The Adaptation of Mainland Chinese Immigrant Parents of Preschool Children in Hong Kong

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Abstract

This study examined the factors associated with the psychological and sociocultural adaptation of immigrant parents of preschool children, in terms of psychological distress, difficulties in managing everyday lives, marital relationship, parenting stress and perception of child behaviour problems. The participants were 261 immigrant parents. They were requested to complete a questionnaire on the above variables. The results indicated that psychological and sociocultural adaptation outcome variables were related to one another and they were associated with self-efficacy, social support and acculturation strategies. Implications for service provisions were discussed.

Keywords: *children; behaviour; parenting; immigrants.*

Introduction

This study is about the adaptation of Mainland Chinese immigrant parents in Hong Kong. In the last ten to fifteen years, there has been an increase in the number of new immigrants from Mainland China to Hong Kong because of a change in the immigrant quota from 75 per day in the early 1980s to 150 per day in 1995. Their proportion in the population rose from 2.6% in 1991 to 4.0% in 2001 (Census and Statistics Department, 2002).

Located in south China, Hong Kong has been a British colony since 1842 and has only become a special administrative region of China since 1997. Hong Kong differs from the Mainland China in aspects of culture and socio-economic development. According to the United Nations Statistics Division (2005), the 2004 per capita gross national income of Mainland China was US$1,276 and that for Hong Kong was US$24,200. In Mainland China, the official spoken language is Mandarin and the written Chinese is the simplified form. In Hong Kong, while both Chinese and English are the official languages, Cantonese is commonly spoken among the local residents, and the written Chinese is in the traditional form.

Below, the demographic profile of the new immigrants will be described to give readers the background information.

Demographic Profile of New Immigrants from Mainland China

In Hong Kong, new immigrants from Mainland China are officially referred to as "Persons from the Mainland of China having Resided in Hong Kong for less than 7 years" (PMRs) by the Hong Kong Census and Statistics Department. Specifically, PMRs are persons who "(i) were born in the Mainland of China; (ii) were of Chinese nationality with place of domicile in Hong Kong; and (iii) have stayed in Hong Kong for less than seven years." (Census and Statistics Department, 2002, p.3). A fair proportion of PMRs are women in the age group of 35-64 (26.5% of all PMRs in 2001) and 18% of PMR households have at least one child aged 5 or under. This is because many Hong Kong male residents marry spouses in the Mainland China. Among PMRs aged 15 or above, 69.7% were married (59.4% for the whole Hong Kong population). Among PMR married women living with their husbands, 86.2% were younger than their husbands and the median age difference was 6 years (3 years for the whole Hong Kong population).

The educational attainment of PMRs was lower than that of the whole population aged 15 and over. There were more PMRs with lower secondary education or below than the whole population (70.4% in PMRs versus 47.8% in the whole population) (Census and Statistics Department, 2002). In terms of occupational type, PMRs were mainly in the elementary occupation (34.9%) and service workers and shop sales workers (30.7%) categories. The corresponding figures for the whole population were 19.5% and 15.0% respectively. The median income of PMR households was HK$12,050, which was lower than the median household income for the whole population (HK$18,705) (Census and Statistics Department, 2002). Based on the above figures, the general picture is that PMRs are more socio-economically disadvantaged, in terms of educational attainment, occupational status,

and household income, compared with the general Hong Kong population.

Aim of the Present Study

The aim of the present study was to understand the adaptation of PMR parents of preschool children, using the immigrant adaptation framework of Berry (1997). There were three reasons behind this aim. First, as mentioned above, many PMR households are families with young children and an understanding of their adaptation needs would be necessary for service planning, for example, provision of parenting training. Second, while there are many studies on parent-child conflict and adaptation of immigrant adolescents, there are few studies focusing on immigrant parents, particularly those of preschool children. Though it is expected that parent-child conflict may be less serious during the preschool period, parenting during the preschool period is important. Many studies have shown that ineffective parenting practices may lead to child behaviour problem which is known to be associated with adolescent behaviour problems, delinquency and crime (Barkley, Fischer, Edelbrock & Smallish, 1991; Campbell, 1995; Earls, 1994; Loeber & Hay, 1994; Patterson, Forgatch, Yoerger & Stoolmiller, 1998; Webster-Stratton & Hancock, 1998). Third, though the framework of Berry (1997) has been widely used with different immigrant groups in different countries, its application to PMRs in Hong Kong warrants investigation as PMRs are different from other immigrants in two aspects: (i) PMRs can be considered internal immigrants as they are moving from the Mainland China to Hong Kong, a special administrative region of Mainland China; (ii) in the vast majority of cases, the fathers in these families are not immigrants whereas the mothers are.

Immigrant Adaptation Framework

Immigrant parents face two sets of challenges. As parents, they face the usual challenges in parenting and bringing up their children, and as immigrants, they have to face the additional challenge of living in a new society. The latter might impact on their parenting which might in turn impinge on their children's well-being. It is well documented that child behaviour problems are affected by parent-child interaction and the quality of parenting (Abidin, 1995) which are influenced by parents' life events (Olds, 1988; Webster-Stratton & Taylor, 2001) such as moving to a new society (Berry, 1997).

Adaptation[1] is defined as the changes that individuals or groups make as a response to demands in the

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[1] Another related term is acculturation. Acculturation refers to the changes that result as a consequence of continuous first-hand contact between people of different cultural backgrounds (Ward, Bochner & Furnham, 2001).

environment (Berry, 1997). Researchers such as Ward (1996) and Berry (1997) conceptualise adaptation as consisting of two related aspects, psychological adaptation and sociocultural adaptation (Ward & Kennedy, 1993). The outcome of the former is often measured in terms of psychological distress or mental health. The outcome of the latter is measured in terms of the ability to deal with everyday life situations including family and work. The distinction between these two aspects of adaptation is based on major theoretical frameworks in acculturation research, namely, stress and coping, and culture learning (Ward, Bochner & Furnham, 2001). In the present case of immigrant parents of preschool children, the relevant measures of sociocultural adaptation outcomes include the management of everyday life in the receiving society, marital relationship quality, parenting, and child behaviour problems. Psychological adaptation is measured in terms of psychological distress.

Berry (1997) presented a conceptual framework to illustrate the main issues related to immigrant adaptation. According to this framework, both group level variables and individual level variables should be considered. The group level variables include society of origin (e.g. economic condition, cultural distance) and society of settlement (e.g. multicultural attitudes) variables. The individual level variables incorporate psychological variables and demographic variables. The former consist of personal competence and social connectedness aspects (Leung, 2001), while the latter comprise length of residence in the receiving society, language proficiency and socioeconomic status etc. In the present study, the focus is on the individual level variables as we are looking at a single immigrant group in one receiving society.

For personal sense of competence, self-efficacy can be defined as the belief that one can successfully carry out a task required to produce a particular outcome (Bandura, 1977). Self-efficacy has been found to be positively related to life satisfaction among immigrants (Leung, 2002).

For social connectedness, among immigrants, the level of social support available is regarded as one of the important factors in their psychological adaptation (Berry, 1997). The level of social support is also relevant to parenting. Parents who are isolated from supportive networks have been found to have higher rates of care giving dysfunction, parenting stress and child behaviour problems (Leung, Leung, Chan, Tso & Ip, 2005; Olds, 1988). Immigrant mothers' level of social support was found to be positively related to their parenting (warmth or control) (Izzo, Weiss, Shanahan & Rodriguez-Brown, 2000) and negatively related to their children's behaviour problems (Nieves, 2002). Higher social support was associated with lower parent-

to-child physical aggression among Hispanic families in U.S.A. (Molnar et al., 2003).

Apart from one's social network, connectedness with the society of settlement is another aspect associated with immigrant adaptation. In this case, Berry (1997) points out that there are four possible acculturation strategies for immigrants who are moving to a new culture. Attitudes towards these four alternatives, and actual behaviours exhibiting them, together constitute an individual's acculturation strategy. Assimilation refers to the case where individuals do not wish to maintain their cultural identity and they seek daily interaction with other cultures. In contrast, separation is the case when immigrants place a value on holding onto their original culture, and at the same time wish to avoid interaction with others. Integration is the case where there is an interest in maintaining one's original culture, and in daily interactions with other groups. Finally, marginalization is the case when there is little interest in cultural maintenance or relations with others. There is evidence to show that individuals who pursue the integration strategy have the most positive adaptation (Ward et al., 2001), while those who are marginalized by the process of acculturation are least well adapted; assimilation and separation lie in between, depending on the group and their situation (Berry & Sam, 1997). Schmitz (1992) found that the separation strategy was positively associated with psychosomatic complaints among East German immigrants but in his study, he failed to consider the marginalization strategy. Parents' acculturation strategies were also found to be associated with child behaviour problems. Children of assimilated parents were reported to have fewer internalizing problems than children with parents with other acculturation strategies (Pawliuk, Grizenko, Chan-Yip, Gantous, Mathew & Nguyen, 1996). A lower level of externalizing behaviour was related to mother's identification with the culture of origin (Nieves, 2002).

For demographic variables, stress has been found to be higher in the initial period of settlement among immigrants (Fukui, 1987; Fan, 1996; Ward et al., 2001). Proficiency in the language of the receiving society was positively related to life satisfaction (Fukui, 1987; Leung, 2002) and negatively associated with use of community services (Ell & Castaneda, 1998). Low socioeconomic status was linked to higher stress (Fukui, 1987) and parenting stress (Leung et al., 2005).

Hypotheses

It was hypothesized that:

1. Psychological adaptation would be related to social support, self-efficacy, length of residence in receiving society, socioeconomic status, language proficiency and integration strategy.

2. Sociocultural adaptation would be related to social support, socioeconomic status, language proficiency, assimilation and separation strategies.

Method

Participants

The target population was families with at least one PMR parent and at least one child aged 3 to 6 years old, and the children and parents should be living in Hong Kong. The participants were recruited through non-governmental organization (NGO) social service centres, preschools, and Maternal and Child Health Centres (MCHCs). There were 261 PMR participants with complete data.

Measures

Participants completed a questionnaire consisting of the following sections.

Eyberg Child Behaviour Inventory (ECBI) (Eyberg & Ross, 1978) – this is a 36 item multidimensional measure of parental perception of disruptive behaviour in children and incorporates two scores, intensity score and problem score. High scores indicate higher intensity and parental concern of problem behaviour. The Chinese version of the inventory has been validated by Leung, Chan, Pang and Cheng (2003). The reliability (Cronbach Alpha) of the former is .95 and the latter is .94.

Parenting Stress Index (PSI) (Lam, 1999) – this is a 36 item questionnaire on issues related to parenting stress. Apart from the total score, three sub-scale scores can also be calculated, namely, Parental Distress (PD), Parent-Child Dysfunctional Interaction (PCDI), and Difficult Child (DC). High scores indicate high stress. The Chinese version of the scale has been validated by Lam (1999). The reliability estimates for the total score and the three subscales are .92, .86, .82 and .86 respectively. In this study, only the first two sub-scales were used as there is considerable overlap between the DC sub-scale and the ECBI.

Relationship Quality Index (RQI) (Norton, 1983) – this is a 6-item index of marital or relationship quality and satisfaction. High scores indicate high satisfaction. The questionnaire has been used in a study on the effectiveness of a parenting programme for parents in Hong Kong with satisfactory reliability estimates (.95). (Leung, Sanders, Leung, Mak & Lau, 2003).

General Self-efficacy Scale (Schwarzer, 1993) – this scale consists of 10 items measured on a 4-point Likert scale ranging from 'Not at all true' (1) to 'Exactly true' (4). High scores on this scale indicate high general self-efficacy. A validated Chinese version is available (http://www.ralfschwarzer.de/). Reliability for a group of Chinese-Australian immigrants was .92 (Leung, 2002).

Duke-UNC Functional Social Support Questionnaire (Broadhead, Gehlbach, de Gruy & Kaplan, 1988) – this is an 8-item questionnaire on perceived social support in various areas. High scores indicate high social support. The questionnaire has been translated into Chinese using back translation and was used with Chinese immigrants in Australia with satisfactory reliability (.94) (Leung, 2002).

General Health Questionnaire-12 (GHQ) – this is a measure of psychological distress. High scores indicate high psychological distress. A Chinese version with 12 items was developed out of the original 60-item English version (Pan & Golding, 1990).

Everyday Life Activities Scale (Ward & Kennedy, 1992) – this scale consists of 23 items measuring difficulties in managing everyday aspects of living in a new culture (Hong Kong culture in the present case). Participants rate their responses on a 5-point Likert scale. High scores indicate greater difficulties in managing daily life activities. The scale has been used with 235 Chinese-Australians and Vietnamese-Australians aged 16 or above and the reliability was .95. Validity was demonstrated through the negative correlation between length of residence in Australia and the difficulty scores.

Acculturation Strategy Scale[2] – this scale is based on the model of Berry, Kim, Power, Young and Bujaki (1989), measuring four acculturation strategies (assimilation, integration, separation and marginalisation) with regard to three domains, cultural traditions, marriage and language. This scale consists of 12 items and participants rated their degrees of agreement with each statement on a five-point scale. High scores indicate stronger endorsement of the respective strategies. The scale has been used internationally with immigrants from different backgrounds, including Chinese-Australians (Berry, Phinney, Sam & Vedder, 2006).

Language use and proficiency scale[3] – this consists of four items on Cantonese (the main dialect used in Hong Kong) and Mandarin/other Chinese dialect usage as well as four items on Cantonese and Mandarin/other Chinese dialect proficiency. Participants indicate their usage and proficiency on a five-point scale. High scores indicate high usage and proficiency. The scale

has been used internationally with migrants from different backgrounds, including Chinese-Australians (Berry et al., 2006).

Identification with Hong Kong/Mainland China – participants were requested to indicate their degree of Hong Kong and mainland Chinese identification each on a five-point scale from 1 (not at all) to 5 (very much).

Participation in parenting education – participants were asked about their participation in parenting education, including source and format of parenting education accessed.

Demographic information – participants were requested to supply basic demographic information on issues including sex, age, place of birth, length of residence in Hong Kong and education of target child, age, education, place of birth, length of residence in Hong Kong and occupation of both parents as well as family type, marital status, relationship of participant to target child and Comprehensive Social Security Assistance (CSSA) status. Besides, participants were asked about their family information including whether the target child was living with parents, and presence of caregiver(s) other than parents.

Procedures

Invitations were sent to MCHCs, preschools and NGO service centres. Interested organizations invited their clients to participate in the study. Upon participant consent, research staff administered the questionnaire to them in small groups in preschools, NGO service centres and MCHCs.

Results

The socio-demographic characteristics of the participants are shown in Table 1. In terms of sex of target child, compared with the 2001 Census figures (boys: 52%; girls: 48%), there was a higher proportion of boys in the present sample (boys: 60.5%, girls: 39.5%). For household income, there are a higher proportion of households with monthly income below $19,999.00 in the present sample (92.5%) than the Census figure where among PMR households with preschool children, approximately 73.2% were in the monthly income range of $19,999.00 or below. In terms of paternal employment, there is a slightly higher proportion of spouses of PMR mothers not in the work force in the Census data (14.7%) than the present sample (9.9%). For the employment situation of PMR mothers, there is a higher proportion of working PMR mothers in the Census data (26%) than in the present sample (13.1%). This is probably related to the data collection procedures in the present study where the researchers administered the questionnaires to the participants in person during office hours. The sample was similar to the Census figures in terms of mean age

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[2] The questionnaire was assembled by the following International Comparative Study of Ethnocultural Youth (ICSEY) researchers: John W. Berry (Canada), Kyunghwa Kwak (Canada), Karmela Liebkind (Finland), Jean Phinney (U.S.A.), Colette Sabatier (France), David L. Sam (Norway), Erkki Virta (Sweden), and Charles Westin (Sweden) (http://www.ceifo.su.se/icsey/icsey.html).

[3] This questionnaire is also part of the questionnaire assembled by the ICSEY researchers mentioned in footnote 1. In the version for Chinese-Australians, the languages were English and Chinese dialects.

of mothers, age difference between husbands and wives, family type and mother's education. The present sample is more disadvantaged than the general PMR population.

The mean and standard deviation scores, as well as the internal consistency estimates (Cronbach Alphas) of the scale-type questionnaires are shown in Table 2. The correlations are shown in Table 3.

Table 1: Demographic characteristics ($N = 261$)

Variable	Mean (standard deviation)
Child age	4.38 (.76)
Child's length of residence in Hong Kong	2.82 (1.39)
Mother's age	33.27 (4.34)
Father's age	41.88 (7.70)
Difference in parent age	8.66 (6.36)
Mother's length of residence in Hong Kong	2.64 (1.97)
Father's length of residence in Hong Kong	32.43 (15.01)
	Number (percentage)
Sex of target child	
Boy	158 (60.5%)
Girl	103 (39.5%)
Relationship with child	
Mother	259 (99.2%)
Father	1 (0.4%)
Stepmother	1 (0.4%)
Family type	
Nuclear family	182 (69.7%)
Extended family	72 (27.6%)
Lone parent family	5 (1.9%)
Reconstituted family/others	2 (0.8%)
Marital status	
Married/de facto	255 (97.7%)
Separated/divorced/widowed/never married	6 (2.3%)
Father Education	
Lower secondary or below	161 (66.3%)
Upper secondary or above	82 (33.7%)
Mother Education	
Lower secondary or below	187 (73.3%)
Upper secondary or above	68 (26.7%)
Father in work force	
In work force	228 (90.1%)
Not in work force	25 (9.9%)
Mother in work force	
In work force	34 (13.1%)
Not in work force	226 (86.9%)
Family income	
$19,999.00 or below	233 (92.5%)
$20,000.00 or above	19 (7.5%)
Comprehensive Social Security Assistance (CSSA)	
On CSSA	28 (10.7%)
Not on CSSA	233 (89.3%)

Table 2: Mean, standard deviation and reliability estimates of various scales ($N = 261$)

Scale (number of items)	Mean	Standard deviation	Minimum score	Maximum score	Reliability
Everyday life activities (23)	38.57	14.57	23	115	.90
General health questionnaire (12)	2.87	3.15	0	12	.87
ECBI-intensity (36)	118.38	25.27	36	252	.93
ECBI-problem (36)	11.90	9.83	0	36	.95
PSI-PD (12)	37.51	7.74	12	60	.84
PSI-PCDI (12)	30.50	6.65	12	60	.78
Relationship quality index (6)	32.68	9.45	6	45	.94
General self-efficacy (10)	23.92	5.96	10	40	.89
Social support (8)	23.47	7.28	8	40	.84
Assimilation (3)	8.85	2.07	1	15	.39
Separation (3)	7.14	1.20	1	15	.52
Integration (3)	11.46	2.01	1	15	.42
Marginalization (3)	7.09	2.34	1	15	.64
Mainland Chinese identification (1)	3.65	1.19	1	5	N/A
Hong Kong identification (1)	2.64	0.99	1	5	N/A

Table 3: Correlation among variables

Scale	1	2	3	4	5	6	7	8	9	10	11	12
1. Everyday life activities												
2. GHQ	.33***											
3. ECBI-intensity	.20***	.27***										
4. ECBI-problem	.25***	.32***	.52***									
5. PSI-PD	.22***	.43***	.31***	.33***								
6. PSI-PCDI	.32***	.28***	.36***	.34***	.45***							
7. RQI	-.34***	-.34***	-.23***	-.27***	-.34***	-.40***						
8. General self-efficacy	-.23***	-.26***	-.27***	-.21***	-.32***	-.21***	.33***					
9. Social support	-.22***	-.26***	-.24***	-.21***	-.31***	-.23***	.27***	.15*				
10. Assimilation	.13*	.04	.01	.10	.16**	.26***	-.10	-.00	-.04			
11. Separation	.19**	.17**	.10	.15*	.18**	.33***	-.23***	.01	-.04	.41***		
12. Integration	-.12	-.09	-.04	-.11	-.05	-.26***	.21***	.10	.06	-.16*	-.24***	
13. Marginalization	.13*	.06	.00	.13*	.08	.24***	-.20***	.08	-.10	.33***	.62***	-.40***

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

Regressions

Seven multiple regressions were conducted, with the dependent variables being the adaptation outcome variables described above, namely, parent perception of child behaviour (ECBI-intensity, ECBI-problem), parenting stress (PSI-PD, PSI-PCDI), marital relationship (RQI), everyday life activities and psychological distress (GHQ).

According to Tabachnick and Fidell (2001), the general goal of regression is to identify "the fewest independent variables necessary to predict a dependent variable" (p. 116). Regression is best when the independent variables are strongly correlated with the dependent variable, but not correlated with other independent variables. Socio-demographic variables which were correlated with the dependent variables were selected to be included in the regression, together with access to parenting education. The socio-demographic variables included were household income, CSSA status, parent educational attainment, parent work status, child sex, child length of residence in Hong Kong, and age difference between parents. Parent's length of residence in Hong Kong and other carers available were not included as they were not correlated with any of the dependent variables.

Apart from the socio-demographic variables, the other independent variables included were the variables theoretically postulated to be related to the adaptation outcome variables. They included language (Cantonese) usage and fluency, acculturation strategies (assimilation, separation, integration and marginalization), social support and self-efficacy. All regressions were significant.

The regression for parent psychological distress (GHQ)[4] was significant, $F(18, 208) = 3.47$, p< .001, adjusted $R^2 = .16$. Psychological distress was positively associated with separation strategy (β =.26, t = 2.98, p < .005), and negatively associated with self-efficacy (β = -.22, t = -3.43, p = .001), and social support (β = -.22, t = -3.34, p = .001). Participants who endorsed separation strategy more reported higher psychological distress scores. Participants who reported more social support and higher self-efficacy reported lower psychological distress scores.

The regression for difficulty in managing everyday life (everyday life activities) was significant, $F(18, 208) = 2.92$, $p < .001$, adjusted $R^2 = .13$. Difficulty in managing everyday life activities was negatively associated with social support ($\beta = -.17$, $t = -2.56$, $p < .05$), and self-efficacy ($\beta = -.14$, $t = -2.15$, $p < .05$). Participants who reported more social support and higher self-efficacy reported less difficulty in managing everyday life activities.

The regression for marital relationship quality (RQI) was significant, $F(18, 208) = 5.62$, $p < .001$, adjusted $R^2 = .27$. Marital relationship quality was positively associated with self-efficacy ($\beta = .31$, $t = 5.15$, $p < .001$), and social support ($\beta = .17$, $t = 2.75$, $p < .01$). Participants who reported more social support and higher self-efficacy reported higher RQI scores.

The regression for parenting stress (PSI-PD) was significant, $F(18, 208) = 3.45$, $p < .001$, adjusted $R^2 = .16$. PSI-PD was negatively associated with social support ($\beta = -.23$, $t = -3.60$, $p < .001$), and self-efficacy ($\beta = -.23$, $t = -3.55$, $p < .001$). PSI-PD was also positively associated with separation strategy ($\beta = .17$, $t = 2.03$, $p < .05$) and assimilation strategy ($\beta = .15$, $t = 2.03$, $p < .05$). Participants who reported more social support and higher self-efficacy reported lower PSI-PD scores. Participants who endorsed assimilation and separation strategies more reported higher PSI-PD scores. The regression for PSI-PCDI was significant, $F(18, 208) = 4.59$, $p < .001$, adjusted $R^2 = .22$. PSI-PCDI was negatively associated with self-efficacy ($\beta = -.18$, $t = -2.84$, $p = .005$), social support ($\beta = -.14$, $t = -2.26$ $p < .05$), integration strategy ($\beta = -.16$, $t = -2.32$, $p < .05$), and income ($\beta = -.13$, $t = -2.01$ $p < .05$) and positively associated with separation ($\beta = .23$, $t = 2.77$, $p < .01$) and assimilation ($\beta = .18$, $t = 2.57$, $p < .05$) strategies. Participants who reported more social support, higher self-efficacy and higher endorsement of integration strategy reported lower PSI-PCDI scores. Participants who endorsed assimilation and separation strategies more reported higher PSI-PCDI scores. Participants with monthly income at or below HK\$19,999.00 reported higher PSI-PCDI scores ($M = 30.84$, $SD = 6.84$, $n = 233$) than those with income \$20,000 or above ($M = 26.47$, $SD = 7.65$, $n = 19$)

The regression for parent perception of child behaviour problems (ECBI-intensity) was significant, $F(18, 208) = 2.59$, $p = .001$, adjusted $R^2 = .11$. ECBI-intensity was negatively associated with self-efficacy ($\beta = -.26$, $t = -3.94$, $p < .001$) and social support ($\beta = -.24$, $t = -3.61$, $p < .001$). Participants who reported more social support and higher self-efficacy reported lower ECBI-intensity scores.

The regression for ECBI-problem[5] was significant, $F(18, 208) = 2.15$, $p = .005$, adjusted $R^2 = .08$. ECBI-problem was negatively associated with self-efficacy ($\beta = -.20$, $t = -2.97$, $p < .005$) and social support ($\beta = -.17$, $t = -2.55$, $p < .05$). Participants who reported more social support and higher self-efficacy reported lower ECBI-problem scores.

Cluster Analysis

As shown in Table 3, the adaptation variables, parenting stress, parent perception of child behaviour,

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[4] Square root transformation was performed as GHQ scores were positively skewed.

[5] Square root transformation was performed as the distribution was positively skewed.

marital relationship quality, everyday life activities and psychological distress were correlated with one another. Cluster analysis, a technique used to "identify homogeneous subtypes within a complex data set" (Borgen & Barnett, 1987, p.460), was used to explore the existence of sub-groups of PMR participants with various patterns of adaptation.

The variables included in the cluster analysis were the adaptation variables, namely, parent perception of child behaviour (ECBI-intensity and problem), parenting stress (PSI-PD and PSI-PCDI), marital relationship quality (RQI), difficulty in managing everyday life (everyday life activities) and parent psychological distress (GHQ). All variables were standardized as the variables were measured using different scales. The standardized scores were subject to K-means cluster analysis. A two-cluster solution was considered the most efficient and theoretically meaningful grouping. A three-cluster solution produced some inconsistencies in the patterns of the variable scores.

The two cluster solution produced a group with lower scores on parent perception of child behaviour, parenting stress, parent psychological distress, difficulty in managing everyday life and higher scores on marital relationship quality (better adaptation group) than the other group (poorer adaptation group). There were 141 participants in the better adaptation group and 119 participants in the poorer adaptation group. The scores of the group members on the adaptation variables are shown in Table 4.

Independent t tests and chi squared tests were performed to examine possible differences in socio-demographic variables, access to parenting education, social support, self-efficacy, and acculturation strategies by cluster group membership. To allow for inflated alpha, a stricter alpha level of .001 was set. Independent t tests results indicated that the two cluster groups differed in terms of self-efficacy, $t(258) = 5.24$, $p < .001$, social support, $t(258) = 5.18$, $p < .001$, and separation strategy, $t(258) = 3.37$, $p < .001$. The better adaptation group reported higher scores on social support ($M = 25.53$, $SD = 6.96$) than the poorer adaptation group ($M = 21.05$, $SD = 6.95$). The better adaptation group reported higher scores on self-efficacy ($M = 25.60$, $SD = 5.94$) than the poorer adaptation group ($M = 21.90$, $SD = 5.36$). The better adaptation group reported lower scores on separation strategy ($M = 6.75$, $SD = 1.95$) than the poorer adaptation group ($M = 7.57$, $SD = 1.96$).

The cluster analysis results were consistent with the regression results described above. Both analyses indicated that adaptation was associated with social support, self-efficacy and lower endorsement of the separation strategy.

Discussion

Both hypotheses were partially supported. The results from regression and cluster analyses consistently showed that social support and self-efficacy were associated with better adaptation outcome. This was consistent with the literature on the positive influence of social support and self-efficacy on immigrant adaptation, including parenting and child behaviour problems (Izzo, Weiss, Shanahan & Rodriguez-Brown, 2000; Leung, 2002; Nieves, 2002). There were also indications that the separation strategy was associated with psychological distress and parenting stress. The pattern of results was consistent with the literature in that separation strategies were associated with negative adaptation outcome (Berry & Sam, 1997). It is possible that separation strategy may be associated with perceived discrimination which could be stressful for migrants (Phinney, Berry, Vedder & Liebkind, 2006; Vedder, Van de Vijver & Liebkind, 2006). However, it should be noted that the reliability estimates of the acculturation strategy sub-scales were less than .7.

The cluster analysis revealed two distinct groups of immigrant parents, one with better psychological and sociocultural adaptation, and the other with poorer adaptation. This is consistent with the postulation of Ward (1996) that psychological and sociocultural adaptation are inter-related.

Contradictory to the hypotheses and other literature (e.g., Fukui, 1987; Leung, 2002), none of the demographic variables were related to the adaptation outcome variables, except that low income was associated with high PSI-PCDI. One possible explanation is that the present sample is fairly homogeneous in socio-demographic characteristics which might have restricted the variance and the ability to make comparisons.

The data consistently indicate that parent psychological and sociocultural adaptation outcomes are related to one another and they are both associated with social support and self-efficacy. It follows that if social support and self-efficacy could be enhanced, one might also expect positive changes in the parent psychological and sociocultural adaptation outcomes. The implication for service provision is that facilitation of social support and enhancement of self-efficacy are probably fruitful approaches to pursue. For example, the provision of language and vocational training could lead to better employment opportunities, which might be associated with self-efficacy. Another possibility is the provision of group parent training programmes to support the PMR parents. This might enhance the self-efficacy of the PMR parents as well as extend their social network through meeting other parents with similar concerns.

Table 4: Mean and standard deviation scores of adaptation variables based on cluster analysis group membership

	Better adaptation group	Poorer adaptation group	t test results
ECBI-intensity	106.38 (19.97)	132.43 (23.66)	$t(258) = -9.63$, $p < .001$
ECBI-problem	6.94 (7.76)	17.74 (8.80)	$t(258) = -10.51$, $p < .001$
PSI-PD	33.82 (6.99)	41.86 (6.22)	$t(258) = -9.71$, $p < .001$
PSI-PCDI	26.89 (5.36)	34.70 (5.41)	$t(258) = -11.65$, $p < .001$
Everyday life activities	33.67 (8.98)	44.40 (13.57)	$t(258) = -7.62$, $p < .001$
GHQ	1.26 (1.85)	4.75 (3.30)	$t(258) = -10.74$, $p < .001$
RQI	37.16 (6.97)	27.37 (9.27)	$t(258) = 9.71$, $p < .001$

Limitations

Random sampling is not possible as there is no sampling frame for selection of participants. Neither preschools, MCHCs nor social service centres have a complete list of preschool children with PMR parents. Furthermore, due to logistic difficulties, it is not possible to calculate the participation rate for the present survey. The present sample might not be representative of the target population. Comparison with the 2001 Census indicates that the present sample is more socially disadvantaged than all PMR families with children under 5. These points should be taken into consideration in the interpretation of the findings.

As this is a cross-sectional study, it is not possible to investigate causal relationships among variables. The relationship among parent individual level variables and the various adaptation outcome variables is complex. It is quite possible that some are mediating or moderating variables. In some cases, the relationship might even be circular.

The present sample consists mainly of participants from socially disadvantaged backgrounds who have been in Hong Kong for less than seven years. The variance of the socio-demographic variables such as household income or length of residence in Hong Kong is relatively small. This restricts the investigation of the effect of socio-demographic differences on the outcome variables.

This study only investigated the perceptions and experiences of the PMR mothers, but not their non-PMR spouses. Inclusion of the non-PMR spouses may provide more information on other factors affecting the adaptation of these PMR mothers.

Conclusion

The present study suggests that the general framework of Berry (1997) could be applied to this group of internal immigrants whose spouses are local residents. The study highlights the importance of social support and self-efficacy in the adaptation of immigrants. The results are consistent with other studies which show that a personal sense of competence and a sense of social connectedness are important to immigrant adaptation (Leung, 2001).

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Research Profiles

Dr. Cynthia Leung has extensive experience in program evaluation including the evaluation of health education programmes and parenting education programmes. She is interested in the adjustment of immigrants, cross-cultural psychology and parenting issues and has published widely in this area.

Dr Shirley Leung is interested in and has published on program evaluation, parenting education and child development, from a public health perspective.

Dr Ruth Chan's research interest included women nutrition, especially nutritional needs during antenatal and postnatal periods, childhood nutrition including nutrition needs assessment and factors influencing their nutritional status, parenting practice and its determinants amoung Hong Kong parents.