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Involvement in Preschools: Comparing Chinese Immigrant and Non-Chinese Parents in New Zealand

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Abstract
This study compared 120 Chinese immigrant parents and 127 non-Chinese parents from New Zealand preschools on their level of involvement in preschool-based activities, as well as key predictors of parental involvement. Results showed that Chinese immigrant parents had a lower level of involvement than non-Chinese parents across three forms of involvement including communication with teachers, volunteering to help at the preschool, and participation in the preschool's decision making. For the entire sample, parental role construction and parenting self-efficacy were predictors of all three forms of involvement, and perceived opportunity for involvement was predictor of communication with teachers. For the Chinese immigrant sample, perceived opportunity for involvement predicted communication with teachers and participation in the preschool's decision making, and educational qualification predicted communication with teachers. The findings highlight the role of parents' motivational beliefs in parental involvement, in particular, the importance of teacher invitations for parental involvement among Chinese immigrant parents.

Key words
Parental involvement, preschool, Chinese immigrant, role construction, self-efficacy, opportunity for involvement

Introduction
Parental involvement in children's education benefits social skills and academic competence among school-age children (Barnard, 2004; Nokali, Bachman, & Votruba-Drzal, 2010), and it is particularly beneficial for preschool children's learning and development (Raffaele & Knoff, 1999; Sheridan, Knoche, Edwards, Bovaird, & Kupzyk, 2010; Galindo & Sheldon, 2012). Parental involvement in the early childhood years may influence children's academic achievement to a greater extent than in elementary and high school (Chao, 2000; Englund, Luckner, Whaley, & Egeland, 2004). Today, most influential curriculum models such as Reggio Emilia (Giudici, Krechevsky, & Rinaldi, 2001) and Developmentally Appropriate Practice (Copple & Bredekamp, 2009) highlight the key role of families in children's learning. Educational authorities in many countries set out mandatory requirements for early childhood services to work in partnership with parents (e.g., Department for Education, 2012; Ministry of Education, 1996).

Previous studies have shown that language minority immigrant parents tend to have a lower level of involvement in their children's school or early childhood service (Lee & Manning, 2001; Pelletier & Brent, 2002; Harper & Pelletier, 2010). For example, Pelletier and Brent (2002) found

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that immigrant parents of preschool children in Canada who spoke English as a second language were less involved in the preschool intervention program, and less likely to approach the teacher with questions and observations. In New Zealand, Asians are the largest language minority immigrant group which accounts for 11.8% of the nation's population, and Chinese immigrants (171,000) are the largest Asian ethnic group (Statistics New Zealand, 2013). However, there is essentially no research that devotes to the topic of parental involvement in early childhood education among Chinese immigrant parents. The few studies which touch on the subject are based on small case studies that have limited generalisability (Mitchell, Haggerty, Hampton, & Pairman, 2006; Guo, 2005). In particular, there is no research of comparative nature that compares Chinese immigrants and non-language minority New Zealanders on their patterns of parental involvement in early childhood education. This study was intended to address the gap.

Epstein (1995) classified parental involvement into six categories: parenting (i.e., authoritative parenting practices such as nurturing, guiding, motivating and disciplining children), communicating (e.g., telephone and face to face conversation with teacher, reading newsletters sent home), volunteering (e.g., helping with classroom sessions, school events, and field trips), learning at home (e.g., creating a home environment conducive to the child's learning), decision making (e.g., becoming a parent representative), and collaborating with the community. While Epstein's multi-dimensional typology was initially established and predominantly implemented in elementary school settings, it has been adapted for use in a number of early childhood education studies (Fantuzzo, Tighe, & Childs, 2000; Pelletier & Brent, 2002; Henrich & Gadaire, 2008). Using Epstein's typology with a sample of urban parents of young children (preschool, kindergarten, and first grade students), Fantuzzo and colleagues developed a multidimensional scale of family involvement, Family Involvement Questionnaire (FIQ) (Fantuzzo et al., 2000), which has been utilised to assess parental involvement dimensions in preschool settings by other researchers (Waanders, Mendez, & Downer, 2007; Laforett & Mendez, 2010). Endorsing the view that involvement activities that are most readily affected by changes in preschool policy and practices should be a research priority (Mulligan, 2005), the present study focused on three of Epstein's (1995) six forms of parental involvement, that is, communication with teachers, volunteering to help at preschool, and participation in the preschool's decision making which were more susceptible to preschool policy and practices than home-based involvement.

Research has shown that a number of factors may influence parental involvement in education. Hoover-Dempsey and Sandler (1997) identified three psychological constructs that are vital to parents' basic involvement decisions: (1) parental role construction (i.e., parents' understanding of their responsibilities with regard to the child's education); (2) parenting self-efficacy (i.e., parents' belief about their competence in helping with the child's school success); and (3) general invitations and opportunities for involvement (i.e., parents' perceptions that the child and school want them to be involved). Since all the three constructs are concerned about parents' perceptions rather than factual reality, Hoover-Dempsey and Sandler referred to them as parental belief variables. In Reed, Jones, Walker and Hoover-Dempsey's (2000) study, parental role construction, parenting efficacy and perceptions of teacher invitations were found to account for 35% of the variance in parent involvement in American elementary schools. Although the Hoover-Dempsey and Sandler model evolved from studies with school samples, it has informed studies in the early childhood education field. For example, Pelletier and Brent (2002) interviewed Canadian parents of 4-year-old children and revealed that parents who perceived themselves as more effective at teaching and motivating their child were more involved in the preschool parenting and school readiness program.

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Socioeconomic status variables such as parental education, income and employment status have also been linked with the extent of parental involvement. Many studies have shown a positive relation of education to parental involvement. For example, Fantuzzo et al. (2000) surveyed parents in preschool, kindergarten, and first-grade programs and found that parents with education above high school had higher levels of school-based involvement and home-school communication than parents with education below high school. Mixed findings emerged on the effect of employment status and family income due to differences in sample characteristics and involvement measures across studies. Some researchers reported that parents could not participate in school activities because of their employment (Shuang Ji & Koblinsky, 2009) and that employed parents were less likely to volunteer in school activities than unemployed parents (Castro, Bryant, Peisner-Feinberg, & Skinner, 2004), while others found that mothers who were employed were more likely to access formal information about the preschool (Yamamoto, Holloway, & Suzuki, 2006). There is also research showing that work status was not associated with any form of parental involvement (Holloway, Yamamoto, Suzuki, & Mindnich, 2008). The influence of income has been found to be limited and moderate. Cooper (2010) revealed a negative association between family poverty and school-based parental involvement that was mediated by parent's education and school invitation. Davis-Kean and Sexton (2009) found that income had weak effect on involvement, and that income might be only important in the early years. Also, there have been studies that revealed no relationship between level of income or resources and parental involvement (Yamamoto et al., 2006; Anderson & Minke, 2007).

Researchers have identified language barrier as an impediment to parental involvement. Pena (2000) found that language barrier was particularly influential on parents' choice of types of involvement. According to Gorinski and Fraser (2006), language barrier prevents parents from obtaining information about the mainstream educational system and can result in a general reluctance to become involved.

Traditional Chinese parenting practices have been linked to parental involvement among Chinese immigrant parents (Dyson, 2001; Li, 2006; Shuang Ji & Koblinsky, 2009). For example, Dyson (2001) found that Chinese immigrant parents were more likely to communicate about academic activities and were less likely to communicate about school events than non-immigrant European-Canadian parents of primary schools, and postulated that emphasis on education in Chinese culture might have "distracted the Chinese parents from their traditional valuation of group well-being, and hence from contributing to such public school events as fundraising" (p.471). Researchers have captured some of the most typical traditional Chinese parenting practices, namely, encouragement of modesty, protection, directiveness, shaming, and maternal involvement. Encouragement of modesty originates from a central Confucian principle - being humble and modest, and giving priority to group interests (Triandis, 1993; Wu et al., 2002). Protection is consistent with the Chinese cultural value of an essential duty of parenthood - ensuring a safe and appropriate environment for the young child (Chao, 1994). Parental directiveness is based on the Chinese cultural belief that young children are incapable of understanding and making decisions, and refers to regulating children's behavior and academic performance with a focus on control and correction (Wu et al, 2002). Shaming originates from the Confucian concept of shame, and includes guilt induction, love withdrawal, warnings of punishment, and statements about being ashamed of misbehavior (Fung, 1999). Maternal involvement refers to mother's being immensely involved and devoted to their children (Wu et al., 2002). In a cross-cultural study comparing parenting of preschoolers between mainland Chinese and North American cultures, Wu et al.

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(2002) developed the Parenting Practices Emphasised in China scale, a subscale of the adapted Parenting Styles and Dimension Questionnaire (PSDQ), for measuring these traditional Chinese parenting practices. The five-construct Parenting Practices Emphasised in China scale was used in the present study.

Research questions and hypotheses

The research questions were: 1. How do Chinese immigrant parents differ from non-language minority New Zealand parents in the level of involvement in preschool? 2. What are the predictors of parental involvement in preschool among Chinese immigrant and non-language minority New Zealand parents? Correspondingly, it was hypothesised: 1. Chinese immigrant parents would be less involved in communication with teachers, volunteering to help at preschool, or the preschool's decision making than non-language minority New Zealand parents; 2.1. Parental role construction, parenting self-efficacy, and perceived opportunities for involvement would be predictors of parental involvement in preschool for both Chinese immigrant and non-language minority New Zealand parents; 2.2. There would be differences in the effect of individual predictors on parental involvement between Chinese immigrant and non-language minority New Zealander samples; 2.3. English level would be positively associated with Chinese immigrant parents' involvement; 2.4. Traditional Chinese parenting practices would be negatively associated with Chinese immigrant parents' involvement. The following section details how these hypotheses were tested to answer the research questions.

Methodology

Participants

In this study, 'Chinese immigrant parent' referred to an immigrant parent who self-identifies as being of Chinese descent and does not speak English as first language, and 'non-Chinese parent' was used to refer to a non-language minority New Zealand parent (i.e., a New Zealand resident or citizen who is non-Chinese and speaks English as first language). The participants were 247 parents (120 Chinese immigrant, 127 non-Chinese) from 50 public preschools. All public preschools in the Auckland (New Zealand) urban region with Chinese children on the roll were approached and all Chinese immigrant parents given the Parent Questionnaires. Non-Chinese parents were sampled randomly, that is, those whose children were listed next on the preschool roll after each Chinese immigrant child were selected. The questionnaire return rates of Chinese immigrant and non-Chinese parents were 30.0% and 36.3% respectively.

The majority of parents in both samples were mothers (Chinese 87.5%; non-Chinese 95.3%) and were married (Chinese 93.3%; non-Chinese 91.3%). Chinese from mainland China made up 79.2% of the Chinese immigrant group, followed by Chinese from Southeast Asia (13.3%), Hong Kong (4.2%) and Taiwan (3.3%). European accounted for 81.1% of the non-Chinese group, followed by Maori (3.9%), Pasifika (3.1%) and Indian (2.4%). The average age of Chinese immigrant participants was 36.3 years (SD = 5.4) and non-Chinese participants 36.0 years (SD = 4.7). On a 5-point scale (1 = no qualification to 5 = postgraduate), the average highest educational qualification was 3.4 (SD = 1.0) for Chinese immigrant parents and 3.3 (SD = 1.1) for non-Chinese parents. Among Chinese immigrant parents, 23.3% worked full-time, 26.7% worked part-time and 60.0% were not employed compared to 12.6%, 33.9% and 53.5% of non-Chinese parents. On a 6-point scale (1=less than 20,000 to 6 = 100,001 and over), the average annual income of Chinese immigrant parents was 2.6 (SD = 1.3) (approximately NZ$50,000), compared to 4.3 (SD = 1.5) of non-Chinese parents (approximately NZ$ 82,000). On a 4-point scale (1= limited to 4 = very good), Chinese immigrant parents' average self-ratings of their English language level were 2.2 (SD

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= 1.0) and 2.1 (SD = 1.0) for oral and written English respectively. The average length of time of Chinese immigrant parents' living in New Zealand was 8.9 years (SD = 5.0).

Measures

The Parent Questionnaires included parent demographic information (e.g., socioeconomic status, self-rated English level) and scales measuring parental involvement, parental role construction, parenting self-efficacy, perceived opportunities for involvement, and traditional Chinese parenting practices.

The Parent Family Involvement Questionnaire (FIQ) (Fantuzzo et al., 2000) was used to measure communication with teachers (e.g., 'I talk to my child's teacher about my child's difficulties at preschool') and volunteering to help at preschool (e.g., 'I volunteer to help during my child's preschool sessions'). In this study, to capture a fuller range of parental involvement, a category of 'never' was added, extending the original 4-point Likert scale to a 5-point scale (1 = never to 5 = always). Cronbach's alphas of .93 and .77 were obtained for the two constructs for the Chinese immigrant sample, and .87 and .74 for the non-Chinese sample. Based on philosophy statements of the sampled preschools, a 3-item construct was developed to measure participation in the preschool's decision making (e.g., "I participated in decisions about the preschool's programs and activities that will impact my own and other children's educational experiences"). The items were subjected to Principal Components Analysis which revealed the presence of one principal component, and the one-component solution explained a total of 67.4% of the variance and showed 3 strong loadings of .72, .86 and .87. Cronbach's alphas of .71 and .75 were obtained for the Chinese immigrant and non-Chinese samples respectively.

The Parental Role Construction for Involvement in the Child's Education Scale: Role Activity Beliefs (Walker, Wilkins, Dallaire, Sander, & Hoover-Dempsey, 2005) was adapted to measure parental role construction. The scale employs a 6-point Likert response format (1 = strongly disagree to 6 = strongly agree), and parents responded to statements such as "It is my responsibility to volunteer at the preschool". Several modifications were made to the scale to make it more appropriate to a New Zealand early childhood education context, for example, the item 'explain tough assignments to my child' was deleted as New Zealand children did not receive homework in preschool. Cronbach's alphas of .90 and .77 were obtained for the Chinese immigrant and non-Chinese samples respectively.

The Parental Sense of Competence Scale (PSOC) (Gibaud-Wialliston & Wandersman, 1978) consists of Satisfaction and Efficacy sub-scales. The 7-item Efficacy subscale was used to measure parenting self-efficacy in the present study. On a 6-point Likert scale (1 = strongly disagree to 6 = strongly agree), parents were asked to respond to statements such as "Being a parent is manageable, and any problems are easily solved". Reliability tests in the present study yielded Cronbach's alphas of .81 and .82 for the Chinese immigrant and non-Chinese sample respectively.

A 14-item 6-point (1 = strongly disagree to 6 = strongly agree) Likert scale was developed to measure perceived opportunity for involvement. Parents were asked to respond to statements such as 'I personally feel welcome when I enter the preschool'. Principal Components Analysis resulted in a one-component solution explaining a total of 53.1% of the variance and showing strong loadings for all items (.48 to .85). Cronbach's alphas of .92 and .89 were obtained for the Chinese immigrant and non-Chinese samples respectively.

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The Parenting Practices Emphasised in China subscale of the adapted Parenting Styles and Dimension Questionnaire (PSDQ) (Wu et al., 2002) was used to measure traditional Chinese parenting practices. Parents were asked to respond to statements such as 'I discourage my child from showing off his/her skills or knowledge to get attention' (encouragement of modesty), 'I tell my child that he/she should be ashamed when he/she misbehaves' (shaming), 'I overly worry about my child getting hurt' (protection), 'I demand that my child does things that I want or think he/she needs to do' (directiveness), 'Children should be in the constant care of their mothers or family' (maternal involvement). In the present study, the Cronbach alpha for the majority of the five sub-constructs was below .70, especially for those with fewer items. According to Briggs and Cheek (1986), for short scales, an optimal inter-item correlation (.2 to .4) is an alternative reliability indicator, and all sub-constructs showed acceptable reliability based on this criterion.

Both English and Chinese version of the questionnaires were available to Chinese immigrant participants. The Chinese version had been translated using the back-translation technique by two different experts in the field of early childhood.

Data analytical methods

To test Hypotheses 1, two tailed independent-samples *t*-tests were performed to compare Chinese immigrant and non-Chinese parents' self-ratings of their level of parental involvement. To test Hypotheses 2.1-2.2, hierarchical multiple regressions were performed for the entire sample to investigate the effect of potential predictors on each form of parental involvement, and interaction terms (group x predictor) were calculated and entered into the regressions. The purpose of the use of interaction terms and the entire sample for regressions was to ensure same predictor variables were compared between Chinese immigrant and non-Chinese samples. To test Hypotheses 2.3-2.4, separate regressions were performed for the Chinese immigrant sample to investigate the effect of Chinese specific predictors. To determine the variables to be entered into the regression models, Pearson product-moment correlations between hypothesised predictors and each form of parental involvement (see Table 1) were conducted.

For the entire sample, all variables that significantly correlated with a form of parental involvement were selected. For the Chinese immigrant sample, given the smaller sample size, in order to keep the variables to a minimum to maintain satisfactory statistical power, a correlation threshold of .30 (Tabachnick & Fidell, 2007) was adopted. All regression analyses followed a fixed entry order. For the entire sample regressions, the dummy variable 'group' (Chinese immigrant, non-Chinese) was entered at the first step, demographic variables the second step, perceived opportunity for involvement the third step, all parental belief and parenting practice variables the fourth step, and interaction terms were entered at the last step. For the Chinese immigrant sample, similar entry order was followed except that there were no dummy variable or interaction terms, and that English level was entered after the demographic variables.

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Table 1: Pearson product-moment correlations between criterion and predictor variables

	Communication		Volunteering		Decision making	
	Entire	Chinese	Entire	Chinese	Entire	Chinese
Parental beliefs						
Role construction	.41***	.47***	.46***	.54***	.36***	.42***
Self-efficacy	.38**	.51***	.36***	.43***	.34***	.45***
Opportunity	.53***	.56***	.43***	.54***	.34***	.53***
Socioeconomic status						
Education	.12	.37***	-.05	.12	-.04	.22*
Income	.29***	.27**	.14*	.02	.20**	.07
Work status	.04	-.01	-.12	-.12	-.06	-.03
Chinese parenting						
Modesty	-.06	-.05	-.01	.04	-.01	.05
Shaming	-.34***	-.27**	-.33***	-.32***	-.24***	-.18
Protection	-.12	-.11	.07	-.15	-.07	-.17
Directiveness	-.12	-.18	-.10	-.05	-.11	-.02
Maternal involvement	-.18**	-.01	-.10	-.08	-.15*	-.10
English level	-	.39***	-	.17	-	.25**

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

Results

Between-group comparisons of levels of parental involvement

The results of independent-samples *t*-tests (Table 2) showed that Chinese immigrant parents were significantly less involved than non-Chinese parents on all three forms of parent involvement including communicating with teachers ($p < .001$), volunteering to help at preschool, ($p < .001$) and participation in decision making ($p < .001$).

Table 2: Comparison between Chinese immigrant and non-Chinese parents on the level of parental involvement

Parameters (Mean score range)	Chinese (n=120) *M (SD)*	Non-Chinese (n=127) *M (SD)*	*t* (df)	Cohen's *d*
Communication (1-5)	2.67 (.92)	3.23 (.74)	5.34*** (229)	.67
Volunteering (1-5)	2.37 (.83)	2.75 (.81)	3.60*** (245)	.46
Decision making (1-5)	1.84 (.82)	2.32 (1.09)	3.89*** (234)	.50

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

Factors associated with parental involvement

Communication with teachers

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Hierarchical multiple regression was performed to examine the associations of communication with teachers with selected variables moderated by their interactions with group (Table 3). Step 1: the group variable explained 10.6% of the variance in communication with teachers, $p < .001$. Step 2: income increased the total variance explained to 12.8%, $p < .05$. Step 3: opportunity for involvement was entered resulting in the total model variance of 30.1%, $p < .001$. Step 4: shaming, role construction, self-efficacy and maternal involvement increased the total variance explained to 34.5%, $p < .01$. Interaction terms were entered at Step 5 and made no significant *R* square change, showing no group difference in the associations of the variables entered with communication with teachers, therefore, Model 4 was reported as the final model where three variables produced a statistically significant beta value, with opportunity recording the highest beta value, ß = .29, $p < .01$, followed by role construction, ß =.16, $p < .05$, and self-efficacy, ß = .16, $p < .05$.

Table 3: Summary of hierarchical regression analysis for variables predicting communication with teachers

	Model I		*Model II*		*Model III*		*Model IV*	
	B (*SE*)	β	B (*SE*)	β	B (*SE*)	β	B (*SE*)	β
The entire sample								
Group	-.57 (.11)	-.33***	-.42 (.12)	-.24**	-.08 (.12)	-.05	-.09 (.14)	-.05
Income			.09 (.04)	.17*	.08 (.03)	.14*	.06 (.03)	.11
Opportunity					.58 (.08)	.47***	.36 (.09)	.29***
Shaming							-.01 (.08)	-.01
Role construction							.21 (.08)	.16*
Self-efficacy							.19 (.07)	.16*
Maternal involvement							-.06 (.06)	-.07
ΔR^2	.106***		.022*		.173***		.044**	
The Chinese sample								
Qualification	.35 (.08)	.37**	.22 (.09)	.23*	.23 (.08)	.24**		
English level			.14 (.05)	.28**	.08 (.04)	.16		
Opportunity					.65 (.09)	.50***		
ΔR^2	.135***		.059**		.241***			

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

A separate regression including one Chinese-specific variable, English level, was performed for the Chinese sample (Table 3). Step 1: educational qualification explained 13.5% of the variance, $p < .001$. Step 2: English level increased the total variance explained to 19.4%, $p < .01$. Step 3: opportunity for involvement was entered resulting in the total model variance of 43.5%, $p < .001$. In Model 3, two variables produced a statistically significant beta value, with opportunity for involvement recording a higher beta value, ß = .50, p < .001, than educational qualification, ß = .24, p < .01.

Volunteering to help at preschool

Hierarchical multiple regression was performed to examine the associations of selected variables with volunteering to help at preschool, moderated by their interactions with group (Table 4). Step 1: the group variable explained 5.0% of the variance, $p < .001$. Step 2: income made no significant *R* square change. Step 3: opportunity for involvement was entered resulting in the total model

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variance of 18.3%, $p < .001$. Step 4: shaming, role construction, and self-efficacy increased the total variance explained to 28.6%, $p < .001$. Interaction terms between group and all independent variables were entered at Step 5 and made no significant *R* square change, showing no group difference in the associations of the variables entered with volunteering to help at preschool, therefore, Model 4 was reported as the final model where two variables produced a statistically significant beta value, with role construction recording a higher beta value, ß = .29, $p < .001$, than self-efficacy, ß = .16, $p < .05$. No separate regression was conducted for the Chinese immigrant sample because no Chinese-specific variable was correlated with volunteering to help at preschool.

Table 4: Summary of hierarchical regression analysis for variables predicting volunteering to help at preschool

	Model I		*Model II*		*Model III*		*Model IV*	
	B (*SE*)	β	B (*SE*)	β	B (*SE*)	β	B (*SE*)	β
The entire sample								
Group	-.38 (.10)	-.22***	-.35 (.12)	-.21**	-.07 (.12)	-.04	-.06 (.13)	-.04
Income			.02 (.04)	.03	.00 (.03)	.01	-.02 (.03)	-.03
Opportunity					.48 (.08)	.41***	.17 (.09)	.14
Shaming							-.11 (.08)	-.10
Role construction							.35 (.08)	.29***
Self-efficacy							.17 (.07)	.16*
ΔR^2	.050***		.000		.133***		.103***	

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

Participation in the preschool's decision making

Hierarchical multiple regression was performed to examine the associations of selected variables with participation in decision making, moderated by their interactions with group (Table 5). Step 1: the group variable explained 5.7% of the variance, $p < .001$. Step 2: income produced no significant *R* square change. Step 3: opportunity for involvement was entered resulting in the total model variance of 13.3%, $p < .001$. Step 4: maternal involvement, self-efficacy, role construction, and shaming increased the total variance explained to 21.6%, $p < .001$. Step 5: interaction terms increased the total variance explained to 25.2%, $p < .001$. In Model 5, four variables produced a statistically significant beta value, with role construction recording the highest beta value, ß = .41, $p < .001$, followed by interaction between group and opportunity, ß = .32, $p < .01$, interaction between group and role construction, ß = -.30, $p < .01$, and self-efficacy, ß = .25, $p < .01$.

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Table 5: Summary of hierarchical regression analysis for variables predicting participation in decision making

	Model I		*Model II*		*Model III*		*Model IV*		*Model V*	
	B (*SE*)	β	B (*SE*)	β	B (*SE*)	β	B (*SE*)	β	B (*SE*)	β
The entire sample										
Group	-.48 (.12)	-.24***	-.37 (.14)	-.19**	-.13 (.15)	-.07	-.18 (.17)	-.09	-.02 (.19)	-.01
Income			.06 (.04)	.11	.05 (.04)	.09	.03 (.04)	.05	.03 (.04)	.04
Opportunity					.41 (.09)	.29***	.08 (.11)	.05	-.14 (.15)	-.10
Maternal involvement							-.11 (.07)	-.11	-.14 (.09)	-.13
Self-efficacy							.28 (.09)	.22**	.32 (.12)	.25**
Role construction							.35 (.10)	.24**	.60 (.15)	.41***
Shaming							.05 (.10)	.04	-.15 (.22)	-.12
Group x opportunity									-.06 (.15)	-.04
Group x maternal involvement									-.13 (.19)	-.07
Group x self-efficacy									-.53 (.21)	-.30*
Group x role construction									.61 (.24)	.32*
Group x shaming									.25 (.25)	.16
ΔR^2	.057***		.010		.066***		.083***		.036*	
The Chinese sample										
Qualification	.18 (.08)	.22*	.11 (.09)	.13	.12 (.08)	.14				
English level			.08 (.05)	.18	.03 (.04)	.06				
Opportunity					.58 (.09)	.50***				
ΔR^2	.047*		.025		.240***					

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

Figure 1 illustrates how group and perceived opportunity for involvement interacted in their effect on participation in decision making. Perceived opportunity for involvement had a positive effect on participation in decision making for Chinese immigrant parents, whereas it had negative effect for non-Chinese parents. Figure 2 illustrates how group and parental role construction interacted in their effect on participation in decision making. Parental role construction had no effect on participation in decision making for Chinese immigrant parents, whereas it had a strong positive effect for non-Chinese parents

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Figure 1: Graphic display of interaction between group and perceived opportunity for involvement on participation in decision making

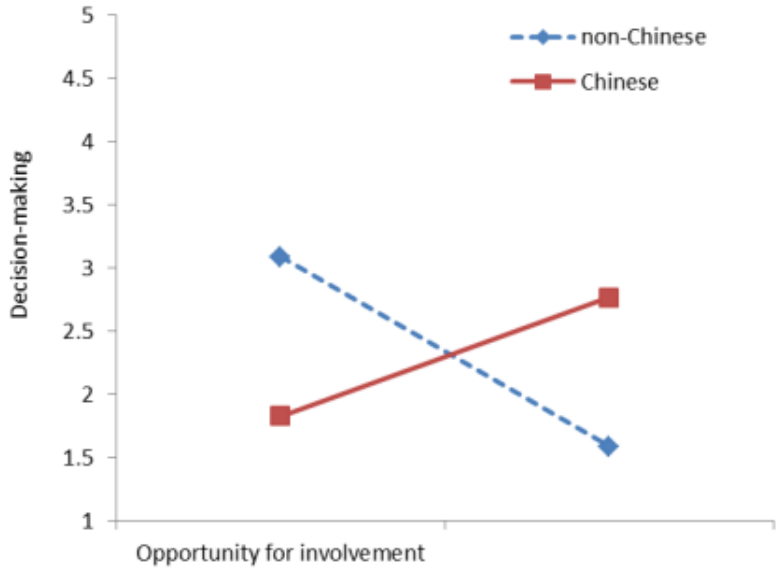
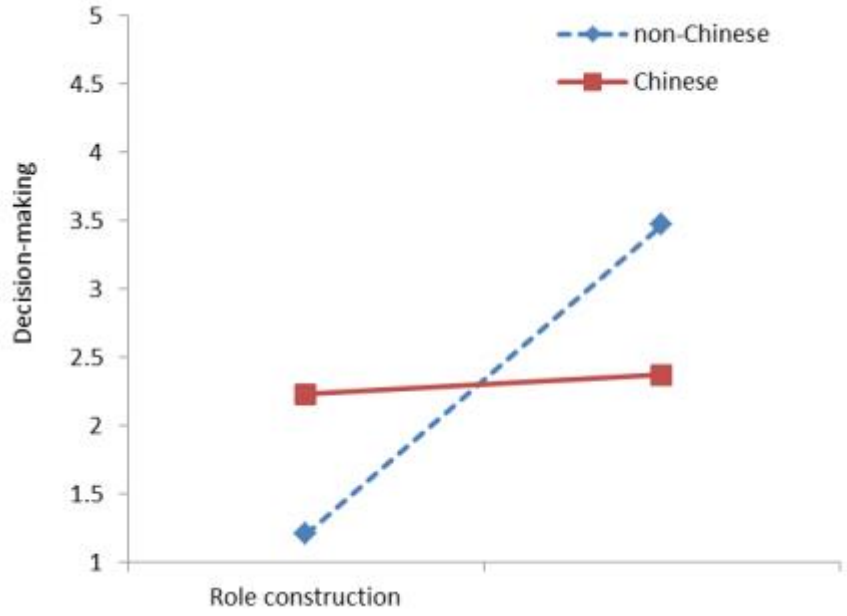


Figure 2: Graphic display of interaction between group and parental role construction on participation in decision making



A separate regression including one Chinese specific variable, English level, was performed for the Chinese immigrant sample (Table 5). Step 1: educational qualification explained 4.7% of the variance, $p < .05$. Step 2: English level increased the total variance explained to 7.2%, $p > .05$. Step 3: opportunity for involvement was entered resulting in the total model variance of 31.2%, $p < .001$. In Model 3, opportunity for involvement was the only variable that produced significant beta value, ß = .50, p <.001.

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In summary, Chinese immigrant parents had a lower level of involvement than non-Chinese parents across all three forms of involvement. For the entire sample, parental role construction and parenting self-efficacy were predictors of all three forms of involvement, and perceived opportunity for involvement was predictor of communication with teachers. For the Chinese immigrant sample, perceived opportunity for involvement predicted communication with teachers and participation in the preschool's decision making, and educational qualification predicted communication with teachers. In particular, Chinese immigrant parents' participation in decision making was more influenced by perceived opportunity for involvement compared to non-Chinese parents for whom parental role construction was more influential.

Discussion

As hypothesised, this study confirmed that Chinese immigrant parents had lower levels of involvement than non-Chinese parents across all three forms of parental involvement, which added to existing evidence that language minority immigrant parents are less involved in their child's education (Dyson, 2001; Li, 2006; Harper & Pelletier, 2010). The more significant contributions that this study made were: (1)This study found that parental role construction, parenting self-efficacy and perceived opportunities for involvement were three largest contributors to communication with teachers in preschool, thus extending the seminal Hoover-Dempsey and Sandler (1997) model based on the US school samples to a preschool sample in New Zealand; (2) This study identified a crucial role of perceived opportunity for involvement in predicting parental involvement in preschool among Chinese immigrants; (3) This study discovered commonalities and differences between Chinese immigrant and non-Chinese parents in the effect of a set of predictors on different forms of parental involvement in preschool.

For the entire sample in this study, perceived opportunity for involvement, parental role construction and parenting self-efficacy were found to be three largest contributors to, and account for 34.5% of the variance in, communication with teachers. The result was in perfect conformity to the Hoover-Dempsey and Sandler (1997) model and surprisingly similar to that of Reed et al. (2000) who found that 35% of the variance in parent involvement in American elementary schools was attributable to the three predictors. It was interesting to note that perceived opportunity for involvement was not predictor of volunteering to help at preschool for the entire sample. It seemed plausible that, compared to communication with teachers, volunteering to help at preschool depended more on parents' internal motivation and personal circumstances than on external factors such as teachers' invitations. Parents tended to take part in giving activities such as fundraising and donation at their own will. This was especially the case with the public preschools where opportunities for volunteering to help were ample. In New Zealand public preschools, there were regular fundraising activities, and it was not unusual that parents were rostered to help with the preschool's sessions. In a sense, opportunity for volunteering to help might have reached a saturation point for both Chinese immigrant and non-Chinese parents so that it made no contribution to the variance in the level of involvement. It was also interesting to note that, for non-Chinese parents, perceived opportunity for involvement was negatively related to participation in decision making, which was in stark contrast with Chinese immigrant parents.

Perceived opportunity for involvement was found to be the largest contributor to Chinese immigrant parents' participation in decision making, a pattern which was not found among the non-Chinese sample. The crucial importance of perceived opportunity for involvement to the Chinese immigrant parents was prominent in this study, and the reasons were intriguing. First,

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parental role construction and parenting self-efficacy of Chinese immigrant parents could possibly not be strong enough to motivate or activate involvement activities, which might have resulted in the need for more and stronger invitation messages. Second, it was possible that Chinese immigrant parents needed more explicit and constant invitations because of their deference to teachers (Lai & Ishiyama, 2004) and lack of knowledge of the mainstream culture and English language skills. Chinese immigrant parents might not be able to perceive invitations from teachers as effectively as mainstream parents, particularly when the perception involves understanding and interpretation of verbal messages (e.g., newsletters, notice board and oral communication) from teachers. Third, since Chinese immigrant parents' assumptions and expectations might not be understood by teachers or even conflict with teachers', teachers might inadvertently not send as many invitation messages to immigrant parents as they send to the non-Chinese parents (Huntsinger & Jose, 2009). Chinese immigrant parents' over dependency on perceived opportunity for involvement would be more severe when they face more challenging involvement tasks such as participation in decision making.

For the Chinese immigrant sample, educational qualification was predictor of communicationwith teachers. This finding is consistent with previous studies which have shown lower educational qualifications to be a barrier to involvement in early childhood education (Davis-Kean & Sexton, 2009) as well as in Head Start (Waanders et al., 2007). However, the effect of educational qualification was not found among non-Chinese parents. Compared to non-Chinese parents, educational qualification meant a lot more to Chinese immigrant parents. Given that Chinese immigrants have maintained the traditional Chinese value of priority on academic excellence (Dyson, 2001), in the present study, educational qualification might have been a proxy variable for Chinese immigrant parents' knowledge and skill which was associated with parenting self-efficacy (Hoover-Dempsey, Bassler, & Brissie, 1992).

Income and work status were not found to be associated with any form of parental involvement for both Chinese immigrant and non-Chinese samples. Several reasons could be explored here. The diverse types of parent help activities available in the preschools could have made parental involvement, volunteering to help at preschool in particular, less dependent on resources. Also, the parents in this study might have generally perceived their resources to be adequate for the purpose of parental involvement given that effect of income probably exists only when it is below a certain threshold (Walker et al., 2005). Further, the public preschools at the time of survey were for few hours so that work hours and income did not come in to play as parents did not typically rely upon it as a source of child care while they were at work.

For Chinese immigrant parents, the absence of the effect of English level was unexpected, which could be related to the presence of the effect of educational qualification. Chinese immigrant participants of this study were predominantly from Mainland China where English was taught as a subject, and, in general, the higher educational qualification meant longer time of learning including learning the English language. In a sense, educational qualification reflected parents' English level. Therefore, in this study, educational qualification was possibly a proxy variable of English level. Also, since English level in this study was rated by Chinese immigrant parents themselves, the self-rated English level might have represented the parents' confidence (efficacy) rather than their actual English ability.

Inconsistent with the hypothesis, none of the traditional Chinese parenting practices was found to be uniquely associated with parental involvement among Chinese immigrant parents. It was

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apparent that the traditional Chinese parenting practices investigated in this study had been mediated by other variables such as role construction and parenting self-efficacy. For example, traditional Chinese parenting practices could have had effect on parental involvement through affecting parental role construction (Chen, 2001; Lai & Ishiyama, 2004). It is also possible that the effect of traditional Chinese parenting practices was mediated by certain variables that were not investigated in this study such as the process of cultural accommodation and adaptation.

Implications for practice, limitations and direction for future study

The important role of parental role construction and parenting self-efficacy in activating parental involvement for both Chinese immigrant and non-Chinese parents raised a practical question about what early childhood education teachers could do. It would be beneficial that teachers formulate, articulate, and explain to Chinese immigrant parents the preschool's expectations about parental roles. In many early childhood services, for example those committed to the Reggio Emilia approach, parents are expected to take part in discussions about institution policy, child development concerns, and curriculum planning and evaluation (Giudici et al., 2001). The sociocultural notion of 'community of learners', which has been adopted by increasingly more early childhood education programmes, prescribes an active role in structuring shared endeavors for all children, teachers and parents (Barbara, 1994). It would be important for teachers to help Chinese immigrant parents understand such expectations. Compared to parental role construction which is more culturally affected, parenting self-efficacy is influenced more by parents' personal skill, knowledge, experience or even personality, and therefore, in terms of boosting self-efficacy, more individualised support should be provided.

The crucial role of perceived opportunities for involvement for Chinese immigrant parents, as revealed in this study, has important implications for practice in the early childhood education context involving language minority immigrant families. First, teachers need to heed what Huntsinger and Jose (2009) termed 'inadvertently' sending less invitation messages, and make a conscious effort to minimise this unconsciously created inequity. More importantly, teachers need to customise or adapt their invitation messages for language minority immigrant parents, which requires teachers to develop and enact cultural competency. Cultural competency involves understanding of different cultural values, beliefs and practices, being aware of the power relationship between dominant and minority cultures and the ability to adapt interactions and services to meet the needs of families from other cultures (Department of Education, Employment and Workplace Relations [DEEWR], 2010). When language minority immigrant parents are offered opportunities for involvement that are relevant and meaningful to them, they will be able to perceive the opportunities more effectively.

Several limitations to this study need to be noted. Given the moderately low return rates of parent questionnaires, it is possible that the parents with low rates of preschool involvement were underrepresented in this study. Parents who took part in the study might have been more motivated and involved than parents who chose not to participate. This sampling limitation might have lessened the variability of parental involvement in the sample, and in turn led to an underestimate of the relations between involvement and other variables. Also, the study only dealt with the quantity (frequencies) rather than both the quantity and quality of parental involvement. Research has found quality of parent involvement to be a more consistent predictor of early school functioning than amount of parent participation (Reynolds, Weissberg, & Kasprow, 1992). Among parents who had the same low frequency of communication with the teachers, the nature of their low involvement could be completely different because the reasons were different. Parents who

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did not communicate with teachers because of the language barrier might be affected more by low preschool involvement than parents who did not communicate simply because they believe there was not any problem with their child. Further, there was an issue of shared variances in this study with respect to the questionnaire method (Podsakoff, MacKenzie, & Podsakoff, 2012). These limitations necessitated interpretive caution on the findings and informed the area for improvement for our future research. The future study could be designed to focus on the nature of involvement behaviors. In addition, given that decision making had the lowest level of involvement for both groups of parents in this study (see Table 2), future research could investigate reasons why this may be so, for example, future research could investigate the topic further by using a broader measure, instead of a 3-item measure in the present study, of participation in decision making.

Conclusion

This study confirmed that Chinese immigrant parents had a lower level of involvement than non-Chinese parents across three forms of involvement including communication with teachers, volunteering to help at the preschool, and participation in the preschool's decision making. For both Chinese immigrant and non-Chinese parents, parental role construction and parenting self-efficacy were predictors of all three forms of involvement, and perceived opportunity for involvement was predictor of communication with teachers. For the Chinese immigrant parents, perceived opportunity for involvement predicted communication with teachers and participation in the preschool's decision making, and educational qualification predicted communication with teachers. Income and work status were not found to be associated with any form of parental involvement for both Chinese immigrant and non-Chinese samples. For Chinese immigrant parents, the effect of both English level and the traditional Chinese parenting practices on parental involvement was insignificant. This study made the following contributions: (1) It found that parental role construction, parenting self-efficacy and perceived opportunities for involvement were three largest contributors to communication with teachers in preschool, which extended the Hoover-Dempsey and Sandler (1997) model based on the US school samples to a preschool sample in New Zealand; (2) It identified the crucial role of perceived opportunity for involvement in predicting parental involvement in preschool among Chinese immigrants; (3) It explored the similarities and differences between Chinese immigrant and non-Chinese parents in the effect of a set of predictors on different forms of parental involvement in preschool. These findings have important implications for practice in the early childhood education context, particularly when language minority immigrant families are involved.

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