same letters *a*, *b*, *c*, and *d*, in Figure 1. Path *a* (brokering W1 → perceived sacrifice W1 → respect W1 → externalizing W1) was significant for both Chinese Americans ($\beta = -.024$, $p = .008$) and Korean Americans ($\beta = -.019$, $p = .010$). Path *b* (brokering W1 → perceived sacrifice W1 → perceived sacrifice W2 → respect W2 → externalizing W2) was also significant for both Chinese Americans ($\beta = -.006$, $p = .044$) and Korean Americans ($\beta = -.007$, $p = .032$). Path *c* (brokering W1 → perceived sacrifice W1 → respect W1 → respect W2 → externalizing W2) was marginally significant for Chinese Americans ($\beta = -.006$, $p = .054$) and significant for Korean Americans ($\beta = -.005$, $p = .046$). The last significant indirect effect involved path *d* (brokering W1 → perceived sacrifice W1 → respect W1 → externalizing W1 → externalizing W2), which was significant for both Chinese Americans ($\beta = -.018$, $p = .008$) and Korean Americans ($\beta = -.011$, $p = .017$). Variances explained in each outcome variable are presented by R^2 statistics in parentheses. Five additional mediational models were tested, altering the temporal ordering among language brokering and the two mediators in all possible ways, and no significant indirect effect was found among these alternatives.

Tests for the Moderated Mediation

To test the hypothesized moderated mediation, mother-child open communication at Wave 1 and the interaction term between language brokering at Wave 1 and open communication at Wave 1 were added to the model as additional independent variables to language brokering (see Figure 2). Language brokering and open communication were both centered on the mean value for each ethnic group before obtaining the interaction term. As significant indirect effects were found only for externalizing problems, the new moderated mediation model included only externalizing problems as outcome variables. The new model was a good fit: $\chi^2(22) = 21.26$, $p = .51$; RMSEA = .00; CFI = 1.00, SRMR = .03. Then, coefficients for the pathways involving open communication and the interaction term were constrained to be equal across groups, one at a time. All pathways could be constrained without significantly worsening model fit. The resulting constrained model was a good fit to the data: $\chi^2(34) = 31.00$, $p = .62$; RMSEA = .00; CFI = 1.00, TLI = 1.01, SRMR = .04.

Variances in externalizing problems at Waves 1 and 2 are presented by R^2 statistics in parentheses.

The moderation hypothesis was supported. Open communication significantly moderated the direct effect of language brokering on Wave 1 perceived maternal sacrifice, both for Chinese Americans (β = −.085, p = .023) and for Korean Americans (β = −.087, p = .020). When a moderating variable moderates one or more paths of the mediational chain, it is considered to moderate the entire mediation or indirect effect (Preacher, Rucker, & Hayes, 2007). As the path from language brokering to perceived maternal sacrifice at Wave 1 was part of the mediational mechanism, open communication also significantly moderated the indirect path from language brokering to Wave 2 externalizing problems. The significant interaction was then probed, and examples of the moderating effect of open communication are presented in Figure 3a (moderation on the direct effect of language brokering W1 on perceived maternal sacrifice W1) and Figure 3b (moderation on the indirect effect of language brokering W1 on externalizing problems W2).

In line with predictions, more language brokering was associated with more perceived maternal sacrifice when open communication was low and medium, but not when it was high. For simplicity, the variances of language brokering, open communication, the interaction term between the two, and the intercept of perceived maternal sacrifice were constrained to be equal across Chinese Americans and Korean Americans, which did not significantly worsen the model fit. As shown in Figure 3a, the direct effect of language brokering on perceived maternal sacrifice was significant when open communication was 1SD below the mean (B = 147, p < .001) and at the mean level (B = .092, p < .001), but not when it was 1SD above the mean (B = .038, p = .19). Indirect effects were also moderated by mother-child open communication. As an example, Figure 3b shows the region of significance of the conditional indirect effect (standardized results for the pathway of brokering W1 → perceived sacrifice W1 → perceived sacrifice W2 → respect W2 → externalizing W2). When mother-child open communication was at or below the mean level, the indirect effect was significant. However, when mother-child open communication was 1SD above the mean level, the 95% confidence interval of the indirect effect contained zero, suggesting a non-significant indirect effect.

Discussion

The current study tested a moderated mediation model in which language brokering for the mother was hypothesized to have an indirect effect on decreasing adolescents' internalizing/externalizing problems. First, analyses for the mediation model supported the hypothesized indirect effect of language brokering for the mother on adolescent externalizing problems via perceived maternal sacrifice and respect for the mother, but did not support an indirect effect on internalizing problems. Second, the indirect effect of language brokering for the mother on externalizing problems was moderated by mother-child open communication. Specifically, the less often adolescents experienced mother-child open communication, the stronger the direct effect of language brokering on perceived maternal sacrifice, and the stronger the indirect effect of language brokering on externalizing problems. Third, the

model was generally equivalent across Chinese and Korean American adolescents, with only a slight difference in the magnitude of the effects.

Mediation Findings

The language brokering literature has mixed findings, with researchers observing both positive and negative impacts of language brokering (Morales & Hanson, 2005). This suggests the possibility of multiple competing mechanisms. There is evidence that a weak Chinese orientation is indirectly related to a sense of burden among language brokers (N. H. Wu & Kim, 2009). There is also evidence that through parentification and acculturation stress, language brokering is indirectly related to risky behaviors (Kam, 2011). However, this study was the first to identify a significant protective mechanism of language brokering via the development of culturally salient parent-child relationships. This study highlights the complexity of language brokering, by recognizing that language brokering effects are not always negative, and that there are conditional indirect mechanisms through which positive developmental outcomes may result for Asian American language brokers.

The significant mediation found in this study demonstrates the importance of understanding the cultural context in which language brokering occurs. Several scholars have suggested that language brokering should not be seen as a solitary activity, and that it should be understood in the socio-cultural and relational context (Dorner, Orellana, & Jiménez, 2008; Hua & Costigan, 2012; N. H. Wu & Kim, 2009). Scholars have argued that, in some cultures, even though child language brokers assume some adult-like responsibilities, inordinate power is not necessarily given to the children who function as language brokers; power may still generally remain in the parents' hands (Dorner, et al., 2008; Orellana, et al., 2003). Findings from the current study indicate that, within Chinese and Korean immigrant cultures, language brokering for the mother indirectly increases adolescents' respect for her, through increasing adolescents' understanding of, and appreciation for, the mother's sacrifices. This study shows that language brokering is not necessarily harmful for adolescents. Both of the mediators in this study, perception of maternal sacrifice and respect for the mother, are desired in traditional Asian cultures (Chao & Tseng, 2002; Kim & Park, 2006); it is perhaps for this reason that language brokering is indirectly linked to lower levels of externalizing problems via this specific mechanism.

Contrary to our hypothesis, language brokering did not have a significant indirect effect on internalizing problems through perceived maternal sacrifice and respect for the mother, as it did on externalizing problems. It seems that the constructs of perceived parental sacrifice and respect for parents are beneficial in shaping adolescents' behaviors, but are not particularly helpful for adolescents' emotional problems. Studies show that a sense of gratitude or indebtedness can motivate individuals to behave in ways that allow them to reciprocate the support they have received (Tsang, 2006), and the measure of parental respect does capture adolescents' effort to obey their parents and to live up to the parents' expectations. As such, it is reasonable that these two constructs were more tied to externalizing problems than to internalizing problems. The differential findings from this study are important for understanding the psychological meanings of perception of parental sacrifice and respect for parents, two culturally salient constructs that have rarely been

studied. More importantly, they also highlight the complexity of the developmental outcomes related to language brokering.

Moderated Mediation Findings

This study also identifies the moderating role of mother-child open communication. To date, little research has examined the moderating role of American/Western values in the relations among language brokering, parent-child relationships and adolescent adjustment. This study was the first to test a moderated mediation model of the effect of language brokering, which enables joint examination of mediation and moderation in the same model. The results suggest that the above-mentioned indirect effect is significant, but only when the level of mother-child open communication is relatively low. For Chinese and Korean American adolescents who experience lower levels of open communication, language brokering for the mother becomes beneficial because it creates opportunities for adolescents to better understand their immigrant mother, which in turn leads to greater respect for her, as well as to lower levels of externalizing problems.

When the level of mother-child open communication is relatively high, the indirect effect of language brokering on externalizing problems is no longer significant. Previous qualitative studies show that language brokering takes place within the framework of everyday activities and is experienced by children as “just normal” (Dorner, et al., 2008; Orellana, et al., 2003). Our results suggest that this may be true for those adolescents experiencing high levels of open communication with their mother. Perhaps the beneficial effect of communication is so pronounced that adolescents in these families may exhibit positive outcomes regardless of how much language brokering they do. For these adolescents, language brokering is no longer specifically associated with a greater perception of maternal sacrifice, respect for the mother, or externalizing problems. That is, language brokering becomes a neutral or “just normal” experience in a context of high open communication.

Implications for Interventions for Asian American Adolescent Brokers

Despite the model minority myth, studies continue to find that Asian American adolescents do not exhibit fewer externalizing behavior problems than white youths (e.g., Choi & Lahey, 2006). By identifying a conditional mechanism of the effect of language brokering, the present study can inform interventions that aim to reduce externalizing problems in Asian American adolescent language brokers, especially among Chinese and Korean American adolescents. By improving adolescents’ understanding of their parents’ sacrifices and by encouraging their feelings of respect for parents, intervention programs may be able to maximize the positive effect of language brokering in reducing adolescent externalizing problems. Such interventions may be particularly effective for adolescents who experience less open communication with their parents. Thus, choosing to focus on families with low levels of open communication would conserve resources by ensuring that the families who would benefit most from the intervention are the ones receiving it. At the same time, aiming at improving open communication within these families may also be helpful in ultimately reducing adolescent externalizing problems. Although actual intervention is a more complex undertaking, intervening with protective factors in both heritage (sacrifice and respect) and mainstream (open communication) cultures simultaneously should yield the best results.

With a multiple group analysis, this study tests the generalizability of the conditional mechanism across Chinese and Korean American adolescents. Although there were differences in the magnitude of two relations (perceived sacrifice W1 → respect for mother W1; externalizing W1 → externalizing W2), both of these relations were positive and significant across Chinese and Korean American adolescents. Thus, the study findings may still be generalizable across these two ethnic groups, and interventions designed accordingly can be similarly effective for both Chinese and Korean American adolescents. More studies are needed to examine if similar mechanisms also apply to other Asian subgroups influenced by traditional Chinese culture, such as Japanese and Vietnamese. In the process of establishing equivalence, the distinctiveness of each ethnic group should not be underestimated, and future studies should also identify group-specific factors.

Limitations and Future Directions

This study has several limitations. First, it would be ideal to have four waves of data to test the mediation longitudinally (brokering W1 → perceived sacrifice W2; respect W3 → externalizing problems W4). However, only two waves of data were available; as a result, the interpretation of the mediation relied on the concurrent associations and stability of constructs over time. Nevertheless, it is still one of the first studies to go beyond using cross-sectional data and investigate the longitudinal indirect effect of language brokering. Second, this study relied on adolescents' self-reports to measure the study variables, and adolescents' perceptions of the constructs may not be the same as parents' perceptions. For example, adolescents may feel more respect toward parents because of language brokering, but parents themselves may feel embarrassed or disrespected. Parents' perceptions of language brokering may then influence their parenting practices, which may in turn have an impact on adolescents' psychological adjustment. We intend to pursue this line of inquiry in the future, and we also recommend this as a future direction for research focusing on language brokering.

In conclusion, this study provides some initial evidence that Chinese and Korean American adolescents' culturally relevant parent-child relationships, including factors such as perception of maternal sacrifice, respect for the mother, and mother-child open communication, may form a conditional mechanism through which language brokering for the mother indirectly decreases adolescents' externalizing problems. This study has important implications for intervention programs designed to reduce the risk of externalizing problems among Chinese and Korean American adolescent language brokers.

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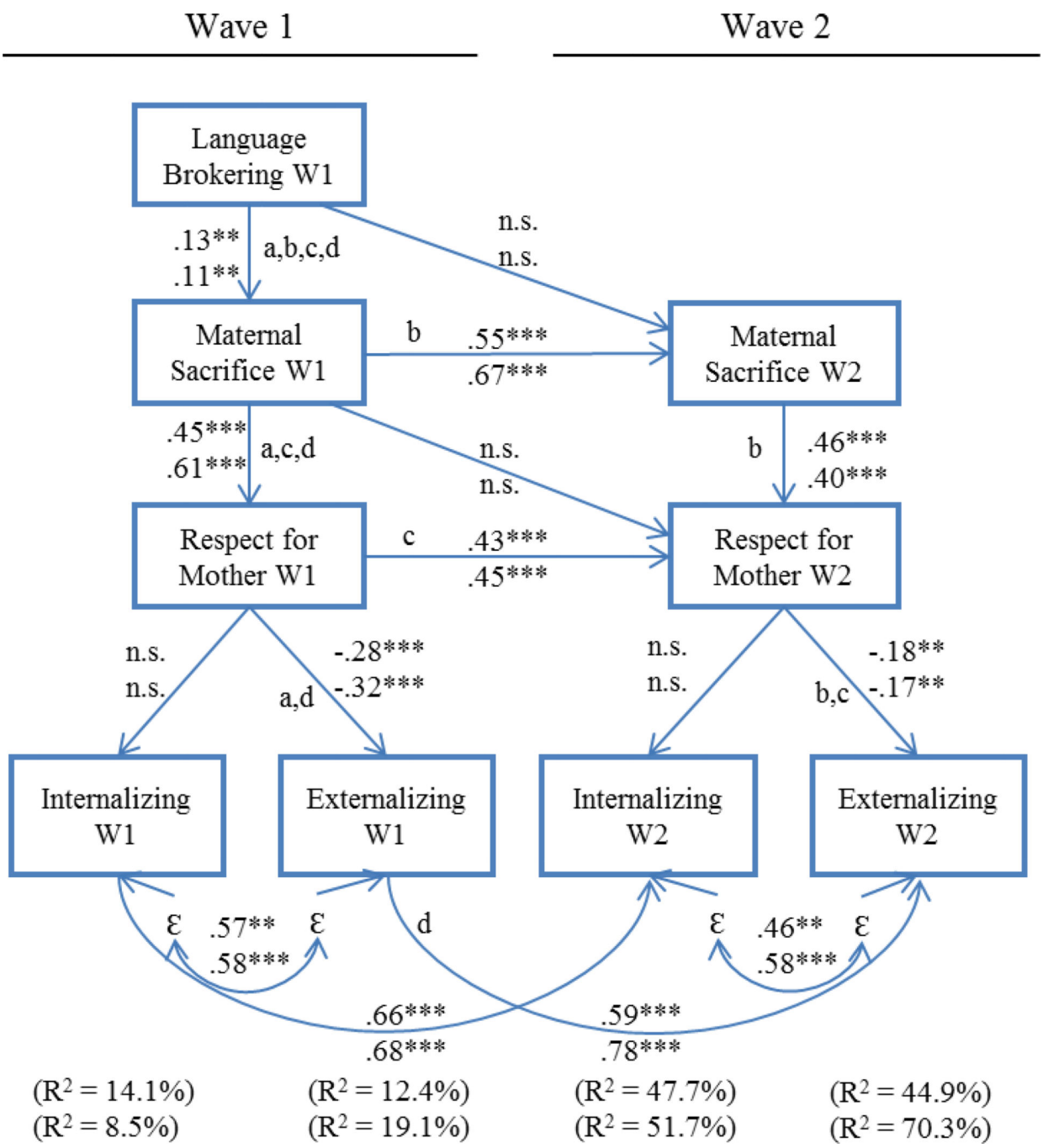


Figure 1.

Structural model linking adolescents' language brokering for mother to perceived maternal sacrifice, to respect for mother, and to internalizing/externalizing problems. The paths for the four significant indirect effects are denoted by the same letters *a*, *b*, *c*, and *d*. The top coefficients are for Korean Americans and the bottom coefficients are for Chinese Americans. Coefficients for paths 1) Maternal Sacrifice W1 → Respect for Mother W1, and 2) Externalizing W1 →Externalizing W2 are significantly different for Chinese and Korean Americans at the .05 level. * $p < .05$; ** $p < .01$; *** $p < .001$.

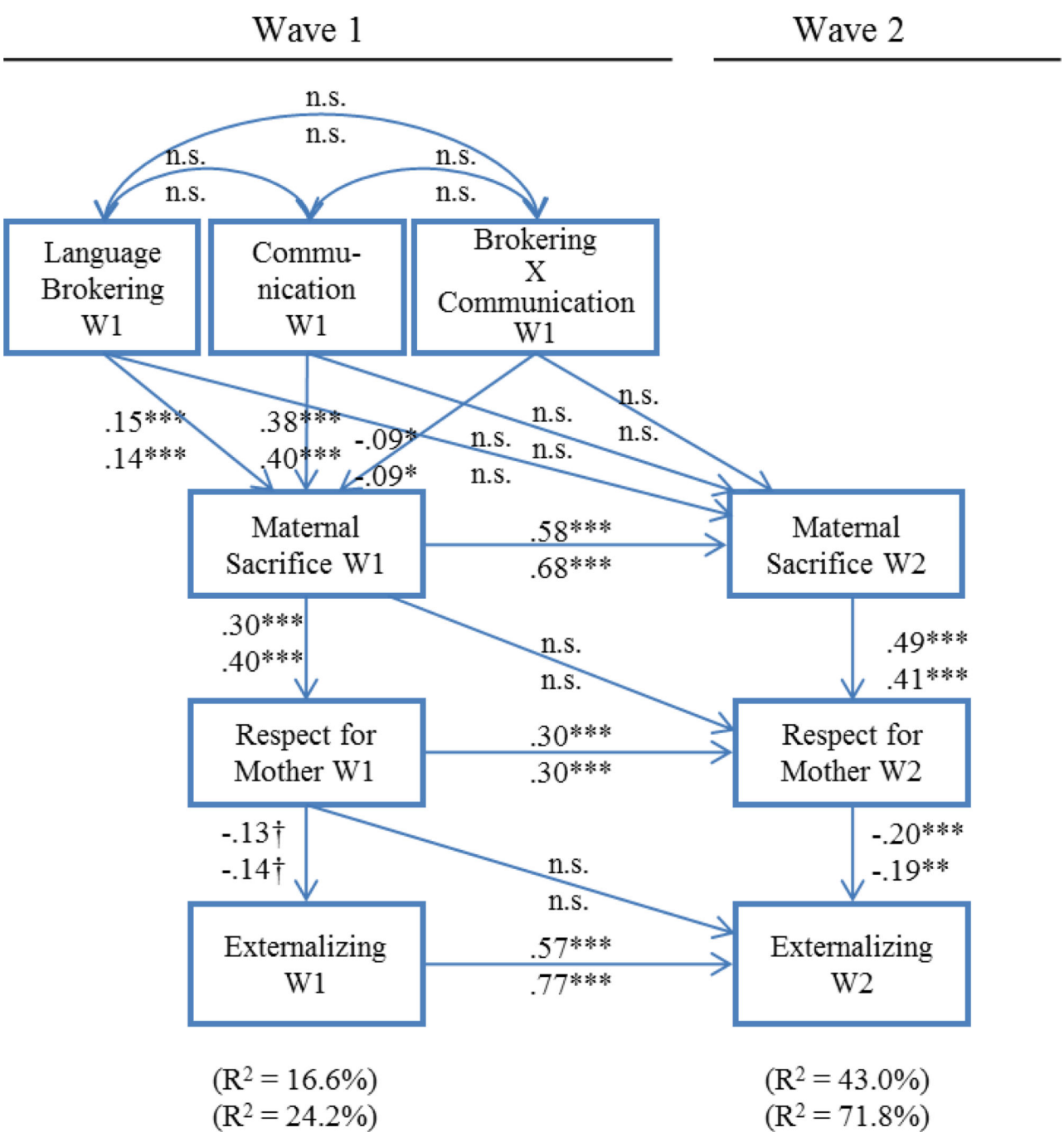
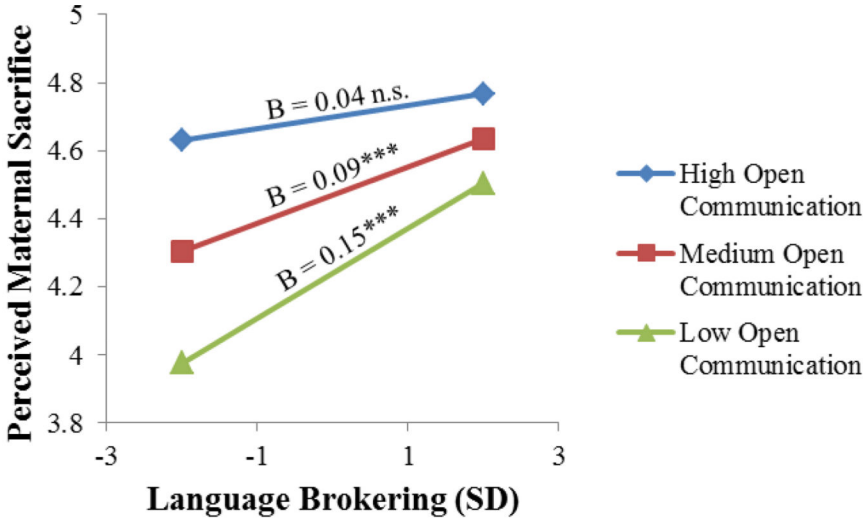
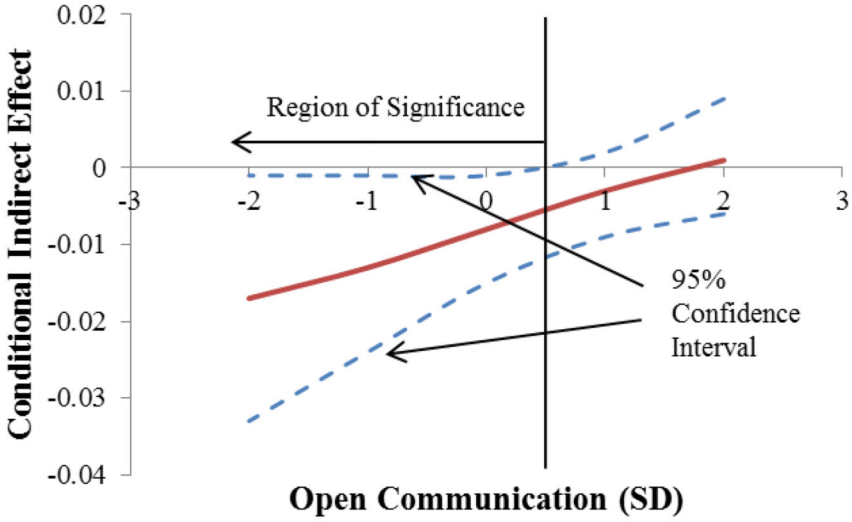


Figure 2.

Moderated Mediation model. The top coefficients are for Korean Americans and the bottom coefficients are for Chinese Americans. † $p < .07$; * $p < .05$; ** $p < .01$; *** $p < .001$.



a.



b.

Figure 3.

a. Plot of Chinese American adolescents' mother-child open communication W1 as a moderator conditioning the direct effect of language brokering W1 on perceived maternal sacrifice W1. The lower the level of open communication, the stronger the relation between language brokering W1 and perceived maternal sacrifice W1.

b. Plot of Chinese American adolescents' mother-child open communication W1 as a moderator conditioning the indirect effect of brokering W1 →perceived sacrifice W1 → perceived sacrifice W2 → respect W2 → externalizing W2. The *y* axis is the magnitude of

the standardized indirect effect of language brokering W1 on externalizing problems W2. The *x* axis is level of mother-child open communication W1. Dashed lines represent 95% confidence intervals. The horizontal line denotes an indirect effect of zero. The vertical line indicates the boundary of the region of significance: the indirect effect is only significant on the left side of the vertical line. Overall, the plot demonstrates that the lower the level of open communication, the stronger the indirect effect is.

Table 1

Zero-order Correlations, Means, and Standard Deviations among Study Variables

	1	2	3	4	5	6	7	8	9	10
1. W1 Brokering	--									
2. W1 Communication	.00	--								
3. W1 Sacrifice	.08	.35**	--							
4. W1 Respect	.06	.54	.46**	--						
5. W1 Internalizing	.13*	−.28**	−.10	−.14*	--					
6. W1 Externalizing	.08	−.37**	−.19**	−.36**	.58**	--				
7. W2 Sacrifice	.00	.26**	.53**	.31**	−.10	−.22**	--			
8. W2 Respect	.03	.40**	.35**	.52**	−.10	−.29**	.52**	--		
9. W2 Internalizing	.15*	−.16*	−.14	−.14	.65**	.27**	−.14	−.19*	--	
10. W2 Externalizing	.08	−.17*	−.19*	−.27**	.23**	.59**	−.17*	−.34**	.43**	--
Child gender	.03	−.04	.03	−.05	−.24**	.05	.01	−.07	−.19*	.16*
Child age	.07	.08	−.01	.10	−.15*	−.03	−.01	.03	−.02	.07
Child generation	−.13*	.01	.07	.01	.09	.04	.00	−.05	.02	.05
Eldest child	.04	.00	−.08	−.12	−.04	−.05	−.06	−.07	.03	−.08
Number of siblings	−.06	.05	.10	.06	.11	.09	−.15	.00	.02	.05
Mother education	−.17*	.11	−.03	.08	−.03	−.06	.15	.16	−.05	−.08
Mother age of arrival	.21*	−.02	−.02	−.01	−.07	−.12	−.13	.03	−.04	−.14
Single parent status	.00	−.03	.03	−.08	.01	.07	.00	−.04	.08	.05
Mean	1.45	3.53	4.5	3.92	0.48	0.37	4.45	3.85	0.45	0.37
SD	0.92	0.75	0.56	0.68	0.3	0.25	0.66	0.71	0.31	0.25
1. W1 Brokering	--									
2. W1 Communication	.04	--								
3. W1 Sacrifice	.17**	.43**	--							
4. W1 Respect	.12	.66**	.62**	--						
5. W1 Internalizing	.08	−.33**	−.12	−.09	--					

	1	2	3	4	5	6	7	8	9	10
6. W1 Externalizing	−.07	−.39**	−.27**	−.33**	.58**	--				
7. W2 Sacrifice	.11	.21**	.67**	.45**	−.04	−.10	--			
8. W2 Respect	.04	.43**	.42**	.56**	.00	−.13	.53**	--		
9. W2 Internalizing	.00	−.12	−.02	.04	.66**	.40**	−.09	−.03	--	
10. W2 Externalizing	−.08	−.29**	−.13	−.22**	.43**	.78**	−.14	−.25**	.57**	--
Child gender	−.04	−.04	−.04	−.14*	−.14*	.16*	−.14	−.22**	−.11	.19*
Child age	.06	−.03	−.13	−.08	.01	.05	−.09	.01	.00	.01
Child generation	−.26**	−.17*	.00	−.06	−.04	.10	.03	−.10	.10	.20**
Eldest child	.00	.03	−.06	−.07	−.08	.03	−.11	−.12	−.07	−.09
Number of siblings	.09	−.10	.03	.00	.14	−.06	.04	−.08	−.02	.02
Mother education	−.22**	−.02	−.06	−.01	−.08	.03	−.10	.05	−.08	−.02
Mother age of arrival	.24**	.26**	.04	.18*	.00	−.06	.05	.18	−.01	.03
Single parent status	.05	.01	.05	.06	.07	.09	.08	.08	−.03	.00
Mean	1.26	3.44	4.44	3.85	0.48	0.34	4.46	3.85	0.46	0.35
SD	0.89	0.83	0.62	0.76	0.3	0.24	0.61	0.74	0.3	0.27

Notes: Top coefficients are for Korean Americans, and bottom coefficients are for Chinese Americans.

* $p < 0.05$;

** $p < 0.01$.