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Family Processes and Adolescent Achievement Motivation in Poor Chinese Single-Mother Families

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Abstract

The role of family functioning in the relationship between maternal beliefs and adolescent achievement motivation in underprivileged families is grossly under-researched. This study examined the moderation effect of family functioning on the relationship between maternal expectations of the children's future and adolescent achievement motivation in a sample of 432 Chinese single-mother families experiencing economic disadvantage in Hong Kong. Results indicated that family functioning moderated the influence of maternal expectations of the children's future on adolescent achievement motivation. The relationship between maternal expectations and adolescent achievement motivation was significantly positive in single-mother families having higher family functioning, while the relationship was not significant in those families with relatively lower family functioning. The main and moderating effects were found stable between immigrant and non-immigrant mothers. The present study underscores the importance of family functioning on the influence of maternal expectations on adolescent achievement motivation in poor Chinese single-mother families, which provides important insight on how single-mother families living in poverty strive to nurture their children in the face of adversity. The theoretical and practical implications of the findings are discussed.

Keywords: parental expectations, family functioning, adolescent achievement motivation, single-mother families, Chinese, poverty

Introduction

In the highly competitive world where excellence and achievement are emphasized, parents generally have high expectations on their children to strive for a good prospect in the future through having good academic performance. This is particularly important for underprivileged families, as achievement motivation is an essential driving force for adolescents to excel in the adverse environments, which may enable them to climb up the social ladder. Unfortunately, single-mother families commonly have to face their hard time to mourn for the loss, handle the negative emotions of depression, frustrations and resentment, and recover from the tragedy during the process of single-motherhood (Amato & Keith, 1991; Anderson, 2003; Lipman et al., 2002).

Besides, single-motherhood brings financial hardship to the family because of reduction of income due to the absence of spouse as well as the difficulty for single mothers to engage in full-time employment (Millar & Ridge, 2009). These families may experience learned helplessness, which stifles their motivation to improve and desire to build up engagement with others (Pareek, 2002). Kane (1987) further suggested that poverty brings “motivational deficit” to the individuals and the families (i.e., believing that one’s action is useless to improve the poor living condition). However, the resilience literature shows that poor single-parent families do invest for their children and prepare them to escape from the risks of intergenerational poverty (Brody, Flor & Gibson, 1999; Hsieh & Shek, 2008; Leung & Shek, 2015; Zhan & Sherraden, 2003). Brody, Flor and Gibson (1999) found that mothers’ developmental goals and competence-promoting parenting helped to enhance adolescent psychosocial competence and academic competence. Zhan & Sherraden (2003) identified that maternal expectations of child’s education were associated with higher educational achievement of children in female-headed households. Along this line, family theorists and researchers have paid attention to the question of how family protective factors may

contribute to adolescent positive development.

Among the various adolescent developmental attributes, achievement motivation is an important developmental asset that represents adolescents' commitment towards learning (Benson, 1997) and desire to achieve success (Weiner 1992). It is a "hope-oriented" attribute that drives adolescents to excellence (Feather, 1965). However, it should be noted that there are differences in the conceptualization of achievement motivation between the Chinese and Western cultures. While an "individualistic orientation" is used to define achievement goals, values, criteria and standard of success in the West, the Chinese conceptualization of achievement motivation focuses on "social orientation" in defining and approving goals, values and standards, which reflects the collectivist orientation rooted in the Confucian thought (Yu & Yang, 1989). Hence, it is insightful to examine the familial factors that influence adolescent achievement motivation in poor single-mother families in different cultural contexts.

Influence of parental expectations on adolescent achievement motivation

Among the familial factors that influence adolescent development, parental expectation is regarded as a crucial parental belief that affects children's motivation and psychosocial competence (Davis-Kean, 2005; Eccles et al., 1998; Schoon et al., 2004; Zhan & Sherraden, 2003). Higher parental expectation motivates adolescents to place higher standards on their academic performance and set up greater self-demands to achieve the standards (Boocock, 1972; Gill & Reynolds, 1999). The expectancy-value theory on motivation (Eccles et al., 1998, 2006) further explains the influence of parental expectations on adolescent development. Under this model, the expectations of significant others infuse one's goals, perceptions of competence and self-schemas. These cognitive variables determine one's values and expectancies of success, which in turn influence one's motivation to action (Eccles

et al., 1998). In short, parental expectations shape adolescents' goals and motivation for achievement.

In the Chinese culture, parents have high expectations on their children's future, hoping that their children can excel and succeed in future (Blair & Qian, 1998). The Chinese maxim of "*wang zi cheng long*" (wishing the son to become a "dragon") aptly demonstrates the essence of parental expectations, with "dragon" symbolizes "supremacy" and high social status. In fact, the conception of parental expectations in the Chinese culture goes beyond the completion of schooling, which includes practical and cultural values (Leung & Shek, 2013b; Li, 2004). The practical values are beliefs in good educational attainment and stable job in their future, which is considered as an assurance of good future prospect and economic success. Cultural values refer to the demands of adolescents' attitudes and behaviors consistent with Chinese beliefs, such as high respect for education and scholarship, fulfillment of filial obligation and possession of moral virtues (Leung & Shek, 2013b; Li, 2004).

The influence of parental expectations on adolescent development has a strong relationship to Chinese familism (Yeh & Yang, 1997). Chao and Sue (1996) suggested that high parental expectations are closely related to two important values underlining Chinese culture: bringing honour to the family and ensuring future success. In the Chinese culture, shame, feelings of inferiority and loss of "*mian zi*" (face) are powerful social control mechanisms shared by an individual and the family (Ho, 1976; Yeh & Huang, 1996). Hence, Chinese adolescents are socialized to be hypersensitive to the expectations of others, especially their superiors and significant ones (Ang & Huan, 1996). Driven by filial piety, adolescents strive to achieve in order to bring honor to their family name and avoid disgracing their parents (Bempechat, Graham, & Jimenez, 1999; Leung & Shek, 2015).

Influence of family functioning on adolescent achievement motivation

Another factor influencing adolescent achievement motivation is a supportive family environment where adolescents are nurtured. Family functioning, which represents the “quality of family life at the systemic level” (Shek, 2005, p. 518), contains the components of family mutuality, effective communication, family harmony, parental care and parental control (Shek, 2002). According to the framework on the socialization of children’s motivation and achievement (Eccles et al., 1998) and family capital theory (Coleman, 1990), a warm, supportive family climate with affectional family relationships predicted motivation and educational achievement of adolescents (Furstenberg et al., 1999; Leung & Shek, 2013a; Smokowski et al., 1999).

Family functioning as a moderator

Theoretically, parental expectations and family functioning interact with each other and influence adolescent development. Based on the ecological-cultural perspective (Super & Harkness, 1986), family functioning conveys family messages to the offspring (Bornstein & Cheah, 2006). Hence, family functioning serves as a platform that facilitates the influence of parental expectations on adolescent development.

However, poor single-mother families face more vulnerabilities because of single-parenthood and financial hardship (Amato & Keith, 1991; Anderson, 2003). Jones et al. (2007) suggested several risk factors that single-mother families have encountered, including insufficient income, maternal depression and disruptive parenting. The loss brings negative emotions of depression, resentment and frustrations to single-mothers, which may lead to hostile and inattentive parenting (Eamon & Zuehl, 2001). The child-rearing demands restrict single-mothers from open employment, and underemployment and low earnings pushes them into poverty (Millar & Ridge, 2009). Based on the family stress model (Conger & Conger, 2008), financial hardship and maternal depression result in disruptive parenting and family

dysfunction, which create adverse effect on adolescent psychosocial development (Parke et al., 2004; Shek, 2007). In families with poor family functioning, nurturance provided by the family is not adequate for adolescents to respond to their mothers' expectations, which eventually restricts their cultivation of achievement motivation. There are ample studies showing that poverty impairs proper family functioning and hampers adolescent development (Amato & Keith, 1991; Leon, 2003),

On the contrary, the compensatory thesis proposes that parents who have low satisfaction of a subsystem (marital subsystem in case of single-mothers) may seek satisfaction from another subsystem (parent-child subsystem) of the family, which attempts to compensate for the shortage of the former subsystem (McLanahan & Booth, 1989; Nelson et al., 2009). Under this thesis, single-mothers may compensate their children for the loss of their fathers' contribution by investing more on their children's development. There is empirical support that single-mothers strive to provide a nurturing environment for their adolescent development so as to minimize the adverse effect of the tragedy (Hsieh & Shek, 2008; Leung & Shek, 2015; Paterson, 2001). Furthermore, although single-mothers face marital disruption, they normally would not lose hope on their children. Some of them have higher expectations on their children because they believe that a better future is the only way for the adolescents to overcome the detrimental effects of the tragedy and bring pride to the family (Leung, 2016). As such, effective family functioning conveys messages on parental expectations which may promote adolescents' achievement motivation.

The moderation effect of family immigrant status

Previous studies revealed that immigrant status of the parents did influence parental expectations on adolescent achievement motivation and academic performance (Areepattamannil & Lee, 2014; Fuligni, 1997; Fuligni & Fuligni, 2007). In previous studies,

immigrant parents were found possessing deep-seated values in education and believing that their children can succeed in future through achieving good academic performance in their schools. They instilled these beliefs in their children and provided the best that they could afford for their children (Fuligni & Fuligni, 2007; Suárez-Orozco, Rhodes, & Milburn, 2009). In Hong Kong, most of immigrant mothers come from mainland China and move to Hong Kong for family reunion, hoping that their children could have a better education and hence a brighter future (Leung, 2016). The maternal expectations and sacrifice may instill adolescents to strive for excellence as a means to reciprocate their mothers (Fuligni & Yoshikawa, 2003). Hence, it may be argued that the influence of maternal beliefs and adolescent achievement motivation would be stronger with immigrant mothers than with non-immigrant mothers. However, as single-motherhood brings loss, sense of abandonment and financial hardship to the families (Anderson, 2003; Jones et al., 2007), the impacts of single-motherhood and poverty on parental expectations, family functioning and adolescent development may be strong enough to outweigh the impacts of immigrant status. In this paper, we examined these two competing views in assessing the moderating effects of maternal immigrant status on the relationships between maternal expectations, family functioning and adolescent achievement motivation in Chinese single-mother families experiencing economic disadvantage.

The Present Study

Against this background, the present study attempted to examine the role of family functioning in the influence of maternal expectations of children's future on adolescents' achievement motivation in poor single-mother families in Hong Kong. There were four research questions in this study:

Research Question 1: Do maternal expectations of children's future influence adolescent achievement motivation in poor single-mother families? Based on the family socialization

model of motivation (Eccles et al., 1998) and previous studies (e.g. Boocock, 1972; Gill & Reynolds, 1999), it was hypothesized that maternal expectations of children's future positively predict achievement motivation of adolescents in poor single-mother families (Hypothesis 1).

Research Question 2: Does family functioning influence adolescent achievement motivation in poor single-mother families? Based on social capital theory (Coleman, 1990), it was hypothesized that effective family functioning positively would predict achievement motivation of adolescents in poor single-mother families (Hypothesis 2).

Research Question 3: Does family functioning moderate the influence of maternal expectations of children's future to adolescent achievement motivation in poor single-mother families? Based on the ecological-cultural perspective (Super & Harkness, 1986) that family functioning communicates and transfers parental messages of their expectations to the offspring, it was hypothesized that the interaction effect of maternal expectations of children's future and family functioning positively would predict achievement motivation of adolescents in poor single-mother families. Specifically, while there would be positive relationship between maternal expectations and adolescent achievement motivation when family functioning was higher in the single-mother families, the relationship would become non-significant when family functioning was relatively lower. (Hypothesis 3).

Research Question 4: Is there any difference in the effects of maternal expectations and family functioning on achievement motivation between families with immigrant mothers and non-immigrant mothers in Hong Kong? Based on the previous studies (Areepattamannil & Lee, 2014; Fuligni, 1997; Fuligni & Fuligni, 2007), it was hypothesized that there would be difference between immigrant mothers and non-immigrant mothers in the main effect of maternal expectations on adolescent achievement motivation (Hypothesis 4). However, as single-motherhood and poverty have detrimental impact on family functioning and adolescent

development (Anderson, 2003; Jones et al., 2007) which may outweigh the impacts on mothers' immigrant status, there would be invariance difference between immigrant mothers and non-immigrant mothers in the main effect of family functioning on adolescent achievement motivation, and the interaction effects of maternal expectations and family functioning on adolescent achievement motivation.

Method

Participants

A cross-sectional survey of single-mother families living in poverty was conducted in Hong Kong. As there was no complete list of single-mother families in Hong Kong, and poor single-parent families tend to hide their identity in the community, purposive sampling method was employed in the study. Three criteria were adopted to identify the respondents: 1) Chinese families experiencing single-motherhood; 2) the family had one adolescent at the age between 11 and 17; and 3) their monthly household income was under the official poverty line of Hong Kong, i.e., less than 50% of monthly median domestic household income. In case there were more than one adolescent at the age between 11 and 17, the elder child would be invited to fill out the questionnaire due to their higher literacy in comprehending the questionnaires. Finally, 432 poor Chinese single-mother families participated in the study.

In the mother sample, the mean age of mothers was 43.49 ($SD = 5.79$). A majority of mothers had low educational levels (secondary 3 and below) ($n = 308$, 71.2%). There were 12 (2.8%) unmarried mothers, 302 (69.9%) divorced mothers, 77 (17.8%) from widowed families, and 35 (8.1%) mothers whose spouses had left the families. A high proportion of families ($n = 315$, 72.9%) received Comprehensive Social Security Assistance (CSSA) from the government. Among the adolescent sample, the mean age was 13.7 ($SD = 2.03$). 211 (48.8%) were boys and 221 (51.2%) were girls. 124 (27.7%) were studying in primary

schools (Grade 6 and below), 203 (47.3%) in junior secondary levels (Grade 7 to Grade 9) and 105 (24.3%) in senior secondary levels (Grade 10 and above). The demographic characteristics generally reflected the characteristics of single-mother families in Hong Kong, with high proportion of divorced mothers, having lower educational attainment and receiving CSSA (Census and Statistics Department, 2013).

Procedures

We invited children and youth service centers and community service centers across Hong Kong to join the study. Ultimately 17 centers agreed to participate in the research. Social workers of the participated centers were trained to identify the respondents as well as data collection. The data collection took place either in the participated centers or at the respondents' homes, depending on the preference of the respondent families. The research objectives, data collection procedures, and rights of the respondents on voluntarily participation and withdrawal from the research were explained to the respondents. Written informed consent of each respondent was sought. Mothers were invited to respond to the measure of maternal expectations and some demographic questions, whereas adolescents were invited to respond to measures of perceived family functioning and achievement motivation. Mothers and adolescents completed the measures separately in a self-administered format. As a few mothers had problems to comprehend the measures, trained social workers read out the items for them. The research was approved and monitored by Human Subjects Ethics Sub-Committee of an internationally recognized university.

Instruments

Mothers' report

Maternal expectations

Chinese Maternal Expectations of Children's Future Scale (MECF). Based on a survey of literature on parental expectations (e.g. Shek & Chan, 1999) and qualitative findings of focus groups of Chinese parents and adolescents, a 17-item indigenous MECF was developed with five dimensions: educational attainment, self-reliance, career aspirations, family obligations and good moral conduct (Leung & Shek, 2011a). A sample item is "I expect my child to have good salary in the future". The respondents are required to rate each item on a 6-point Likert scale from "1 = Strongly Disagree" to "6 = Strongly Agree". MECF showed good reliability and validity in the previous studies (Leung & Shek, 2011b). Higher scores indicate higher parental expectations of children's future. The measure showed good reliability in this study ($\alpha = 0.88$).

Immigrant status

Mothers were requested to fill out their duration of stay in Hong Kong. A dummy variable, maternal immigrant status ("families with non-immigrant mothers" = -1; "families with immigrant mothers" = 1), was created. We grouped those mothers who indicated that they were born in Hong Kong into "families with non-immigrant mothers", and those who indicated that they were immigrants from mainland China into "families with immigrant mothers".

Adolescents' report

Family Functioning

The Chinese Family Assessment Instrument (CFAI). CFAI is an indigenous 33-item multi-dimensional measurement used to assess family functioning in Chinese people (Shek, 2002). CFAI has five dimensions, namely mutuality, communication, conflict and harmony, parental concern, and parental control. A sample item is "family members support each other". The

respondents were asked to rate whether their family environment is similar to the statement on a 5-point scale, with response options including “very similar”, “somewhat similar”, “neither similar nor dissimilar”, “somewhat dissimilar”, and “very dissimilar.” Higher score of the scale indicates higher levels of family functioning. The scale showed good reliability, concurrent validity and factorial validity in the previous studies (Shek, 2002; Shek & Ma, 2010). CFAI showed excellent reliability in this study ($\alpha = 0.95$).

Achievement motivation

Social Oriented Achievement Motivation Scale (SOAM). SOAM is a 30-item self-reported measurement assessing achievement motivation in the Chinese population (Yu & Yang, 1989). SOAM assesses social orientation of achievement motivation, including achievement goals, values and standards defined by significant others, community and society (Yu, 1996). A sample item of SOAM is “The main goal in my life is to do things that will make my parents feel proud”. Each item is rated on a 6-point Likert scale ranging from “1 = Strongly Disagree” to “6 = Strongly Agree”. The measurement showed good reliability and validity in the previous study (Yu & Yang, 1989). Higher score of the scale indicates higher level of social-oriented achievement motivation. SOAM showed good internal consistency in this study ($\alpha = 0.94$).

Data Analyses

To examine Hypotheses 1, 2 and 3, structural equation modelling using AMOS 23.0 was performed. The scores of maternal expectations and family functioning were mean-centered. The interaction term of “maternal expectations X family functioning” was constructed. The structural model was tested with maternal expectations, family functioning and the interaction term of “maternal expectations X family functioning” as the predictors, and adolescent

achievement motivation as the outcome. Three goodness-of-fit indices were used to test the model, including (i) chi-square (χ^2), with a non-significant probability value and χ^2/df ratio less than 2 (Hu & Bentler, 1999); (ii) the Comparative Fit Index (CFI) value greater than .90 to show a good model fit; and (iii) the Root Mean Square Error of Approximation (RMSEA) lower than .06 to indicate a good fit of the model, and between .06 and .08 as an acceptable fit of the model (Hu & Bentler, 1999). The effects of the predictors on the outcome were estimated. In case the interaction term of “maternal expectations X family functioning” significantly predicted adolescent achievement motivation, the moderation effect was supported.

To clarify the influence of the interaction effect of maternal expectations and family functioning on adolescent achievement motivation, simple slope analyses (Cohen et al., 2003) on the regression of adolescent achievement motivation by maternal expectations of children’s future were conducted separately at low and high levels of family functioning. High family functioning was 1 *SD* higher than the mean of family functioning, and low family functioning was 1 *SD* lower than the mean.

Regarding Research Question 4, multiple group analyses via structural equation modeling (SEM) were performed to assess whether there was difference between immigrant mothers and non-immigrant mothers in the tested model. The Chi-square difference test was used to test the model difference between the groups.

Results

Correlational analyses were conducted between the measured variables and demographic characteristics of the sample. A two-tailed multistage Bonferroni procedure was performed to guard against inflated Type I error (Larzelere & Mulaik, 1977). The results indicated that most demographic characteristics (age and educational level of mothers, years

of single-parenthood, gender, age and educational level of adolescents, number of children and reliance of CSSA), except maternal immigrant status, did not correlate with the measured variables. Maternal immigrant status was related to maternal expectations of children future ($r = .24, p < .001$), with immigrant mothers having higher levels of maternal expectations. Furthermore, it was found that both maternal expectations of children's future and family functioning were positively associated with adolescent achievement motivation (Table 1).

In the SEM models, we used full information maximum likelihood (FIML) estimation to handle the issue of missing data (Arbuckle, 2007). All variables had skewness and kurtosis values less than 2 and 7 respectively (Table 1). Hence, maximum likelihood method was adopted (Curran, West & Finch, 1996).

The goodness-of-fit indices of structural equation modelling indicated that the tested model yielded a good fit of the data, with $\chi^2(3) = 1.76$ ($p > .001$), $\chi^2/df = .59$ (< 2.0 ; Hu & Bentler, 1999), CFI = 1.00 ($> .90$; Hu & Bentler, 1999), and RMSEA = .00 ($< .06$; Hu & Bentler, 1999). Maternal expectations, family functioning and the interaction term between maternal expectations and family functioning significantly predicted adolescent achievement motivation, with $\beta = .15$ ($p < .01$), $.17$ ($p < .001$) and $.11$ ($p < .05$), respectively. Hypotheses 1, 2 and 3 were supported. Family functioning moderated the relationship between maternal expectations and adolescent achievement motivation in poor Chinese single-mother families. Figure 1 showed the main and interaction effects of maternal expectations and family functioning on adolescent achievement motivation.

The results of simple slope analyses showed that the positive relationship between maternal expectations of the children's future and adolescent achievement motivation was the strongest in families with high level of family functioning ($\beta = 0.25, p < 0.001$). On the contrary, the influence of maternal expectations of the children's future on adolescent achievement motivation was non-significant in families with low level of family functioning

($\beta = 0.06, p > 0.05$). Figure 2 plots the regression lines of maternal expectations of the children's future on adolescent achievement motivation at high and low levels of family functioning.

Regarding Research Question 4, multiple group analyses were performed to assess whether there were differences between families with migrants and non-migrant mothers on the main effects and interaction effects of maternal expectations and family functioning on adolescent achievement motivation. Results indicated that the unconstrained model showed an acceptable fit of the data, with $\chi^2(2) = 5.53$ ($p > .05$), CFI = .94 ($> .90$) and RMSEA = .06 (between .06 and .08; Hu & Bentler, 1999). When constraining all predictive paths to be equal across both migrant and non-migrant groups, the model fitted the data well, with $\chi^2(5) = 7.86$ ($p > .05$), CFI = .95 ($> .90$) and RMSEA = .04 ($< .06$; Hu & Bentler, 1999). There was invariance between families with immigrant mothers and non-immigrant mothers on the main effects and interaction effects of maternal expectations and family functioning on adolescent achievement motivation, with $\Delta\chi^2(3) = 2.32$ ($p > .05$).

Discussion

The study attempted to examine the moderating effect of family functioning on the influence of maternal expectations of children's education on adolescent achievement motivation in poor single-mother families in Hong Kong. There were several unique features of the study. First, Chinese single-mother families experiencing economic disadvantage were recruited. As pointed out by Leung and Shek (2015), although this population is increasing rapidly in the recent decades, related research is sparse. Hence, the study fills the existing gap in the scientific literature. Second, the study explored family functioning as a contextual attribute upon which maternal expectations influence adolescent achievement motivation in the Chinese communities, which is pioneering in the literature. Third, the study gathered

information from both mother and adolescent in a family, hence providing a more comprehensive picture of family dynamics in Chinese single-mother families. It is noteworthy that studies based on the data collected from multiple informants are rare in the literature.

The present findings indicated that maternal expectations and family functioning positively predicted achievement motivation of Chinese adolescents in poor single-mother families. Furthermore, the interaction term of maternal expectations and family functioning positively predicted adolescent achievement motivation. In single-mother families demonstrating better family functioning, maternal expectations positively predicted adolescent achievement motivation. The findings are in line with the ecological-cultural perspective (Super & Harkness, 1986) and the family socialization model of motivation (Eccles et al., 1998), suggesting that family functioning provides a contextual nurturing environment for the influence of maternal expectations on adolescent achievement motivation. This is particularly important for Chinese families where collectivism and interdependence among family members are stressed (Yeh & Yang, 1997). Deeply influenced by the Confucian thoughts, family members are supposed to strive for harmony and prosperity of the families as a whole (Ting & Chiu, 2002). Parents are expected to provide a nurturing environment for the welfare and development of their children, and reciprocally adolescents are obliged to follow their parents' expectations and strive for achievement so as to honor their family name (Yeh, 2003). Based on this view, adolescents give meanings on family functioning, which is the manifestation of maternal expectations and effort for their future development. Specific to single-mother families, the compensatory thesis suggests that some mothers tend to compensate their children for the absence of fathers in the family by providing extra care and nurturance to their offspring (McLanahan & Booth, 1989; Nelson et al., 2009). The compensatory effects would remind and reinforce adolescents on their

mothers' expectations and aspirations on them. Reciprocally, adolescents are obliged to strive for excellence so as to please their mothers (Leung & Shek, 2015). Hence, adolescents are more motivated for achievement as gratitude to their mothers' nurturance and care. In short, family functioning not only serves as a protective factor for the positive development of adolescents, but also interacts with parental expectations to positively influence achievement motivation of Chinese adolescents.

The results indicate that the influence of maternal expectations on adolescent achievement motivation become non-significant in single-mother families with poor family functioning. This provides valuable insights for researchers and family theorists in understanding the adverse situations in single-mother families. Single-motherhood may bring different impacts to family functioning. Facing marital disruption, the negative outcomes of family functioning will be intensified due to maternal distress and punitive parenting behaviours (Jackson et al., 2000; Jones et al., 2007). With the lack of a nurturing environment for adolescents to develop and flourish, adolescents may experience a sense of helplessness and inadequacy that may reduce their motivation to excel, regardless of maternal expectations on their future. The sense of learned helplessness and "motivational deficit" will be intensified by the effects of financial hardship (Kane, 1987). Hence, at low levels of family functioning, maternal expectations do not predict adolescents' achievement motivation.

Contrary to the previous findings (Areepattamannil & Lee, 2014; Fuligni, 1997; Fuligni & Fuligni, 2007), mothers' immigrant status did not moderate the main effect of maternal expectations on adolescent achievement motivation in poor single-mother families, even though immigrant mothers showed higher levels of maternal expectations of their children's future than did non-immigrant mothers. One possibility is that the related studies on immigrant families did not specifically focus on single-mother families. In fact, single-motherhood and poverty have brought tremendous impacts to maternal values and adolescent

development (Barber & Eccles, 1992; De Civita et al., 2004), which may surpass the impacts of maternal immigrant status on the relationship between maternal expectations and adolescent achievement motivation. Furthermore, as predicted, there was invariance between immigrant and non-immigrant mothers in the main effects of family functioning on adolescent achievement motivation, and the interaction effects between maternal expectations and family functioning on adolescent achievement motivation. Nevertheless, as studies on immigrant status, parental expectations and family functioning are sparse in the literature, further research in this area is recommended.

The findings bring several theoretical and practical implications. Theoretically, the study examines the role of family functioning on the relationship between maternal expectations of children's future and adolescent achievement motivation in Chinese single-mother families, which is pioneering in the social science literature. As research on Chinese family beliefs was severely lacking (Leung & Shek, 2013b), the study brings an important piece of work to the literature. Second, the study shows that family functioning serves as an important factor that moderates the relationship between maternal expectations of children's future and adolescent achievement motivation in poor Chinese single-mother families. The present findings indicated that family functioning would provide a contextual nurturing environment for making parental expectations "meaningful" and "feasible" for adolescents to strive to excel, which help to identify the familial mechanism through which adolescent achievement motivation can be nurtured in Chinese single-mother families. The results provide important cues for future research and construction of related models in the Chinese context.

Practically, the research findings demonstrate the importance of family functioning in the influence between maternal expectations and adolescent positive development in poor single-mother families, which may help social service practitioners in designing and implementing effective services to help them. The results indicate that even though single-

mothers may expect their children to be successful in the future and get out from the shadow of intergenerational poverty, adolescent achievement motivation may not be boosted up when the family is dysfunctional. Hence, an important message of the present study is that “parental expectations alone is not enough”. Single-mothers may need extra support and efforts to manage the multiple roles of child rearing, rebuilding of financial resources, family management, emotional resolution and re-establishment of family supportive network (Carter & McGoldrick, 1989). This is essential for social service practitioners to assist the single-mothers in maintaining proper family functioning, which catalyses the influence of maternal expectations on adolescent achievement motivation. Family life education programmes, mutual aid groups, family aided services may be helpful for such families.

Regarding service delivery, social services typically support poor single-parent families via tangible services such as financial subsidies, employment aid, tutoring service. In contrast, less emphases are paid to the changes of family beliefs system and family functioning in dealing with the problems of single-motherhood. The study suggests that maternal expectations of children’s future are influential in cultivating the achievement motivation of adolescents, and family functioning moderates the relationship between maternal expectations and adolescent achievement motivation. Social service practitioners may need to pay more attention on the changes of maternal expectations of children’s future, and assist the families in rebuilding a supportive and stable environment for their adolescents to develop.

The study has several limitations. First, the constraint of cross-sectional research design to infer cause-and-effect relationships should be noted as a limitation in the study. Hence, longitudinal research design is preferred in the future studies. Second, non-randomized sampling strategy brings the generalizability of the findings into question. Third, the study was conducted with a sample of poor single-mother families in Hong Kong. To examine

whether the findings are applicable to other Chinese communities, it is suggested that similar studies will be performed in different Chinese communities (e.g. China) and Chinese families resided in other non-Chinese communities (e.g. American-Chinese).

Conclusion

The study is the first known scientific research that examines the moderating effect of family functioning on the relationship between maternal expectations of children's future and achievement motivation of adolescents living in poor Chinese single-mother families. The findings indicated that family functioning moderated the influence of maternal expectations on adolescent achievement motivation. The main effects and moderating effects was found stable between immigrant and non-immigrant status of mothers. This study provides important cues on how maternal expectations and family functioning interplay with each other to affect adolescents' motivation in poor single-mother families, which allow family theorists and researcher to have a better understanding on the familial protective factors in building positive assets of Chinese adolescents growing up in poor single-mother families, and the mechanisms through which the protective factors work. In view of the appeal of Imber-Black (2007) on "discovering and sustaining ways to enhance the well-being of so-called nontraditional families [single-parent families]" (p. 1), the present study is a constructive response to the request.

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Table 1: Correlations of the variables

		Mean	SD	Skewness	Kurtosis	1	2	3	4	5	6	7	8	9	10	11
1.	Mothers' age	43.49	5.79	.29	-.07	1.00										
2.	Mothers' educational level	3.04	.82	.10	.12	-.00	1.00									
3.	Mothers' migrant status (-1 = non-immigrant; 1 = immigrant)	.48	.88	-1.09	-.81	.01	-.18*	1.00								
4.	Period of single-motherhood	3.22	1.21	-.07	-.98	.20*	.11	-.12	1.00							
5.	Adolescents' gender (boys = 1, girls = -1)	-.02	1.00	.05	-2.0	.05	.06	-.02	-.06	1.00						
6.	Adolescents' age	13.67	2.03	.10	-.91	.31*	.10	-.08	.17*	.01	1.00					
7.	Adolescents' educational levels	3.85	1.93	.15	-1.11	.30*	.10	-.06	.20*	-.01	.91*	1.00				
8.	No. of children in the family	1.89	.84	1.10	2.14	.02	-.12	-.04	-.15*	-.13	.10*	.09	1.00			
9.	CSSA recipients (non-CSSA = -1, CSSA = 1)	.50	.88	-1.07	-.61	.03	-.09	-.04	.21*	-.07	-.01	.00	.11	1.00		
10.	Maternal expectations of child's future	5.24	.48	.66	.76	-.12	-.04	.24*	-.01	.08	.11	-.08	-.01	-.02	1.00	
11.	Family functioning	3.77	.62	.29	.13	-.10	.03	-.02	.01	-.04	-.05	-.04	-.05	-.05	.14*	1.00
12.	Adolescent achievement motivation	3.95	.80	.11	-.13	.02	.00	.04	-.04	-.02	-.09	.13	-.08	-.02	.15*	.20*

* Bonferroni correction was used to evaluate the significance of the correlations and * indicates that the r value is significant when familywise Type I error. $p_{FW} < .05$, $p_T < .006$.

Table 2. Regression of adolescent achievement motivation by maternal expectations of children's future at low, moderate and high levels of family functioning

Family Functioning	Classification	Adolescent Achievement Motivation		
		Unstandardized coefficient (B)	Standard error (SE)	Standardized Coefficient (β)
Low	- 1 <i>SD</i>	0.05	0.05	0.06
High	+ 1 <i>SD</i>	0.20	0.06	0.25***

*** $p < .001$

Figure 1: Final model of multiple regression of adolescent achievement motivation by the predictors

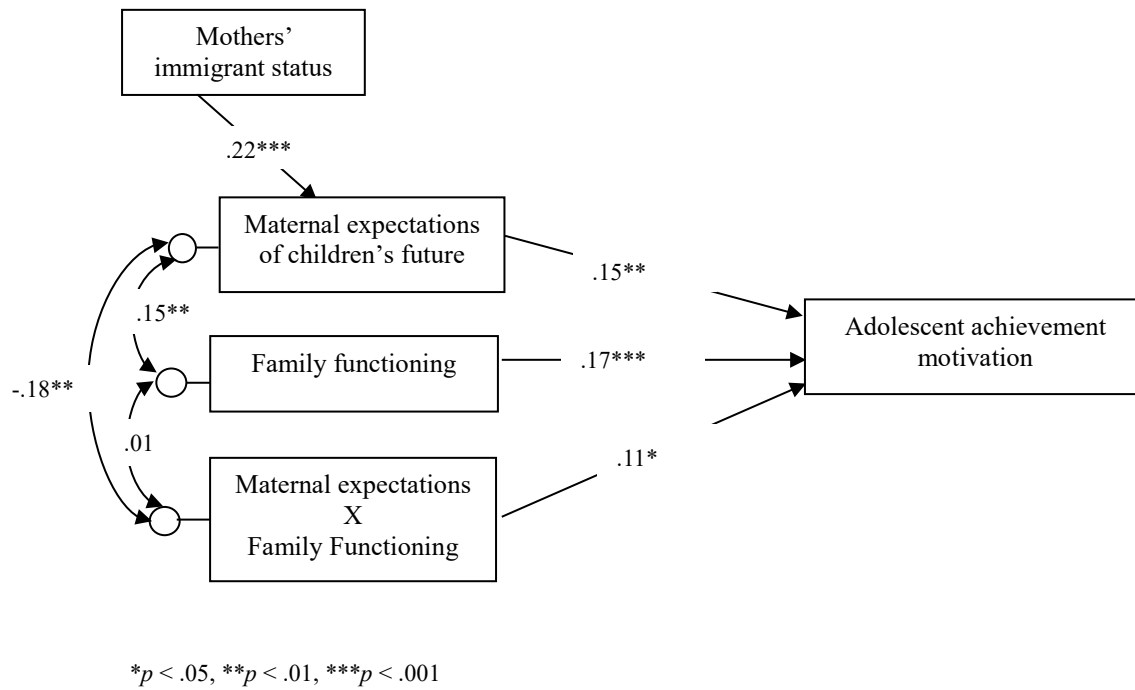
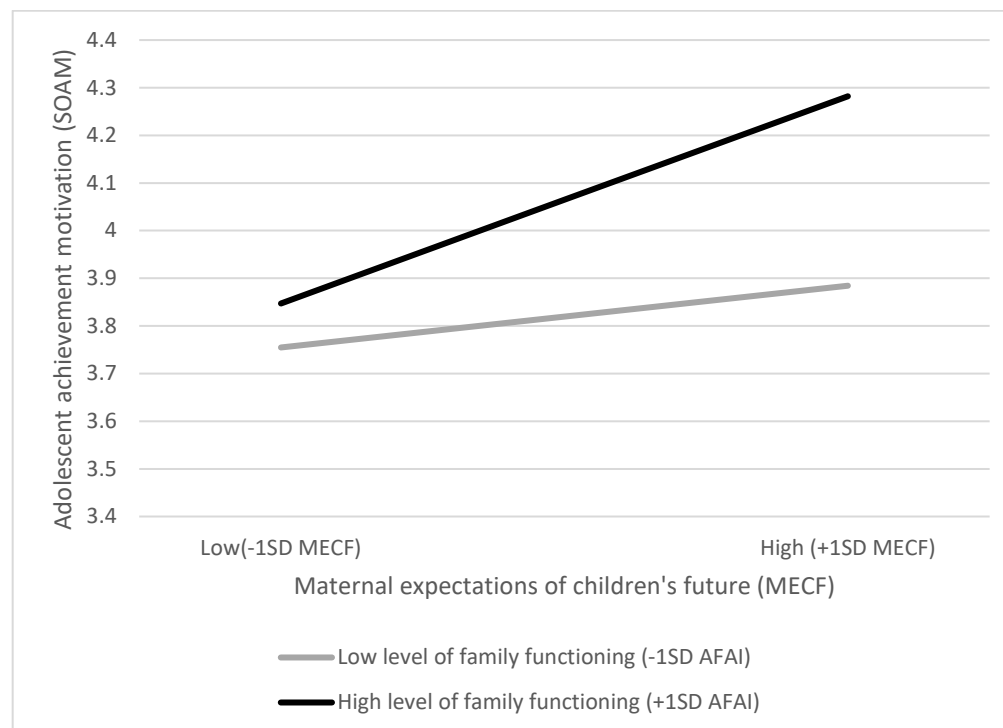


Figure 2: Regression of adolescent achievement motivation by maternal expectations of children's future in different levels of family functioning



Note: MECF = Maternal Expectations of Children's Future Scale perceived by mothers. AFAI = The Chinese Family Assessment Instrument perceived by adolescents. SOAM = Social-oriented Achievement Motivation Scale perceived by adolescents.