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## Cultural Family Beliefs, Maternal Sacrifice and Adolescent Psychological Competence in

### Chinese Poor Single-mother Families

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## **ABSTRACT**

Research on cultural family beliefs and family processes as protective factors of adolescent development is severely lacking in the Chinese culture. Based on 432 Chinese single-mother families living in poverty in Hong Kong, the relationships among Chinese cultural beliefs of familism, adolescent perceived maternal sacrifice and psychological competence (indexed by a clear and healthy identity, cognitive competence and a positive future outlook) were examined. Results showed that adolescents' perceived maternal sacrifice mediated the influence between maternal Chinese cultural beliefs of familism and the psychological competence of adolescents raised in poor single-mother families in Hong Kong. The present study underscores the importance of cultural family beliefs and parental sacrifice on nurturing adolescent psychological competence in Chinese single-mother families living in poverty, which contributes to the construction of a family resilience model applicable to Chinese communities.

Keywords: Chinese, cultural beliefs, parental sacrifice, adolescent, single-parent families, psychological competence

## **Introduction**

The rise of divorce has tremendously impacted family systems in global and local contexts (The United Nations, 2009). Hong Kong did not escape this global trend. The number of single parents having children under 18 years old has increased from 3.9% in 2001 to 6.1% in 2011 (Census and Statistics Department, 2013). Particularly, single-mother families far outnumbered single-father families in the past decade, with the ratio of single fathers to single mothers reaching 1 to 3.63 in 2011 (Census and Statistics Department, 2011). Unfortunately, single mothers generally have more difficulties in open employment due to the child-rearing role, and their incomes are comparatively less when compared with intact families and single-father families (Cheung, 2002), making them more vulnerable to poverty. In Hong Kong, single-mother families constituted 83.6% of the total single-parent recipients of Comprehensive Social Security Assistance (CSSA) in 2011 (Census and Statistical Department, 2012). Jones et al. (2007) identified inadequate income, maternal depression, and punitive parenting as risk factors that may result in family dysfunction and detrimental adolescent development in single-mother families. There is ample research indicating that adolescents raised in single-parent families display more internalizing and externalizing behavioural problems (Amato & Keith, 1991; Leon, 2003).

Though some adolescents from poor single-mother families suffer from psychosocial maladjustment (Amato & Keith, 1991; Jones et al., 2007), there is empirical evidence illustrating that some adolescents raised in single-mother families are competent and positive in face of adversity (Anderson, 2003; Brody, Flor & Gibson, 1999). Despite the parental loss and economic hardship that adolescents encounter, they adapt well in adverse conditions and strive for excellence in their lives. This has attracted the curiosity of family theorists in the field of resilience. In particular, the Family Adjustment and Adaptation Response (FAAR)

Model portrays family meaning and identity as facilitating family members' abilities to deal with the family demands, and as building up positive adaptation against adversity and hardship (Patterson, 2002). Furthermore, Walsh (2006) identified that family beliefs, social and economic resources, family connectedness and effective communication are protective factors of families in facing adversity. In summary, positive family beliefs and effective family processes are essential family attributes that help adolescents from poor single-mother families adjust to the adverse environment.

Unfortunately, the relationships among family beliefs, family processes, and adolescent development are not thoroughly comprehended in the social science literature (Miller, 1988), particularly in Chinese contexts. It is essential to study Chinese family beliefs and family processes with emphases of familism, interdependence and reciprocity rooted in Confucian thought (Yeh & Yang, 1997). Hence, it is illuminating to study the influences of family beliefs and family processes on the psychological competence of Chinese adolescents in poor single-mother families.

### **Chinese Cultural Beliefs of Familism**

In the Chinese culture, collective familism is a pillar deeply immersed in the Confucian philosophy (Ting & Chiu, 2002). Yang (2006) defined familism as "a person's complex system of social attitudes towards their family, family members, and family-related affairs" (p. 300). Family obligations, maintenance of social bonds, conformity to rules, respect of seniors and parents, and family reputation are essential elements of the Chinese collective familism (King & Bond, 1985). Rather than acquiring an individualistic orientation in socializing the offspring, Chinese parents emphasize a collective orientation that focuses on family solidarity and family pride (Yeh & Yang, 1997). Under the Chinese culture, each family member is expected to subordinate his or her own interests for the welfare and honor of the family (Yeh

& Yang, 1997). Hence, beliefs in family solidarity and harmony, and family prosperity are essential Chinese familial beliefs in determining socialization goals (Yeh & Yang, 1997; Ting & Chiu, 2002). Family solidarity and harmony expects family members to develop mutual support with each other, show forbearance to maintain family cohesion, protect family members from external threats, and comply with standards and expectations of other family members (Yeh & Yang, 1997). Family prosperity requires family members to strive for achievement in order to bring pride to their family name (Yeh & Yang, 1997). The Chinese maxims of “*jia he wan shi xing*” (family harmony is the foundation of success in all circumstances) and “*guang zong yao zu*” (bringing honour to ancestors) aptly reflect the conventional Chinese values. Chinese conceptions of familism are similar to conceptions of familism (familismo) in the Mexican culture where family integration, family solidarity, intergenerational support and submission of one’s desire for the family are stressed (Gamble & Modry-Mandell, 2008). However, the focus of family prosperity and family pride is a distinct feature of Chinese conceptions of familism.

Even though Hong Kong was a prior British colony and has experienced dramatic changes politically and socio-economically, familism is still prevalent in modern Hong Kong families. Lau (1982) used the term “utilitarian familism” to describe the characteristics of modern Chinese families that individuals place familial interests (e.g., family protection and enhancement of family resources) over and above the interests of the society and of other people. Indeed, the emphasis of business favouritism and a low tax regime foster the competitiveness of Hong Kong, but at the same time results in minimal social welfare commitment of the government (Goodstadt, 2014). Family becomes the central pillar to provide support, welfare and development of the family members. Under this competitive ecology, family members are highly motivated to protect and enhance resources for their own families (Chan & Lee, 1995).

Cultural beliefs of familism may bring special implications to the single mothers. Under patriarchal Confucian ethics, the males have decision-making authority in their families. According to the Three Obediences (*san cong*), a wife was expected to “follow” her husband after marriage (*chu jia cong fu*). Hence, single motherhood (particularly divorce) may imply the failure of maintaining family solidarity. Furthermore, the concept of familism develops along the male lineage in the Chinese culture (i.e., family members are expected to bring glory to their paternal family lineage; Ting & Chiu, 2002). This brings ambivalence to single mothers, as they no longer belong to their ex-spouses’ family lineages. On one hand family solidarity and prosperity are familial ideals that each family member has. On the other hand, the consequences of single-motherhood may challenge their beliefs.

### **Parental Sacrifice**

Parental sacrifice is considered as a central feature of children’s socialization in Chinese families (Chao & Kaeochinda, 2010). The connotation of parenthood in the Chinese culture means assuming “responsibility for children” and “making sacrifice for the benefit of children” (Lam, 2005, p. 118). Parental sacrifice is a family process by which parents surrender their personal needs and interests for the development of their offspring. During the process, parents need to decide on the allocation of limited resources (including financial capital, time and effort). They consider their children’s developmental needs as priorities over their personal needs (Leung & Shek, 2011a). Based on the family capital theory (Coleman, 1990), the family investment model (Conger & Donnellan, 2007) and the results based on the qualitative data of Chinese parents and adolescents (Leung & Shek, 2011a), five components of parental sacrifice were identified. These include struggling for financial capital, time allocated to child’s study, rearrangement of daily schedule, sacrifice of one’s lifestyle and wishes, and concealing one’s worries (Leung & Shek, 2011a).

## **Adolescent Psychological Competence**

This study employed a “positive youth development” perspective that assesses the psychological competence of adolescents. Three constructs of psychological competence (i.e., cognitive competence, a positive future outlook, and a clear and healthy identity) were evaluated. Cognitive competence is one’s capability to assimilate and apply the skills of information processing, reasoning, and analysing (Sun & Hui, 2012). Cognitive competence is essential in goal setting and problem solving. A positive future outlook embraces an individual’s hopes, aspirations and future life goals (Sun & Shek, 2012). A clear and healthy identity represents one’s unified self-concept in developing one’s self-worth and self-esteem, which is essential for building an individual’s identity formation and self-achievement (Tsang, Hui & Law, 2012). These three constructs were chosen as outcome variables as they were essential components for adolescents of poor single-mother families to solve their problems, develop self-worth and build up a positive outlook despite the hardship and adversities that they may encounter. Furthermore, these psychological qualities could be nurtured by parental investment and parenting practices (Brody, Flor, & Gibson, 1999).

## **The Cultural-Ecological Perspectives of Children’s Socialization: Relationships among Chinese Cultural Beliefs of Familism, Parental Sacrifice and Adolescent Psychological Competence**

Based on cultural-ecological perspectives (Super & Harkness, 1986), parental beliefs influence parental behaviors, which further affect adolescent development. Particularly, LeVine (1988) portrayed how cultural socialization goals influence parental behaviors. While there are some socialization goals that are worldwide (e.g., protection of children from risks, enhancing children’s welfare), there are other socialization goals that are culturally specific

(e.g., developing filial piety towards their parents, building reputation of the family), reflecting the cultural values that are related to the expectations of a family as well as their children (Chen, Liu & Li, 2000). As highlighted by Bornstein and Cheah (2006), the cultural socialization practices instantiate “cultural themes” that are crucial for parents, and they carry strong cultural messages. The Chinese cultural beliefs of familism represent parental values and commitment on the ideals of family solidarity and family pride, which motivate the parents to nurture and invest for their children’s development so that their children can repay the family and build up family honor in the future. In the modern era, parents strive to enhance family resources for nurturing their children, and place children’s development as the primary goal of the family (i.e., “utilitarian familism”; Lau, 1982). This is more salient in poor Chinese single-mother families as family resources are scarce. Single mothers may have difficulties striving for more resources due to the practical constraints in taking care of their children. As such, the choice they can make is to sacrifice their own needs for their children’s development.

Based on the family capital theory, family social capital predicts adolescents’ psychological competence (Coleman, 1990). Gofen (2009) suggested that family capital represents the “means, strategies, and the resources embodied in the family’s way of life that influences the future of their children” (p. 115). Maternal sacrifice serves as a family social capital that enhances adolescents’ human capital (Leung & Shek, 2015). Moreover, the Chinese socialization model (Yeh & Yang, 1997) supports the thesis. While parents are obliged to sacrifice their personal interests for the welfare and development of their offspring, children are anticipated to follow their parents’ expectations and fulfill their obligations. The parent-child interdependent relationship boosts the adolescent to achievement as gratitude towards their parents’ sacrifice (Fuligni & Yoshikawa, 2003).



At this point, it is noteworthy that although parents make a sacrifice for the adolescent development, adolescents may have discrepant views on the allocation of resources, which may block their realization of maternal sacrifice (Leung & Shek, 2016). There is evidence showing that mothers perceived more sacrifice than did adolescents, and mother-child discrepancy of perceived maternal sacrifices negatively predicted adolescent achievement motivation (Leung & Shek, 2016). Rather, adolescents' perceived parental sacrifice positively predicted adolescent achievement motivation and well-being in poor Chinese families (Leung & Shek, 2013a, b). Hence, it is posited that adolescents who "make sense" of their parents' devotion and sacrifice may repay their parents by striving for achievement and displaying good behaviours.

In addition, the family socialization model on children's motivation and development (Eccles et al., 1998) provides more insights on the mediational pathways among family beliefs, family processes and adolescent development. Eccles et al. (1998) portrayed that parental beliefs influence socialization strategies and family investment on their children, which in turn affect adolescent development. In fact, there is evidence that mothers' socialization goals influence their maternal involvement and parenting practice, which further predicted children's self-regulation, psychosocial and academic competence in single-parent families (Brody, Flor, & Gibson, 1999).

### **The Current Study**

The present study aimed to examine whether maternal sacrifice mediated the relationship between Chinese cultural beliefs of familism and adolescent psychological competence in poor single-mother families in Hong Kong. Four research questions were addressed:

- Research Question 1: Do Chinese cultural beliefs of familism influence the psychological competence of adolescents in poor single-mother families? Based on the Walsh's family resilience framework (Walsh, 2006), it was hypothesized that stronger Chinese cultural parental beliefs of familism would influence greater psychological competence of adolescents (Hypothesis 1).
- Research Question 2: Do Chinese cultural beliefs of familism predict adolescents' perceived maternal sacrifice in poor single-mother families? Based on the cultural-ecological perspectives (Super & Harkness, 1986), it was hypothesized that stronger Chinese cultural parental beliefs of familism would predict higher levels of adolescents' perceived maternal sacrifice (Hypothesis 2).
- Research Question 3: Does perceived maternal sacrifice influence the psychological competence of adolescents in poor single-mother families? Based on the family capital theory (Coleman, 1990), it was hypothesized that higher levels of perceived maternal sacrifice would predict greater psychological competence of adolescents (Hypothesis 3).
- Research Question 4: Does adolescents' perceived maternal sacrifice mediate the influence between Chinese cultural parental beliefs of familism and psychological competence of adolescents in poor single-mother families? Based on the family socialization model on children's motivation and development (Eccles et al., 1998), it was hypothesized that adolescents' perceived maternal sacrifice would mediate the association between Chinese cultural parental beliefs of familism and psychological competence of adolescents (Hypothesis 4).

## **Method**

### **Participants**

The sample consisted of 432 mother-adolescent dyads of poor single-mother families in

Hong Kong. Due to the non-existence of a complete list of single-mother families in Hong Kong, as well as the fact that poor single-mother families tended to conceal their status in avoiding social stigmatization, purposive sampling method was adopted in the study.

Invitation letters were sent to different non-governmental organizations providing social services in Hong Kong. Five non-governmental organizations containing a total of 17 social service units (e.g., community centres, children and youth service units) across Hong Kong agreed to join the study. Social workers were trained to identify the responding families and assist in the data collection. Three criteria were used to identify the mother-adolescent dyads:

1) Chinese families that included adolescents who lived with their single mothers; 2) adolescents were between the ages of 11 and 17; and 3) families who lived under the poverty threshold in Hong Kong (i.e., monthly domestic household income was less than 50% of median monthly domestic household income in Hong Kong). The families were identified from the lists of members and service users of the social service units. In case more than one child within a family were eligible to participate, the elder child was selected as he or she was more capable to comprehend the questionnaire. A HK\$100 (US\$12.5) supermarket coupon was given to each participating family as a compensation of their time and transportation expense.

The mean age of mothers in the sample was 43.49 ( $SD = 5.79$ ). A high proportion of mothers had an educational level of junior secondary school or below ( $n = 308$ , 71.2%). The majority of the families ( $n = 315$ , 72.9%) received Comprehensive Social Security Assistance (CSSA) from the government. Those working mothers mainly engaged in unskilled low-paid jobs ( $n = 79$ , 18.4%). Regarding the status of single-motherhood, 12 (2.8%) were unmarried mothers, 302 (69.9%) were divorced, 27 (6.2%) were separated, 77 (17.8%) were widowed, and 8 (1.9%) mothers who had spouses that left them. The mean age of adolescents in the sample was 13.7 ( $SD = 2.03$ ). There were 211 (48.8%) boys and 221 (51.2%) girls. There

were 124 (27.7%) adolescents in Primary six (Grade 6) and below, 203 (47.3%) in Secondary 1 to Secondary 3 (Grade 7 to Grade 9) and 105 (24.3%) in Secondary 4 (Grade 10) and above). The demographic characteristics of the sample generally reflected poor single-parent families in Hong Kong (Census and Statistics Department, 2013).

## **Procedures**

Trained social workers conducted data collection either at social service units or the participants' homes, depending on the participants' preference. Written informed consent of both mothers and adolescents was sought. Mothers were invited to fill out the measure of Chinese cultural beliefs of familism and some demographic questions, whereas adolescents were invited to fill out the measures of perceived parental sacrifice and psychological competence. The questionnaires were self-administered by mothers and adolescents separately so as to ensure confidentiality. In case the participants found difficulties in comprehending the items, trained social workers read them aloud. The research was approved and monitored by Human Subjects Ethics Sub-committee of an internationally recognized university.

## **Instruments**

### **Mothers' reports**

#### *Chinese cultural beliefs of familism*

*Beliefs in Chinese Familism Scale (BCF)*. Based on the *BCF* developed by Yeh and Yang (1997), two subscales, Chinese Beliefs of Family Solidarity and Harmony (*BCF-SH*), and Chinese Beliefs of Family Prosperity (*BCF-FP*), were used. *BCF-SH* assesses Chinese beliefs on family mutuality, forbearance, protection of family members and family compliance (Yeh & Yang, 1997). *BCF-FP* measures the Chinese beliefs on family pride (Yeh

& Yang, 1997). Each item is rated on a 6-point Likert scale (1 = Strongly disagree, 6 = Strongly agree). An item sample of *BCF-SH* is “when facing difficulties, the most helpful persons are family members”, and that of *BCF-FP* is “family members need to do more things that can gain pride to the family”. In this study, six factors were extracted exploratory factor analysis, namely, family responsibilities, forbearance, family protection, mutuality, family pride and avoiding ruining family name. Each factor showed acceptable internal consistencies except “mutuality” (See Results). (*family responsibilities*:  $\alpha = 0.72$ ; *forbearance*:  $\alpha = 0.72$ ; *protection*:  $\alpha = 0.67$ ; *mutuality*:  $\alpha = 0.50$ ; *family pride*:  $\alpha = 0.85$ ; *avoiding ruining family name*:  $\alpha = 0.80$ ; Table 1).

## **Adolescents’ reports**

### *Perceived maternal sacrifice*

*Maternal Sacrifice Scale (MSA)*. Based on the theories of family capital, family investment, and parental involvement (e.g., Coleman, 1990), together with the qualitative data of Chinese parents and adolescents, a 23-item indigenous *MSA* assessing maternal sacrifice was developed on a 6-point Likert scale (1 = Strongly disagree, 6 = Strongly agree). An item sample is “Even when my mother is tired, she tries her best to understand my school life”. *MSA* showed good psychometric properties in validation studies (Leung & Shek, 2011b) and confirmatory factor analyses (Leung, Shek & Ma, 2016). In this study, three factors were extracted from exploratory factor analysis, namely: time spent and restructuring of daily schedule ( $\alpha = 0.88$ ), struggling for financial resources ( $\alpha = 0.76$ ), and personal sacrifice and concealing one’s worries ( $\alpha = 0.86$ ; Table 1).

### *Psychological competence*

*Chinese Positive Youth Development Scale (CPYDS)*. Shek et al. (2007) developed a

90-item *CPYDS* containing fifteen attributes of positive youth development. Three subscales were used in this research. 1) *Cognitive Competence Subscale (CC)*. Three items modelling after the items of the Chinese version of the Social Problem-Solving Inventory (Siu & Shek, 2005) were used, which assessed one's problem-solving and goal-setting skills. An example of the item is "I will try new ways to solve my problems". 2) *Beliefs in the Future subscale (BF)*. A short form of three items modelled from the Chinese Hopelessness Scale (Shek, 1993) was used in the study. An example of *BF* is "I have confidence that I will be a useful person when I grow up". 3) *Clear and Positive Identity Subscale (CPI)*. A 3-item short form of *CPI* was developed after literature review (e.g. Education and Manpower Bureau, 2003). A sample item is "I am a person with self-confidence". The items were rated on a 6-point Likert scale ranging from "strongly disagree" to "strongly agree". Higher scores of the subscales indicate more developmental attributes of adolescents respectively. The three subscales showed good internal consistencies (*CC*:  $\alpha = 0.86$ ; *CPI*:  $\alpha = 0.77$ ; *BF*:  $\alpha = 0.81$ ; Table 1).

## **Data Analyses**

Structural equation modeling (SEM) using AMOS 22.0 software was performed to test the hypotheses. A two-step modeling method was adopted (Kline, 2005). First, the measurement model was tested to confirm the factor structure of the latent variables. Second, the structural model of the relationships among Chinese cultural beliefs, maternal sacrifice and adolescent psychological competence was examined. Four goodness-of-fit indices were employed, including (i) *chi-square* ( $\chi^2$ ), with a non-significant probability value showing a closer fit of the hypothetical model; (ii) *the Comparative Fit Index* (CFI) and *the Normal Fit Index* (NFI) values greater than 0.90 to represent a good model fit; and (iii) *the Root Mean Square Error of Approximation* (RMSEA) value lower than 0.06 represent a good fit, and between 0.06 and 0.08 represent an acceptable fit (Hu & Bentler, 1999). The work of Baron

and Kenny (1986) was adopted to analyze the mediation effect. First, the hypothetical model of direct influence between Chinese cultural beliefs and adolescent psychological competence was tested. Then, adolescents' perceived maternal sacrifice was added to the tested model as a mediator. The direct and indirect effects were estimated. Finally, bootstrapping mediation test (Preacher & Hayes, 2008) with 5,000 bootstrapped re-samples was used to test whether the mediation effect is significant. When a "zero" value did not fall into the upper and lower bounds of bias corrected 95% confidence intervals in bootstrapping mediation test, the mediation effect was supported (Preacher & Hayes, 2008).

Based on the transactional model of child development (Sameroff, 2009), adolescent behaviors and parental child-rearing strategies interact with each other. Hence, it is plausible that the relationship between family processes and adolescents' behaviors is bi-directional. Against this background, two alternative models, the influence of Chinese cultural beliefs on maternal sacrifice via adolescent psychological competence, and the influence of maternal sacrifice on adolescent psychological competence via Chinese cultural beliefs, were tested respectively. *Akaike's Information Criterion* (AIC) was used for model comparison. The model that has smaller value of AIC is expected to have the better fit of the data (Burnham & Anderson, 2002).

In this study, a parcel-based model was used for two reasons. First, some measurements contained numerous items (e.g., *BCF* had 31 items; *MSA* had 23 items), which may result in numerous measurement errors when item-based model was employed (Little et al., 2002). Furthermore, a parcel-based model improves the variable to sample size ratio, and can be used in relatively small sample (Vandenberg & Scarpello, 1991). This approach has been extensively used in social science research using SEM (Bandalos & Finney, 2001).

To generate the parcels, the procedures suggested by Little et al. (2002) were adopted. First, the dimensions of each measurement were assessed by exploratory factor analysis using

principle axis factoring (PAF) approach with a direct oblimin rotation ( $\delta = 0$ ). Then, the internal-consistency approach of parcel creation (Kishton & Widaman, 1994) was adopted (i.e., grouping the items within the same domain to form a parcel). This approach was preferred as it allowed the unique multidimensional components of the construct to be retained in the model (Little et al., 2002).

## **Results**

Exploratory factor analysis using principle axis factoring (PAF) approach with a direct oblimin rotation ( $\delta = 0$ ) was performed. Regarding Chinese cultural beliefs of familism, six factors having eigenvalues greater than unity were extracted, explaining 44.11% of the total variance. All items except two had factor loadings above 0.32 (Tabachnick & Fidell, 2007). The six factors were “family responsibilities” (3 items, 28.76% of the variance), “forbearance” (5 items, 6.40% of the variance), “family protection” (4 items, 2.95% of the variance), “family pride” (7 items, 2.39% of the variance), “avoiding ruining family name” (8 items, 1.97% of the variance) and “mutuality” (2 items, 1.64% of the variance). In fact, “family responsibilities”, “forbearance”, “family protection” and “mutuality” are central components on the cultural beliefs of family harmony and solidarity, and “family pride” and “avoid ruining family name” are features of cultural beliefs of family prosperity (Yeh & Yang, 1997).

Regarding perceived family sacrifice, three factors were extracted, explaining 51.27% of the total variance. All items were retained. The three factors were “time spent and restructuring of daily schedule” (8 items, 38.92% of the variance), “struggling for financial resources” (9 items, 7.47% of the variance) and “personal sacrifice and concealing one’s worries” (6 items, 4.89% of the variance). The results resembled the 3 factors extracted in the exploratory factor analysis of a previous validation study (Leung & Shek, 2011b).



For adolescent psychological competence, a unidimensional factor model was obtained from PAF, accounting for 50.80% of the total variance. As the measures of the three subscales were theoretically developed, and adolescent psychological competence was regarded as a latent construct, confirmatory factor analysis (CFA) was further performed to determine the factor structure. Results indicated that a 3-factor model had an acceptable fit of the data, with  $\chi^2(24) = 63.542$  ( $p < 0.001$ ), NFI and CFI were 0.969 and 0.980 respectively (NFI and CFI > 0.90; Hu & Bentler, 1999), and RMSEA was 0.062 (< 0.08; Hu & Bentler, 1999). Hence, cognitive competence, a clear and healthy identity and a positive future outlook were confirmed as factors of adolescent psychological competence.

After identifying the dimensions of the latent variables, different parcels were generated by grouping the items within the same dimensions together. The internal consistency of each parcel was assessed. All parcels showed acceptable internal consistencies (Table 1), except “mutuality” having the Cronbach’s alpha value of 0.50. As “mutuality” contained only two items, the low internal consistency may be due to the small number of items. However, the inter-item correlation of “mutuality” was 0.332, which was regarded as moderate effect (Cohen, 1988), and this dimension was moderately correlated with other dimensions of cultural beliefs of familism ( $r$  ranged from 0.272 to 0.356). Therefore I retained “mutuality” in tested models (Schmitt, 1996).

The descriptive statistics of the measures were listed in Table 1. Full information maximum likelihood (FIML) estimation was used to handle the issue of missing data (Arbuckle, 2007). As the skewness and kurtosis values of all observed variables were less than 2 and 7 respectively (Table 1), maximum likelihood method was used in the analyses (Curran, West & Finch, 1996). Results of correlational analyses are shown in Table 2.

## **The Measurement Model**

The measurement model of Chinese cultural beliefs of familism, perceived maternal sacrifice and psychological competence was assessed by confirmatory factor analysis. Every latent variable was correlated freely with the other latent variables so as to test whether the observed variables (i.e., parcels) were only corresponding to their representing latent variables (Cole & Maxwell, 2003). The measurement model showed a good fit of the data, with  $\chi^2(51) = 121.306$  ( $p < 0.001$ ), CFI = 0.942, NFI = 0.965, and RMSEA = 0.057 (Hu & Bentler, 1999). It was not surprising to find a significant  $\chi^2$  as the likelihood ratio test is sensitive to large sample size (Byrne, 2001). The observed variables corresponded to the relevant latent constructs. The factor loadings and squared multiple correlations of the constructs were shown in Table 1.

### **The Structural Model**

Regarding direct influence of Chinese cultural beliefs on adolescent psychological competence (Model 1), the structural model yielded an acceptable fit of the data, with  $\chi^2(26) = 82.949$  ( $p < 0.001$ ), NFI, CFI and RMSEA were 0.946 and 0.962 respectively, and RMSEA was 0.071. The prediction of Chinese cultural beliefs of familism on adolescent psychological competence was significant, with  $\beta = 0.14$  ( $p < 0.05$ ). Hypothesis 1 was supported.

Then, perceived maternal sacrifice was added to the structural model (Model 2). The goodness-of-fit indices showed a good fit of the data, with  $\chi^2(51) = 121.306$  ( $p < 0.001$ ), NFI and CFI were 0.942 and 0.965 respectively, and RMSEA was 0.057. The hypothetical model explained 15% of the variance of adolescent psychological competence. Chinese cultural beliefs of familism positively influenced perceived maternal sacrifice, with  $\beta = 0.227$  ( $p < 0.001$ ). Hypothesis 2 was supported. Perceived maternal sacrifice also positively predicted psychological competence, with  $\beta = 0.369$  ( $p < 0.001$ ). Hypothesis 3 was supported. The direct effect between Chinese cultural beliefs and adolescent psychological competence

became non-significant ( $\beta = 0.056, p > 0.05$ ), but the indirect effect via maternal sacrifice was significant, with  $\beta = 0.084 (p < 0.001)$ . The total effect of the model was 0.140 ( $p < 0.05$ ). A “zero” did not fall between the upper and lower bounds of the bias corrected 95% confidence intervals of indirect effects of the mediating path (Preacher & Hayes, 2008), suggesting a mediation effect via maternal sacrifice in the tested model was supported (i.e., Hypothesis 4, Table 3). A simplex model with only the indirect effect (i.e. omitting the direct effect) was assessed (Model 3). It was found that Model 3 showed an acceptable fit of data, with  $\chi^2(52) = 122.335 (p < 0.001)$ ; NFI and CFI were 0.942 and 0.965 respectively, and RMSEA was 0.056 (Table 4). The value of  $\Delta\chi^2 = 1.029 (p > 0.05)$ , suggesting that the difference between the full model (Model 2) and the simplex model (Model 3) were non-significant.

Moreover, two alternative models, the influence of Chinese cultural beliefs on perceived maternal sacrifice via adolescent psychological competence (Model 4), and the influence of perceived maternal sacrifice on adolescent psychological competence via Chinese cultural beliefs (Model 5), were assessed. It was found that Model 4 and Model 5 showed an acceptable fit (Model 4:  $\chi^2(52) = 131.985 (p < 0.001)$ , NFI = 0.937, CFI = 0.961, RMSEA = 0.060; Model 5:  $\chi^2(52) = 162.003 (p < 0.001)$ , NFI = 0.923, CFI = 0.946, RMSEA = 0.070). When comparing the AIC values among the models, it was found that AIC values of Model 2 (full hypothetical model) and Model 3 (simplex model) are smaller than those of Model 4 and Model 5. Hence, the alternative models were rejected. The goodness-of-fit of all tested models were shown in Table 4. Due to the consideration of model parsimony, Model 3 (the simplex model) was regarded as the final model (Figure 1).

## Discussion

The present study aimed to examine whether maternal sacrifice mediated the relationship between Chinese cultural beliefs of familism and adolescent psychological competence in poor single-mother families in Hong Kong. Rooted in the Confucian thought, the cultural beliefs of familism are deep seated in the Chinese families. Beliefs in family solidarity, harmony and prosperity have become the foundations of Chinese family values. Unfortunately, divorce, separation or widowhood brings challenges to these beliefs. Marital breakdown and absence of spouses in the family has directly confronted the beliefs of family solidarity and harmony. Furthermore, due to the patriarchal family characteristics, achievements of family members serve to bring family pride to the male lineage (Ting & Chiu, 2002). The fundamental beliefs of family prosperity might be challenged by single mothers. However, the study showed that regardless of the loss and economic hardship that single mothers have experienced, those who have higher endorsement of Chinese cultural beliefs of family solidarity, harmony, and prosperity would sacrifice their needs for their children. Adolescents who perceive more maternal sacrifice may have more opportunities to excel and to become more resilient in adverse situations, as a repayment for their mothers' sacrifice on their development (Fuligni & Yoshikawa, 2003).

Another insight from the findings is that adolescents' perceived maternal sacrifice mediates the association between maternal cultural beliefs and adolescents' psychological competence. Facing single-parenthood, adolescents fully understand that their mothers need to take up multiple roles of striving for financial resources, child rearing and monitoring, and family management, especially those living in poverty. Cultural family beliefs bring cultural meanings of maternal sacrifice to the adolescents in upholding the ideals of family solidarity and prosperity. The interdependent relationship between mothers and adolescents become more salient, as illustrated by the Chinese sayings of "*xiang yi wei ming*" (survive interdependently). It is possible that adolescents perceive their mothers' sacrifice as a

manifestation of mothers' preservation of family solidarity and betterment of the children. Adolescents who understand the cultural message of their mothers may make meanings of maternal sacrifice. This becomes the driving force of adolescents to strive for achievement and develop their competence so as to bring pride to their mothers and avoid disappointing their mothers (Fuligni et al., 1999). This is indeed a representation of filial piety embedded in the Chinese culture.

### **Implications of the Study**

A review of literature on relationships among cultural beliefs of familism, parenting behaviors and adolescent development has been conducted in the Hispanic and Asian cultures (e.g., Gamble & Modry-Mandell, 2008; Hernández et al., 2010; Li, 2014). Some studies indicated that familism moderated the influence of parent-child relationship (or parent-child conflicts) on adolescent well-being (e.g., Gamble & Modry-Mandell, 2008; Hernández et al., 2010), and other studies examined how socialization practices served as mediators in influencing adolescent development (e.g., Calderón-Tena, Knight & Carlo, 2011). Undoubtedly, the literature provides important insights on the relationships among cultural family beliefs, family socialization and adolescent development. However, majority of these studies were conducted in the U.S. and explored the acculturation process of immigrant families (e.g., Hispanic-American and Asian-American families; Hernández et al., 2010; Li, 2014). There were relatively fewer studies exploring the relationships in the motherland and examining the role of familism in underprivileged families. This study showed that adolescents' perceived maternal sacrifice mediated the influence of maternal cultural beliefs on adolescent psychological competence in poor Chinese single-mother families, which is pioneering in the social science literature. In view of the paucity of research on the family

beliefs systems in underprivileged families, the present study brings an important piece to the existing literature.

Furthermore, the majority of the studies examined parent-child relationships (e.g., Li, 2014) and parenting practices (e.g., Calderón-Tena, Knight & Carlo, 2011) as the mediators. There were few studies that examined parental contributions in terms of family resources. This study examined Chinese cultural beliefs of familism and maternal sacrifice as protective factors that predict adolescent psychological competence in Chinese single-mother families living in poverty, which helps to contribute to the development of Chinese model of resilience. Moreover, the study illustrates the importance of employing indigenous concepts of family beliefs and family processes in understanding the family influence in the Chinese culture. It has been argued that culture plays an “overarching role in shaping the ecology of parenting and childhood” (Bornstein & Cheah, 2006, p.3). Yang (1999) also criticized that unquestioned borrowing of Western concepts and tools may inhibit native values, views and ways of thinking. This study advocates the need for research that captures the unique features of a particular culture in the development of indigenous family models.

Practically, the present findings underscore the importance of Chinese cultural beliefs in nurturing adolescent psychological competence in poor single-mother families. The conventional welfare service for helping poor single-parent families are mainly financial and tangible aids, employment assistance and emotional support. The beliefs system of single-parent families is always ignored. The current study indicates that stronger maternal beliefs on family solidarity and prosperity would predict more perceived maternal sacrifice, which in turn influences adolescent psychological competence. Hence, family practitioners can incorporate cultural family beliefs into family life education programs and supportive services for Chinese single-parent families.

Second, findings demonstrate that perceived maternal sacrifice is a protective factor that enhances adolescent development in Chinese single-mother families, and it might carry cultural meanings of family solidarity and prosperity. It is essential to foster adolescents' gratitude towards their mothers as a resource for adolescents to cope with adversity. Furthermore, single mothers often sacrifice their own needs in order to invest in their children's development. The asset-based development programs such as Individual Development Accounts (IDAs) in the U.S. (Sherraden, 1991) and Child Development Fund in Hong Kong may certainly help underprivileged families build up assets for their offspring, and thus lessen the heavy loads of mothers in meeting the developmental needs of adolescents.

Last but not the least, though perceived maternal sacrifice predicts adolescent psychological competence in single-mother families, it may also create psychological stresses for both single mothers and adolescents. Single mothers may feel guilty and shameful when they fail to mobilize adequate resources for meeting the developmental demands of their offspring, which may further reinforce a sense of helplessness in their experience of single-motherhood. At the same time, adolescents may feel guilty when they fail to upkeep the beliefs and expectations of their mothers (Bempechat, Graham & Jimenez, 1999), which is perceived as a disgrace to their mothers. Family practitioners should be sensitive to the financial burdens and psychological wellbeing of single mothers and adolescents, and give timely interventions when necessary.

## **Limitations and Conclusion**

The cross-sectional design has the inherent problem of inferring cause-and-effect relationships among the variables. Although alternative models were tested in this study, longitudinal studies are preferred in examining the mediation effect in future studies. Second,

the generalizability of the findings in the current study may be limited as the sample was not randomly selected. Third, the adoption of a parcel-based model in the analyses may bring the possibility of model misspecification. Fourth, the Cronbach's alpha value of "mutuality" of Chinese cultural beliefs was low. Further exploration of the reliability of this measure is recommended in the future studies. Fifth, the sample of poor single-mother families was selected in Hong Kong. Future studies should replicate findings in different Chinese communities (e.g. China) and with Chinese people living overseas (e.g. Chinese living in the U.S.).

Despite the limitations, this study is pioneering in examining the relationships among cultural beliefs, maternal sacrifice, and adolescent development in the Chinese contexts. As noted by Lebow (2012), family issues "concerned with gender and culture were largely unattended to for many years" (p.437). The present study, and its findings, provide a timely response to the criticism.



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Table 1. Descriptive statistics of measuring variables ( $N = 432$ )

Measuring variables		Mean	SD	Skewness	Kurtosis	Cronbach's Alpha	Factor loadings	Squared Multiple Correlations
Mother	Chinese cultural beliefs							
	Family responsibilities	4.14	0.91	-0.25	-0.05	0.72	0.76	0.58
	Forbearance	4.97	0.63	-0.56	0.16	0.72	0.55	0.30
	Family protection	4.34	0.83	-0.38	0.28	0.67	0.74	0.54
	Mutuality	4.83	0.91	-0.82	0.51	0.50	0.41	0.17
	Family pride	3.84	0.94	-0.03	-0.24	0.85	0.79	0.63
	Avoid ruining family name	4.33	0.78	-0.27	0.01	0.80	0.79	0.62
Adolescent	Perceived maternal sacrifice							
	Struggling for financial resources	4.61	0.86	-0.60	-0.51	0.88	0.70	0.49
	Time spent and restructuring of daily schedule	4.31	0.95	-0.49	-0.13	0.76	0.81	0.65
	Personal sacrifice and concealing one's worries	3.86	1.19	-0.18	-0.55	0.86	0.82	0.68
	Psychological competence							
	Cognitive competence	4.60	0.91	-0.41	0.09	0.86	0.75	0.57
	Positive future outlook	4.54	0.94	-0.54	0.47	0.81	0.81	0.65
	Clear and healthy identity	5.12	1.26	-0.41	-0.15	0.77	0.83	0.69

Table 2. Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11
Chinese cultural beliefs											
1. Family responsibilities											
2. Forbearance	0.428***										
3. Family protection	0.582***	0.387***									
4. Mutuality	0.272***	0.356***	0.353***								
5. Family pride	0.613***	0.339***	0.597***	0.294***							
6. Avoid ruining family name	0.572***	0.509***	0.552***	0.302***	0.649***						
Perceived maternal sacrifice											
7. Struggling for financial resources	0.213***	0.188***	0.125**	0.111*	0.164**	0.210***					
8. Time spent and restructuring of daily schedule	0.151**	0.142**	0.060	0.141**	0.118*	0.091	0.555***				
9. Personal sacrifice and concealing one's worries	0.173***	0.108*	0.063	0.085	0.158**	0.115*	0.579***	0.670***			
Adolescent psychological competence											
10. Cognitive competence	0.137**	0.106*	0.014	0.098*	0.100*	0.055	0.212***	0.243***	0.228***		
11. Positive future outlook	0.113*	0.040	-0.002	0.103*	0.085	0.063	0.242***	0.308***	0.218***	0.607***	
12. Clear and healthy identity	0.147**	0.043	0.006	0.108*	0.121*	0.113*	0.256***	0.231***	0.234***	0.628***	0.672***

\* $p < .05$ , \*\* $p < 0.01$ , \*\*\* $p < .001$

Table 3: The standardized effects of Chinese cultural beliefs on adolescent psychological competence

	Estimate		BC (95% CI)	
	(standardized)	(unstandardized)	Lower	Upper
Direct effect	0.056	0.055	-0.054	0.156
Indirect effect via parental sacrifice	0.084***	0.083***	0.042	0.139
Total Effect	0.140*	0.138*	0.027	0.250

\* $p < 0.05$ , \*\*\* $p < 0.001$

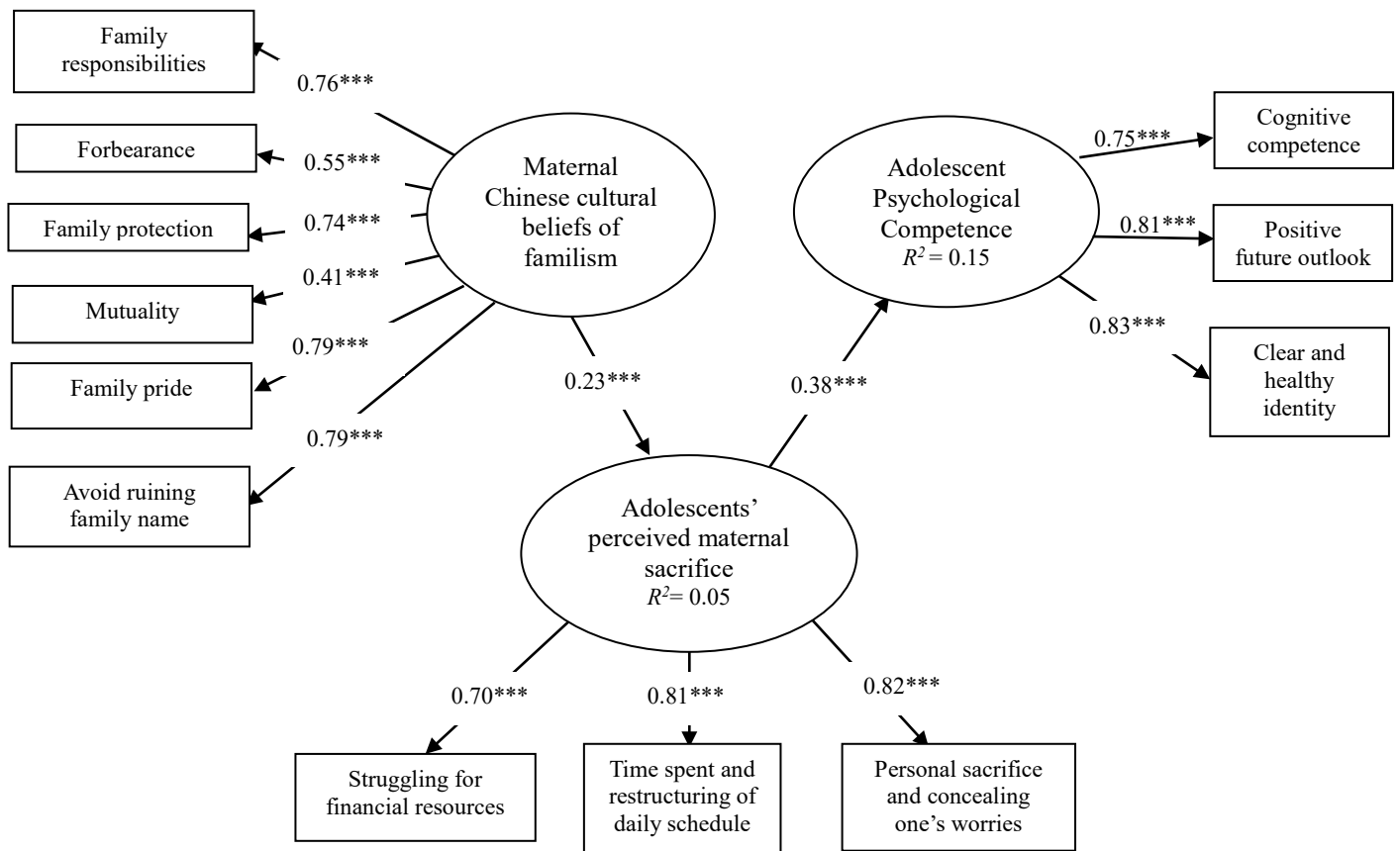
Table 4: Goodness-of-fit indices of different tested models

Model	Influences	Model	$\chi^2$	df	NFI	CFI	RMSEA	AIC
1	Beliefs → Competence	Direct	82.949***	26	0.946	0.962	0.071	138.949
2	Beliefs → Sacrifice → Competence	Full	121.306***	51	0.942	0.965	0.057	199.306
3	Beliefs → Sacrifice → Competence	Simplex (omit direct effect)	122.335***	52	0.942	0.965	0.056	198.335
4	Beliefs → Competence → Sacrifice	Simplex	131.985***	52	0.937	0.961	0.060	207.985
5	Sacrifice → Beliefs → Competence	Simplex	162.003***	52	0.923	0.946	0.070	238.003

\* $p < .05$ , \*\*  $p < 0.01$ , \*\*\*  $p < .001$

Beliefs = Chinese cultural beliefs of familism perceived by mothers. Sacrifice = Maternal sacrifice perceived by adolescents. Competence = Adolescent psychological competence

Figure 1: The final model



$\chi^2(52) = 122.335, p < 0.001$   
 NFI = 0.942  
 CFI = 0.965  
 RMSEA = 0.056