THE MEDIATING ROLE OF PARENTAL PSYCHOLOGICAL HEALTH IN CHINESE FAMILIES IN AN IMPOVERISHED CONTEXT IN HONG KONG

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Based on data collected from 504 parents in Tin Shui Wai, one of the lowest income-level communities in Hong Kong, the present study found that, in addition to financial strain, cumulative family stressors associated with poverty had deleterious impacts on family functioning and parental psychological health. Furthermore, negative effects of cumulative family stressors on family functioning were significantly shrunk after adding parental self-efficacy as mediator, and became insignificant after adding parenting stress and both parental self-efficacy and parenting stress as mediators. The results of this study are consonant to family stress model and demoralization thesis, postulating that experiencing multiple stressors at family level coalesced with poverty may adversely influence family development and relationships through their detriments on parental psychological health. Implications for service practices were briefly discussed.

Keywords: poverty, family stressors, parental psychological health, family functioning

INTRODUCTION

With societies becoming more industrialized and marketized globally, characterized by competitiveness, inequality of economic distribution and high unemployment, well-being of the family nowadays has been placed in a more vulnerable po-
sition and adversely affected by multiple socio-contextual risks, especially for those families living in an economically disadvantaged neighborhood (Gabel & Kamerman, 2009; Magnuson & Duncan, 2002). Substantial research indicated that living in an economically disadvantaged neighborhood might occasion delayed or poor family functioning and development (Elder & Caspi, 1988; Magnuson & Duncan, 2002). Therefore, persistent impoverishment threatens various aspects of family life, including marital discord, poor interspousal cohesion, instability of home arrangements, improper adult role modeling, and hostile and neglectful child-rearing practices (Elder & Caspi, 1988; Barnett, 2008).

A family with good functioning displays mutual support, efficient communications, sense of shared purposes and values, reciprocal interactions, and feelings of congruence and cohesion (Anderson et al., 2007; Trivette et al., 1990). On the other hand, literature and research has demonstrated that poverty itself does not explain all the variance in family functioning; rather, it is probably the multiple stressors in a cumulative nature at the family level incurred from concurrent financial strain that produce undesirable family functioning characteristics (Ackerman et al., 2004; Linver et al., 2002) including poor parenting styles, estranged interpersonal relationships, and inadequate communications within the family (Barnett, 2008; Raikes & Thompson, 2005). This is consistent with the ecological perspective (Bronfenbrenner & Morris, 1998), in which families in an impoverished neighborhood need simultaneously to deal with multiple family-level stressors that are coexisting amalgamatively (Barnett, 2008; Linver et al., 2002). These stressors include, for example, unemployment/job loss, health problem, residential instability, marital conflicts and divorce, children’s schooling problems, dependency on welfare, single parenthood, as well as having a new family immigrant, which is correspondent to what Tickamyer and Duncan (1990) termed as “an oppressive social structure” for economically poor families.

THE MEDIATING ROLE OF PARENTS’ PSYCHOLOGICAL HEALTH IN FAMILY FUNCTIONING

Recent literature proposed that impoverishment concomitant with adverse contextual conditions in the family realm may compromise parents’ psychological health, convincing them that they are incapable of performing various tasks that they need to fulfill for their parental role (Ackerman et al., 2004; Sanders & Woolley, 2005). This process of demoralization is anticipated to occasion psychological distress and difficulties in parents, such as heightened parenting stress and reduced sense of self-efficacy (Brody et al., 1999; Raikes & Thompson, 2005), which in turn is thought to bring about detrimental effects on
family functioning. In fact, research consistently pointed out that parental psychological maladjustment may introduce uncertainty and instability to family affairs and may expose their children to inappropriate socialization processes (Belsky et al., 1995; Kwok & Wong, 2000; Sanders & Woolley, 2005). This thesis is resonant with the family stress model postulating that financial strain combined with other stressful events cumulatively at family level may result in detrimental effects on family functioning through their hazards on parental psychological health (Conger et al., 1993, 1995; Elder & Caspi, 1988).

Extant research has demonstrated that financial strain could result in poor childrearing behaviors because of its impacts on psychological health and self-efficacy in parents, which would limit parents' ability to respond sensitively and consistently to children's needs (Brody et al., 1999; Raikes & Thompson, 2005). Aber et al. (2000) found that harsh and non-responsive parenting practices were more commonly observed among low-income families and were assumed to arise in part from parental psychological stress. Studies by Davis and Windle (1997) and Fergusson et al. (1995) both supported that parental psychological distress was related to marital discord and spousal conflict by disagreements and withdrawal of mutual support between the couple. Accordingly, it is in the same vein with other research, heightened parental stress would undermine family functioning (Sepa et al., 2004; Crnic et al., 1986).

However, living in impoverishment and experiencing poverty do not necessarily come out with psychological health problems. Elder et al. (1995) reckoned that financial strain was thought to provoke economic pressure; albeit, it did not necessarily lead directly to emotional distress. The thesis is tantamount to the cognitive perspective that individuals are not directly disturbed by adversities themselves but by how they interpret them (Shek, 2004). Although parents living in poverty may undermine their self-efficacy, this casual relationship is not universally true. If a parent in poverty could maintain a positive psychological outlook, such as feeling efficacious for their parental role, she/he could offset the detrimental effects of financial strain and cumulative stressful family events associated with poverty on family functioning (Aber et al., 2000; Raikes & Thompson, 2005). In fact, McLoyd and Flanagan (1990) have examined the significance of poverty's effects on maternal psychological stress and how a mother responded to it. They found that a mother who was more self-efficacious would experience less parenting stress despite the context of economic hardship, whereas, however, a mother with low self-efficacy might induce a sense of inadequacy and experience more parenting stress. Jackson (2000) also reported that parental self-efficacy could effectively help low-income parents to cope with parenting stress.
The present study

The aim of the current study was to investigate the mediating role of parental psychological health, in terms of self-efficacy and parenting stress in adverse effects of cumulative family stressors induced by living in poverty, on family functioning. As mentioned above, although families living under impoverishment have to deal with multiple family stressors, which are concurrently harmful to family functioning, we think that parents’ psychological conditions may have a mediating role in the relationship. Moreover, this study was also responsive to the proposition made by Shek (2004) that "(d)espite the intensification of the problem of poverty in the global context, studies attempting to understand families that experience economic disadvantages are inadequate (p. 239)." This inadequacy is especially pronounced in Chinese societies, like Hong Kong, where the increase of low-income families has reached 50% from 1995 to 2005 and its Gini coefficient has jumped from 0.476 in 1991 to 0.525 in 2001 (The Hong Kong Council of Social Service, 2007). Hence, more research concerning families in economically disadvantaged neighborhood is needed. In this study, the hypotheses addressed were: (1) Cumulative family stressors would have adverse effects on both parental psychological health in the form of low self-efficacy and high parenting stress and family functioning as well, for families living in impoverishment. (2) Parental psychological health would mediate the effect of cumulative family stressors on family functioning, in which parental self-efficacy would enhance family functioning and parental stress would compromise it. (3) Parental self-efficacy would reduce parental stress after taking cumulative family stressors into account. In addition, we incorporated family income and parental education attainment as covariates in the analyses, as previous work consistently demonstrated their effects on parental psychological health and family functioning for parents in poverty (Ackerman et al., 1999; Kochanska et al., 2007; Raikes & Thompson, 2005). Figure 1 presents the theoretical model depicting the hypotheses of the current study.
METHOD

Sampling and Procedure

Participants of the current study were the parents living in the Tin Shui Wai District in Hong Kong. The district belongs to one of the lowest income-level communities in Hong Kong, and it is characteristic of high rates of unemployment/underemployment, single parenthood, newly immigrant and on-welfare families (Chan et al., 2006; Yeung & Chan, 2010). During the period of February and April, 2008, the Department of Applied Social Science at The Hong Kong Polytechnic University in collaboration with Tin Shui Wai (North) Integrated Family Service Centre of The International Social Service (Hong Kong Branch) successfully collected data regarding family stressors, family functioning, psychological health and demographics from 504 parents through support by 2 kindergartens and 2 primary schools in the district to recruit potential parent participants who had children studying in the aforementioned kindergartens and schools. The sample came from respective family units, which represents 504 families in the district, and the questionnaires were filled by the main caretakers in these families.

Measures

Cumulative Family Stressors

The Cumulative Family Stressors Index (CFSI) was used because prior research has indicated that families living in poverty would concurrently encounter multiple stressors. Thirteen family stressors were selected as relevant by referring to prior studies (Ackerman et al., 2004; Raikes & Thompson, 2005). These stressors included unemployment, economic difficulties, divorce, marital problems, maladjustment to the residential environment, employment difficulties, health problems of family members, health problems of a parent, death of a family member, academic problems of children, welfare dependency, single parenthood, and having a new immigrant family member. A score of 1 was assigned to each stressor that was present in the family, and the index was the sum of the thirteen stressful events (possible range=0 to 13). Higher scores indicated the family was currently facing more family stressors.

Parental Self-Efficacy

The subscale of the Parenting Sense of Competence Scale (PSOCS) was used to measure a sense of competence and efficacy in parents (Gibaud-Wallston & Wanderman, 1978). The subscale contains 8 items with a 6-point Likert-type scale. Higher scores indicate more efficacious and competent parents. The Cronbach α in this study was 0.67.
Parental Stress

The Parenting Stress Index (PSI-Short Form) was used to measure psychologically stressful and difficult feelings in parents (Abidin, 1990). PSI is composed of three subscales, namely, Parental Distress, Parent-Child Dysfunctional Interaction and Difficult Child. PSI is a 5-point Likert-type scale and the scores of the three subscales were summed by reverse-coding the items, so that higher scores indicate more stressful and difficult feelings in parents. The Cronbach $\alpha$ was 0.93.

Family Functioning

Family Functioning Style Scale (FFSS) was used to measure positive family functioning in this study (Trivette et al., 1990). Positive family functioning denotes the characteristic of cohesiveness, constructive interaction, effective communication, and mutual support as well as high commitment among family members in a family unit (Anderson et al., 2007; Trivette et al., 1990). FFSS is a 5-point Likert-type scale and has 26 items. Higher scores obtained in this scale indicate better functioning in a family unit. The internal consistency of the measure was 0.94.

Parents' Demographics

Previous research consistently demonstrated that educational and income levels among parents were two essential background confounders influential of their capabilities to cope with daily stressors, maintain psychological health and family behaviors. For this, levels of monthly family income and educational attainment among parents were adjusted as covariates in regression analyses of the current study.

RESULTS

The median family income level of the current sample was HKD 10,000, which was substantially lower than that of the average median family income level (HKD 17,520) of general families in Hong Kong\(^2\) (Census and Statistics Department, 2006). The mean family income of the sample was HKD 1,1045.5 (S.D. = 5851.5). For educational attainment of the parents, the mean level of educational attainment was 4.1 (S.D. = 0.97), which connotes that the average educational attainment of the parent participants was at junior secondary school level (a range from 1 = no formal education, 2 = junior primary school, 3 = senior primary school, 4 = junior secondary school, 5 = senior secondary school, to 6 = post-secondary education). In fact, 64.3% of the parent participants’ educational attainment was at junior secondary school level or below; and 32.7% had attained senior secondary school level. Only 2.9% of the parents had a
post-secondary level of education. For distribution of educational attainment of the general population in Hong Kong in 2007, 40.1% of the population were with junior secondary school level or below, 35.5% had attained senior secondary school level, and 24.3% had a post-secondary level of education (Census and Statistics Department, 2008). Therefore, the educational attainment of our sample was apparently lower than that of the general population in Hong Kong.

Table 1 presents the bivariate relationships of the study variables. For parents’ background variables, both education attainment and income levels negatively and significantly correlated with stressful feelings in parents (r=-0.14 and r=-0.19) and positively and significantly correlated with family functioning (r=0.09 and r=0.12). And family income also had a significantly negative correlation with cumulative stressful family events (r=-0.19) and a positive correlation with parental self-efficacy (r=0.11). Bivariate analyses also demonstrated that more family stressors were significantly related to lower parental self-efficacy (r=-0.16) and poorer family functioning (r=-0.16) as well as higher psychological stress in parents (r=0.32). Moreover, parental self-efficacy had a substantially significant and negative correlation with parenting stress (r=-0.45) and a significant and positive correlation with family functioning (r=0.36). In addition, more stressful feelings in parents was significantly related to poorer family functioning (r=-0.29).

Hierarchical linear regression models were used to test the hypotheses of the current study. First, we regressed Cumulative Family Stressors Index on parents’ educational attainment and family income. The model was significant, F(2, 501)= 8.66, p<0.001. Family income was significantly and negatively predictive of stressful family events (β=-0.18, p<0.01), but parents’ education attainment was not. Moreover, we moved to test the effects of cumulative family stressors on parental psychological health. After controlling for parents’ educational attainment and family income level, a family that had more stressors would result in a more detrimental influence on parental
self-efficacy ($\beta = -0.14$, $p < 0.01$). However, parents’ educational attainment and family income in this model became insignificant ($\beta = 0.04$ and $\beta = 0.07$, $p > 0.05$), after taking cumulative family stressors into account. The model was significant, $F(3,500) = 5.05$, $p < 0.01$. For parenting stress, both parents’ education attainment and family income had negative effects on it ($\beta = -0.09$ and $\beta = -0.10$, $p < 0.05$), and stressful family events showed the strongest predictive power of parenting stress in the model ($\beta = 0.28$, $p < 0.01$). In addition, we added parental self-efficacy as a predictor of parenting stress after retaining the above-mentioned independent variables in the model. In this model, parents’ education attainment, cumulative family stressors and parental self-efficacy were significant predictor variables of parenting stress, and family income became insignificant ($\beta = -0.07$, $p = 0.064$). The results showed that more stressful family events would bring about higher parenting stress ($\beta = 0.23$, $p < 0.01$), and higher educational attainment and parental self-efficacy would in turn contribute to less parenting stress ($\beta = -0.08$, $p < 0.05$ and $\beta = -0.41$, $p < 0.01$), in which parental self-efficacy was demonstrated to have the strongest predictive power. The model was significant, $F(4,499) = 47.5$, $p < 0.001$.

For testing family functioning as an outcome variable, Cumulative Family Stressors Index was first regressed in the model, after controlling for the two parents’ background variables (Model 1 in Table 2). Both stressful family events and parents’ educational attainment appeared to be significant predictors of family functioning ($\beta = -0.14$ and $\beta = 0.09$), which connotes that higher educational levels of parents and less family stressors would have salutary effects on family functioning. In comparing the equation only with parents’ educational attainment and family income, $F(2,501) = 5.3$, $p < 0.01$, $R^2 = 0.02$, the explanatory power of the model after adding cumulative family stressors as a predictor was augmented significantly, $F(1, 500) = 9.4$, $p < 0.01$, $\Delta R^2 = 0.04$.

In order to test the mediational hypothesis of parental psychological health, we followed the three steps proposed by Baron and Kenny (1986). First, the predictor (cumulative family stressors) should be significantly related to the outcome variable (family functioning). Second, the mediator(s) (parental self-efficacy and parenting stress) should be significantly related to the predictor and the outcome variable. Third, the relation of the predictor and the outcome variable would be significantly diminished or become insignificant in the presence of the mediator(s). As shown in Table 1, correlations of the study variables fulfilled the requirements of mediational hypothesis testing. In model 2 of Table 2, the predictive power of cu-
Cumulative family stressors was shrunk ($\beta = -0.09$) after adding parental self-efficacy as a mediator, which shared a large portion of the variance explained ($\Delta R^2 = 0.11$) and had a substantially positive effect on family functioning ($\beta = 0.33$).

### Table 2

Summary of hierarchical regressions of family functioning on stressful family events, parental self-efficacy, parenting stress, controlling for parents' background variables (N=504)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$\Delta R^2$</td>
<td>df</td>
<td>$F$</td>
</tr>
<tr>
<td>Education Attainment</td>
<td>0.09*</td>
<td>0.02</td>
<td>1,500</td>
<td>9.4**</td>
</tr>
<tr>
<td>Family Income</td>
<td>0.07</td>
<td></td>
<td>0.05</td>
<td>0.11</td>
</tr>
<tr>
<td>Stressful Family Events</td>
<td>-0.14**</td>
<td>-0.09*</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Parental Self-Efficacy</td>
<td>-</td>
<td>0.33**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Parenting Stress</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model</td>
<td>F(3, 500)=6.75**, $R^2=0.04$</td>
<td>F(4, 499)=20.1**, $R^2=0.15$</td>
<td>F(4, 499)=13.44**, $R^2=0.10$</td>
<td>F(5, 498)=18.61**, $R^2=0.16$</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01

* In model 1, $\Delta R^2$ indicates the variance explained by cumulative stressful family events index net of the effects of the two parents' background variables
On the other hand, when parenting stress was added as a mediator (model 3), both cumulative family stressors and parents’ background variables were diluted to be insignificant. In this model, parenting stress was the only significant predictor of family functioning ($\beta = -0.26$), which denotes that higher levels of stress in parents would result in poorer family functioning. In order to investigate the shared mediating effects of the two parental psychological health variables on the relationship, model 4 incorporated both parental self-efficacy and parenting stress as mediators, as shown in Table 2, which were respectively positively and negatively predictive of family functioning ($\beta = 0.28$ and $\beta = -0.14$) and additionally contributed 12% of the variance explained. However, the predictive power of cumulative family stressors, family income and parents’ educational attainment became insignificant in the model, which was significant, $F(5, 498) = 18.61$, $p < 0.01$, $R^2 = 16$.

**DISCUSSION**

The purpose of the current study was to investigate the mediational role of parental psychological health in terms of efficacy and stress in the relationship between cumulative stressful events at family level and family functioning for families in an impoverished neighborhood in Hong Kong. The results showed that families living in an economically disadvantaged environment would be concomitant with multiple family stressors ($r = -0.19$), which concurrently contributed to poor parental psychological health and family functioning. Apparently, psychological health variables in parents would be salient mediators for the negative impacts of financial strain and cumulative family stressors associated with poverty on family processes and relationships. In this sense, parental self-efficacy is thought to be imperative for better family functioning, while stressful feelings in parents in turn would have a harmful influence on it, the latter being offset by the former if parents were able to maintain efficacy living in an economically disadvantaged neighborhood. However, stressful feelings in parents may transmit the detriments of cumulative family stressors of families in an impoverished context on family functioning.

Moreover, the findings from the current study indicate that it is not poverty itself contributing predominantly to poor family development and relationships, but rather multiple contextual stressors at family level in a cumulative nature, amalgamatively accounting for the variance, which is consistent with prior research (Ackerman et al., 2004; Dilworth-Bart et al., 2007). In fact, results of this study tally with the family
stress model (Conger et al., 1995; Mistry et al., 2002) and the demoralization thesis (Brody et al., 1999) that an impoverished contextual environment may have an indirectly negative impact on the proper functioning of a family and development of its children, through harming parents’ mental health. The present study and limited number of previous research have explored this potential mediational mechanism (Ackerman et al., 2004; Brody et al., 1999), and, to our knowledge, this study is the first one of its kind to investigate the mediational role of parental psychological health in an impoverished Chinese context, which is characteristic of high parenting stress and demandingsness in parental role reported in literature (Kwok & Wong, 2000).

In Chinese culture, the family is an important social unit, which, in a collective sense, acts as a synthetic part of the well-being of society as a whole and, in a personal sense, plays the role of welfare shelter for an individual's goodness in particular (Bian et al., 2007). As Chinese parents are more concerned about the better upbringing and development of their children, they may tend to be exposed to salient psychological vulnerability and emotional distress while disadvantaged environments curb their aspirations and expectations to fulfill their parental responsibilities (Shek, 2004). There is a Chinese traditional proverb saying that “Incapacity of providing nurturing socialization for positive development of offspring is the dereliction of duties of parents (養兒不善, 父母之過).” For this, psychological factors would be crucial mediators for the linkage between environmental stressors and family functioning in Chinese parents. However, since our final model (Model 4 in Table 2) explained only 16% of the variance of family functioning, it is believed that other notable psychosocial and contextual factors should be captured in future research.

The findings of the current study shedding light on frontline social service practices are that economical and material impoverishment may not be the only determinant of family functioning and development, which is more structural in nature. Practitioners may consider service programs to intervene with the enhancement of psychosocial resilience among family residents living in a neighborhood with an “oppressive social structure”, termed by Tickamyer and Duncan (1990). Also, social policy administrators can think about reengineering economic activities and public enterprises, as well as introducing investment from the outside, in order to increase employment opportunities. The former is focused on individual changes, and the latter on macro-level changes. In addition, at the meso-level, both social service practitioners and
social policy administrators may explore the possibilities of vocational training programs and job skills acquisition for these families, as they generally tend to be low educated, in comparison with the general population of Hong Kong (Census and Statistical Department, 2008).

As for the limitations of the present study, they are in its cross-sectional design that makes it impossible to examine the dynamic changes of relationships among the study variables across different time points. In addition, the findings of this study were restricted by the sample coming from only one of the impoverished communities in Hong Kong, which would cast dubiousness of its generalization to other disadvantaged contexts, because impoverished communities would have their unique socio-cultural differences (Barnett, 2008; Shek, 2004). Furthermore, other positive psychological mediators in parents, such as optimism and active coping strategies, which would probably influence the mediational mechanism, were not incorporated in this study. In fact, it is suggested that augmentation of sample size and recruitment of participants from different contexts with economic disadvantage, in combination with a panel design of more mediators tested, should be considered in future research.

NOTES

1 There are no official statistics regarding the family income mean reported in Hong Kong, hence we could only compare the median family income level of our sample with the general families in Hong Kong.

2 There are no official statistics regarding the mean educational attainment of the general population in Hong Kong reported, hence we could only compare the distribution of educational attainment of our sample with the general population in Hong Kong.

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**Posrednička uloga psihičkoga zdravlja roditelja u siromašnim kineskim obiteljima u Hong Kongu**

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Na temelju podataka prikupljenih od 504 roditelja iz Tin Shui Waia, jedne od četvrti Hong Konga s najnižim prihodima, ova je studija pokazala da, uz financijske nedače, kumulativni obiteljski stresori povezani sa siromaštvom štetno utječu na funkcioniranje obitelji i psihičko zdravlje roditelja. Nadalje, negativni učinci kumulativnih obiteljskih stresora na funkcioniranje obitelji značajno su se smanjili nakon dodavanja roditeljske samoefikasnosti kao posrednika, a postali beznačajni nakon dodavanja roditeljskoga stresa te roditeljske samoefikasnosti i roditeljskoga stresa kao posrednika. Rezultati ove studije slažu se s modelom obiteljskoga stresa i tezom o...
demoralizaciji, koja tvrdi da izlaganje raznim oblicima stresa na obiteljskoj razini, povezano sa siromaštvom, može negativno utjecati na razvoj obitelji i obiteljskih odnosa s posljedicama na psihološko zdravlje roditelja. Ukratko se razmatraju i implikacije za pružanje usluga.

Ključne riječi: siromaštvo, obiteljski stresori, psihičko zdravlje roditelja, funkcioniranje obitelji

Die seelische Gesundheit der Eltern und ihr vermittelnder Einfluss in bedürftigen chinesischen Familien in Hong Kong

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Schlüsselbegriffe: Armut, Familienstressoren, seelischer Gesundheitszustand der Eltern, intaktes Familienleben