

“All I can do for my child” – development of the Chinese Parental Sacrifice for Child’s Education Scale

Janet T.Y. Leung¹ and Daniel T.L. Shek^{1-4,*}

¹ Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hong Kong, P.R. China

² Public Policy Research Institute, The Hong Kong Polytechnic University, Hong Kong, P.R. China

³ Kiang Wu Nursing College of Macau, Macau, P.R. China

⁴ Division of Adolescent Medicine, Kentucky Children’s Hospital, University of Kentucky, Lexington, KY, USA

Abstract

This paper describes a study in which an assessment tool of parental sacrifice for child’s education was developed. Based on focus group interviews of parents and adolescents, five dimensions of parental sacrifice on child’s education were identified, including “striving of financial resources”, “time spent on child education”, “restructuring of daily routine”, “sacrifice of lifestyle and aspiration”, and “shielding of worries”. Based on the literature on family capital theory, family investment, and parental involvement as well as the present findings, the Chinese Parental Sacrifice for Child’s Education Scale was developed. To assess the content validity of the measure, a panel of experts was invited to determine the relevance, clarity, and representativeness of the developed items and the views of the experts were used to further modify the scale. This study is a pioneer attempt to assess parental sacrifice for child’s education in the Chinese and international contexts.

Keywords: children’s education; Chinese; content validity; focus group interview; parental sacrifice.

Introduction

Education is regarded as a milestone for individuals in achieving upward social and economic mobility (1, 2). Apart from serving the instrumental purpose of climbing up the social ladder, education possesses special meaning in Chinese values. According to Chinese philosophy, education is intrinsic

for the fulfillment of two fundamental values: human malleability and self-improvement (3). It has an ultimate function in the cultivation of “*chun-tzu*” (man of virtue or noble character), which contains a strong moralistic sentiment (4, 5). Thus, children are socialized with the saying like “*wan ban jie xia pin, wei you du shu gao*” (all jobs are low in status, except study which is the highest). Education has a high-value in adolescent development in the Chinese community.

To allow children to attain better education is an important task for parents, but it is not easily fulfilled. Family theorists highlight different aspects of parent’s contributions to a child’s education, including family capital (6, 7), family investment (8), and parental involvement in children’s education (9–12). Among them, parental sacrifice is an important concept when accounting for parent’s contribution to a child’s education, especially in Asian culture (13). Parental sacrifice for child’s education is a process of which parents give up their personal needs for the sake of educational needs of their children. The process involves three important components. First, education of children requires parents to mobilize different family resources, such as money, time, and effort. Second, due to limited resources within the family, parents face a struggle in its mobilization and distribution. Third, parents prioritize the educational needs of children over their own personal needs, and thus there is mobilization of resources for child’s education over parental fulfillment of their own needs.

Parental sacrifice has been regarded as a central feature in the Chinese conception of familism. In Chinese culture, family members are supposed to subordinate their personal interests and goals to the glory and welfare of the family as a whole (14). In particular, for the sake of their children’s future, parents sacrifice their personal needs and interests. Besides, with the ideal of collectivism in Chinese society, interdependent orientation in socialization practice in the family is stressed (15). Parents are expected to nurture their children unconditionally and be ready to “pay” for the development of their children. Children are socialized to behave according to the expectations of parents, and exhibit feelings of guilt and shame if they fail (15). The indigenous Chinese socialization practice makes the parental contribution to children’s education to be more sentimental (i.e., affective) and less calculative (i.e., rational) in nature (16).

Though the concept of parental sacrifice for child’s education is distinctive and important in understanding the family process on parent’s contribution to their child’s educational and developmental needs, it is grossly neglected in the literature. In computer searches in October 2010 on databases including PsycINFO, Social Work Abstracts, Sociological Abstracts, and ERIC for the period of 1980–2010 with “parental sacrifice” as the search term, there were only 17, 0, nine

*Corresponding author: Professor Daniel T.L. Shek, PhD, FHKPS, BBS, JP, Chair Professor of Applied Social Sciences, Faculty of Health and Social Sciences, Department of Applied Social Sciences, The Hong Kong Polytechnic University, Room HJ407, Core H, Hung Hom, Hong Kong, P.R. China
E-mail: danielshek@inet.polyu.edu.hk

Received October 6, 2010; accepted December 5, 2010

and two publications, respectively. The number of citations dropped to six, 0, three, two, respectively when searching for parental sacrifice with relevance to education. The results further dropped to two, 0, 0, 0 respectively in the studies of Chinese communities based on the search terms “parental sacrifice”, “education”, and “Chinese”.

Among the limited studies on parental sacrifice for child's education, most of them were qualitative in nature. In her qualitative study on how higher education students broke through the intergenerational cycle of education level inheritance, Gofen (17) found that their parents were ready to sacrifice their own needs for the educational needs of the children. Interestingly, children recognized the sacrifice of parents on their contribution and thus regarded it as a duty to fulfill the expectations of the parents. Weiling (18) performed a qualitative study based on 11 ethnographic interviews with families in economic disadvantage in Mexico to understand the phenomenological meanings of children's education to the families. It was discovered that parents made a lot of personal sacrifices for the educational achievement of their children. Under strong values of collectivism and familism in Latino culture, families felt that all sacrifices were worthwhile as “it is all I can do for them...to help them to succeed in this life” (p. 827).

With reference to Chinese communities, the concept of parental sacrifice was mainly explored in immigrant families (19, 20). In their study of low-income immigrant families, Fuligni and Yoshikawa (19) found that children and adolescents were motivated for academic achievement and avoided problem behaviors in response to the sacrifice of parents who migrated to the US for their better future prospect. Chao and Kaochinda (20) suggested that parental sacrifice is a distinct facet of parental support within the cultural frames of Asian immigrants. Thus, parental sacrifice for child's education is an important family process that should attract more attention.

Regarding measurement tools on parental sacrifice for child's education, it was found that quantitative assessment tools are almost non-existent. Chao and Kaochinda (20) developed a six-item scale on parental sacrifice that contained two components: parents' sacrifice and hard work for assuring children have a better life, and children's gratitude and recognition of parental sacrifice. However, the scale showed several limitations. First, parental sacrifice was considered as a dimension of parental support, instead of regarded as an independent construct with its unique dimensions. Second, as the scale was developed and used with the sample of Chinese immigrants in the US and the migration experience may lead to biased experiences, the items and scale may not be suitable for Chinese in their native places. Third, as the scale was developed and used in adolescents only, the perceptions of parents on parental sacrifice was ignored. Thus, there is a need to develop a new measurement tool for parental sacrifice in the native Chinese context.

Academically, it is essential to develop a measurement tool to assess parental sacrifice for child's education due to two reasons. First, as the concept and theories related to parental sacrifice are underdeveloped, the measurement tool would facilitate empirical studies on the issue which would contribute to the

theorization and conceptualization of the concept of parental sacrifice. Second, it helps us to understand the family process on how Chinese people nurture their children, which may be different from that of Western societies. In fact, there is always an urge on the development of indigenous Chinese family concepts that would enhance our understanding of Chinese families and construction of relevant family models (21, 22).

The lack of theories and empirical studies on parental sacrifice create hurdles in the development of the measure. As parental sacrifice for child's education involves the distribution of family resources, a survey of literature on family resources for children's education is essential. Family capital theory suggests that family capital is “the ensemble of ways, strategies, and the resources embodied in the family's way of life that influences the future of their children” (p. 115) (17). Family capital can be further classified into financial, human, and social capital that describes the physical resources for enhancement of learning of children, potential for creating a cognitive environment, and the networks that connect children with resources (6, 7).

The family investment model further suggests four dimensions of family resources that influence the physical, cognitive, and psychological development of their children. These include (a) availability of learning materials; (b) parenting's stimulation of learning; (c) family's standard of living such as food and housing and (d) residing locations that foster children's development (8). Van Horn et al. (23) categorized family resources into three components: adequacy of basic needs, money, and time.

In general, two broad categories of family resources are identified: (a) the home environment for creating a stimulating learning environment, and (b) parental involvement in children's schooling and activities. Home environment is the physical and cognitive environment for the stimulation of children and adolescents in their homes and communities. Physical environment, learning materials, modeling, instructional activities, regulatory activities, variety of experience, and acceptance and responsivity were regarded as dimensions of home environment for adolescents (24).

For parental involvement in children's schooling and activities, Grolnick et al. (12) proposed three categories: (a) school involvement (e.g., involving in school events, talking to teacher before and after school); (b) cognitive involvement which exposed the child to cognitive stimulating activities, such as going to library; and (c) personal involvement which got acquainted on the child's experience in school. These categories highlight parental involvement in individual, contextual, and institutional levels. In short, the measurement tool of parental sacrifice for child's education builds on the understanding of parent's decisions on distribution of family resources for the sake of their child's educational needs.

Methods

Participants and procedure

Regarding the development of an assessment tool for parental sacrifice for child's education, two stages of research implementation

were involved. First, focus group interviews with Chinese parents and adolescents were carried out. Second, experts were invited to assess the content validity of the scale and examine whether the items could be modified.

Focus group interviews with Chinese parents and adolescents

With the very limited literature on parental sacrifice, it is essential to understand the phenomenon directly from the stakeholders. The process is of special importance for an indigenous study where cultural specificity is emphasized. Qualitative study allows researchers to grasp the native meanings and characteristics of the phenomenon, so as to make indigenous conceptualization of the phenomenon possible (21). In this study, two focus groups of parents and adolescents were arranged and interviewed separately.

The parents and adolescents were recruited from two children and youth service units in Hong Kong. The adolescent group consisted of two boys and six girls, with age ranged from 12 to 16 ($M=14.13$, $SD=1.25$). One of them came from single parent families and others from intact families. The family sizes ranged from three to six persons ($M=4.25$, $SD=1.16$). Four of them were experiencing economic disadvantage. Written consent from parents was obtained for the adolescents to join the focus group. The adolescents were requested to voice their ideas and experiences on the sacrifices of their parents for their educational needs.

The parent group consisted of seven parents (one father and six mothers) with at least one child aged between 11 and 15. The age ranged from 40 to 52 ($M=46.0$, $SD=4.32$). Their children studied in Secondary 2 to Secondary 4. There were three intact families, two divorced families, and two widowed families. There were four parents experiencing economic disadvantage. Written consent from parents was obtained. Also, the parents were requested to voice their ideas and experiences on their sacrifices for their child's education. The researcher conducted both interviews and the processes were audio recorded. The focus group interviews of adolescents and parents lasted for 1 h and 1 h 15 min, respectively.

Content validation by experts

While focus groups could yield rich information for the construction of the scale on parental sacrifice for child's education, content validation of the measure is important to see whether the measure is valid. In this study, content validity was determined by the judgments of experts and researchers to assess whether the elements or items were relevant to and covered the relevant facets of the construct (25). In this study, experts who had more than 5 years of experiences in providing social work or counseling services for adolescents and families or had substantial knowledge on parent education and parent-adolescent relationship were invited to participate in the content validation process. There were 15 experts involved in total. They were all social workers, with 14 currently working in children and youth services and family services, and one a full-time PhD student. Regarding their experiences, one had worked as a social worker for 5 to 10 years, eight for 10 to 15 years, three for 16 to 20 years, and three for more than 20 years. Regarding their educational levels, one was a PhD student, 10 with a Master degree, and four with a Bachelor degree. They were requested to examine (a) relevance of the items to the construct or subscales measured in the instruments; (b) representativeness of the items to a particular content domain (i.e., how far the domains cover all the facets of the targeted constructs), and (c) clarity (i.e., whether the wordings and phases were clear and concise).

A self-administered questionnaire was used to collect the opinion of the experts. The experts were informed of the definitions, related literature, domains of the construct, as well as the assessment instrument. They were requested to fill in the questionnaire with their judgment of the content validity of the instruments. Regarding "relevance" of the items to the construct, a 4-point rating scale (1=irrelevant, 2=unable to assess the relevance without item revision or item is in need of revision or otherwise would no longer be relevant, 3=relevant but needs minor amendment, 4=relevant) was used for measuring how far each item was relevant to the content domain. Justifications were requested for items considered irrelevant, and recommendations for modifications of items that needed revision were also requested. Regarding "clarity" of the items, a 4-point Likert scale (1=very unclear, 2=unclear, 3=clear, 4=very clear) was used to see whether the wordings and phases were concise and clearly presented. Again, recommendations for modifications of the wordings and phases were requested in case an item was perceived as unclearly presented. For "representativeness" of items to the domains, a 4-point Likert scale (1=very inadequate, 2=inadequate, 3=adequate, 4=very adequate) was used to evaluate how far the items cover the facets of the domains. Recommendations were asked if the aspects are under-presented. Overall, the representativeness of the domains to the targeted construct was also evaluated by a 4-point Likert scale. An open-ended question was used to examine the overall representativeness of the domains in covering the facets of the targeted construct.

Results

Focus group interviews with Chinese parents and adolescents

The content of the interview was fully transcribed by the first author. Pattern coding was carried out with the transcripts of the parent and adolescent focus groups. Miles and Huberman (26) suggest that pattern coding is "a way of grouping those summaries into a small number of sets, themes, or constructs... it's an analogue to the cluster-analytic and factor-analytic devices use in statistical analysis" (p. 69).

In analyzing the narratives of the two focus groups, analyses showed that five categories of responses (striving for financial resources, time spent for education of children, restructuring of daily routines, sacrifice of lifestyle and aspiration, and shielding of worries) emerged from the data. Table 1 lists the domains and themes of parental sacrifice for child's education.

The data of the focus groups provided some insights on the attributes of the concept of parental sacrifice. Apart from the dimensions of financial resources and time involvement that are mentioned in the literature of family resources, other domains such as restructuring of daily routine, sacrifice of lifestyle and aspiration, and shielding of worries were experienced by parents or expressed by adolescents.

Adolescents, rather than parents, were more ready to voice their experience of parental sacrifice for financial resources on their educational needs. Also, adolescents experiencing economic disadvantage shared in detail their experiences of parent's prioritization of educational provision over personal needs, whereas adolescents from a better economic situation did not. The theme may be more salient to families with economic disadvantage.

Table 1 Domains and themes of parental sacrifice for child's education.

Domain	Themes	Examples of narratives	No. of participants mentioned (numbers in parentheses are those experiencing economic disadvantage)
Strive for financial resources	Work hard for a living	<p>"At least I knew that he [my father] worked hard but never complained. He was very tired after work" (F, 15 years old, male, para. 443a–445a).</p> <p>"He spent the whole year on his work without rest. I found that in supporting the family, he sacrificed his whole life, including his health... Long hours of work, he was a taxi driver and went out for work at four o'clock something" (L, mother, 42 years old, para. 473p–475p)</p> <p>"I spent my life for the work, working hard, to earn a living" (Y, mother, 50 years old, para. 490p)</p> <p>"No matter how expensive the things were, my father bought them for us. In contrast, he found that his own things were unnecessary and thus he did not buy for himself... I needed to buy some products for my learning, such as electronic dictionary, he [my father] bought them for me, regardless how expensive they were. But his bag was torn, he continued to use it. He would only purchase a new one only when the bag could not be used. He bought a cheap one" (S, 14 years old, female, 324a & 329a).</p> <p>"My father had only two pairs of trousers and he wore them alternately. Even when they were torn, he continued to wear them. He said that they were usable... We usually bought stuffs for education, such as electronic dictionary, books. He gave us money, and never asked the price" (M, 14 years old, female, para. 332a)</p>	<p>Adolescent: 2(1) Parent: 3(1)</p>
	Priority of provision for education over personal needs	<p>He [my father] saved money for us to attend university. He needed to save money for three of us. It would be hard" (T, 13 years old, female, para. 283a)</p> <p>"The expense of the whole family was great, but still you had to save some money, bit by bit... By now when the son needed much expense on education, we could manage" (L, mother, 42 years old, para. 359p)</p> <p>"My mother was afraid. She was afraid that we could not continue our education with the lack of money. She borrowed money from our relatives. I felt embarrassed" (S, 14 years old, female, para. 312a)</p> <p>"Discuss with parents, or other matters that teachers required, she [my mother] would take a leave" (M, 14 years old, female, para. 366a)</p> <p>"(During examination) when he [my son] knew that someone was there, he would not be so lazy... He would say, OK Mum, you could check the pages to see whether I knew the answers" (L, mother, 42 years old, para. 361p–371p)</p> <p>"As I had to attend school and she [my mother] needed to wake up early" (K, 16 years old, female, para. 277a)</p> <p>"He [my son] did his homework to midnight, you have to stay with him till mid-night. It was unreasonable that you went to sleep but he was still reading" (G, mother, 40 years old, para. 427p)</p> <p>"I made up the decision to leave the job and rear my child. Now I had had not worked for 20 years... I sacrificed my career" (C, father, 48 years old, para. 449p)</p> <p>"He [my father] would not use the money for entertainment, nor went for a vacation" (T, 13 years old, female, para. 283a)</p> <p>"They [parents] sacrificed their time of entertainment to help us in our revision, fulfilling our educational needs" (T, 13 years old, female, para. 287a)</p> <p>"Her [my wife's] social circle was smaller. She always stayed at home and seldom went out" (C, father, 48 years old, para. 488p)</p> <p>"In case she [my mother] got sick she would seldom let us know. She would stand for it... She scared that we would worry" (T, 13 years old, female, para. 463a and 467a)</p>	<p>Adolescent: 3(1) Parent: 2(0)</p> <p>Adolescent: 1(1) Adolescent: 3(2)</p> <p>Adolescent: 1(0) Parent: 3(1)</p> <p>Adolescent: 2(1) Parent: 3(1)</p> <p>Parent: 1(0)</p> <p>Adolescent: 1(0)</p>
Time spent on educational needs of children	Strive for savings for children to study in university and other educational expenses		
	Borrow money to fulfill educational needs of children		
Restructuring of daily routine	Involvement in school activities		
	Supervision of children's school work		
Sacrifice of lifestyle and aspiration	Caring for children's schooling and daily needs		
	Sacrifice of occupational aspiration		
Shielding of worries	Sacrifice of leisure		
	Reduced social life		
Shielding of worries	Shielding of illness		

Besides, parents took time involvement as a major sacrifice for the education of adolescents, especially supervising the schoolwork of adolescents which consumed much time and energy. However, adolescents might not regard these acts and behaviors as parental sacrifice. In contrast, some took the behaviors as parents' restriction of their freedom, mistrust in them, and sometimes as embarrassment to them. Based on the focus group findings, a scale of parental sacrifice on child's education was developed according to the domains and themes suggested in the focus group (Table 2).

Content validation by experts

The evaluation of content validity of the measure was performed using two analytical strategies: (a) calculation of Content Validity

Index (CVI) on aspects of relevance, clarity and representativeness, and (b) analysis of the feedback and recommendations of the experts for the improvement of the items and the scale.

Regarding calculation of CVI, the method suggested by Rubio et al. (27) was used. The method was to compute CVI of each item by counting the number of experts who rated positively (three or four) on the evaluating aspect of the item and then dividing the number by total number of experts. This provided the proportion of experts that considered the item as content valid. CVI for the measure was estimated by calculating the average CVI across the items. A CVI of 0.80 was recommended as indicator for content validity for new measures (28).

Besides CVI, experts were asked to give feedbacks on the justifications of the "poorly designed" items, as well as recommendations for improvement of the items and the scale.

Table 2 The original scale of parental sacrifice for child's education and modified scale according to the results of content validation by experts.

Original scale of parental sacrifice for child's education	Modified scale of parental sacrifice for child's education
1. To fulfill the educational needs of my child, I eat and wear less.	1. To fulfill the educational needs of my child, I eat and wear less.
2. I save money for my child to study in university, despite how hard the work I face.	2. I save money for my child to study in university, despite how hard the work I face.
3. The expense of child's education is more important than my personal expenses.	3. The expense of child's education is more important than my personal expenses.
4. If my child needs tutoring, I would fulfill his/her needs even if family expenses have to be tightened.	4. If my child needs tutoring, I would fulfill his/her needs even if family expenses have to be tightened.
5. If my child needs to join extra-curricular activities, I would fulfill his/her needs even if family expenses have to be tightened.	5. If my child needs to join extra-curricular activities, I would fulfill his/her needs even if family expenses have to be tightened.
6. I save rigorously as to reserve funds for child's education.	6. I save rigorously as to reserve funds for child's education.
7. Even if the family faces financial stress, I will not stop any educational expenses of children.	7. Even if the family faces financial stress, I will not stop any educational expenses of children.
8. If my child needs to buy reference books, I would fulfill his/her needs even if family expenses have to be tightened.	8. If my child needs to buy reference books, I would fulfill his/her needs even if family expenses have to be tightened.
9. In case the family faces financial stress, I will borrow money to fulfill the educational needs of children.	9. In case the family faces financial stress, I will borrow money to fulfill the educational needs of children.
10. During the examination period, I will try my best to stay at home and accompany with my child.	10. During the examination period, I will try my best to stay at home and accompany with my child.
11. If the teacher calls me to discuss about my child, I will stop my work and see the teacher even I am busy at the time.	11. If the teacher calls me to discuss about my child, I will stop my work and see the teacher even I am busy at the time.
12. I always reserve the time for participating in the parent day of school.	12. I always reserve the time for participating in the parent day of school.
13. Even I am tired, I try my best to understand the school life of my child.	13. Even I am tired, I try my best to understand the school life of my child.
14. When my child studies at mid-night, I will never sleep.	14. When my child studies at mid-night, I will never sleep.
15. My life routine was structured according to the educational needs of my child.	15. My life routine is adjusted according to the educational needs of my child.
16. I persist to take care of my child even when I am sick.	16. During the examination period, I am more conscious in taking care of my children.
17. During the examination period, I am more conscious in taking care of my children.	17. I will change the family habits in order to fit the educational needs of my child.
18. I will change the family habits in order to fit the educational needs of my child.	18. In order to have a silent environment for the study of my child, I give up family entertainment.
19. In order to have a silent environment for the study of my child, I give up family entertainment.	19. I give up my hobbies for the education of my child.
20. I give up my hobbies for the education of my child.	20. I sacrifice my aspiration for the education of my child.
21. I sacrifice my aspiration for the education of my child.	21. I give up my social life for the education of my child.
22. I will hide the family worries in front of my child in order not to disturb his/her studying.	22. I will hide the family worries in front of my child in order not to disturb his/her studying.
23. In order not to affect the study of my child, I will hide my sickness when it happens.	23. In order not to affect the study of my child, I will hide my sickness when it happens.

Table 3 Overall CVI on the measure on aspects of relevance, clarity, and representativeness.

Aspects	Overall CVI
Relevance	0.98
Clarity	0.98
Representativeness	0.91 [calculated under Rubio's suggestion (27)] 1.00 (rated by experts)

Analysis of content was made to understand the feedback of the scale. The overall CVIs on relevance, clarity, and representativeness were 0.98, 0.98, and 0.91 respectively, showing that the scale has good content validity in the aspects of relevance, clarity, and representativeness. Except item 16, all items had $CVI_{(relevance)} > 0.80$. Among the 23 items, 20 items obtained $CVI_{(relevance)}$ of 1.0, indicating that all experts agreed the items appropriately described the measured construct. For clarity of items and the scale, all items had $CVI_{(clarity)} > 0.80$, suggesting a good validity value of the items in terms of clarity. $CVI_{(clarity)}$ ranged from 0.87 to 1.0. There were 17 out of 23 items with $CVI_{(clarity)}$ value equal to 1.0, indicating that all experts agreed that the items were clearly presented. For representativeness, all five domains (strive for financial resources, spending of time on educational needs of children, restructuring of family routine, sacrifice of lifestyle and aspiration, and shielding of worries) had $CVI_{(representativeness)} > 0.80$, showing good content validity of the items in representing the domains. Furthermore, the calculated overall $CVI_{(representativeness)}$ and $CVI_{(representativeness)}$ of the scale rated by experts were 0.91 and 1.0, respectively, suggesting that the scale obtained a good degree of representativeness of the measured construct. Table 3 illustrates the overall CVI of the measure on aspects of relevance, clarity, and representativeness.

Experts also listed feedback and recommendations of the items that provided qualitative data for improvement of the items. For item 16, five experts suggested that the item was not related to education. It focused on the caring and nurturing roles of parents. Thus, it was suggested the item could be deleted. For sacrifice of lifestyle and aspiration, three experts suggested for adding items on parental sacrifice of social life. Thus, one item "I give up my social life for the education of my child" was added. Modifications of the scale of parental sacrifice for child's education are illustrated in Table 4. The modified scale of parental sacrifice for child's education is presented in Table 2.

Discussion

With reference to the limited literature on the theoretical conceptualization of parental sacrifice for child's education, the paper presents findings on the conceptualization of the construct as well as evidence of the content validity of the measure, which is considered as pioneering in this field.

The qualitative data of the focus group interviews with adolescents and parents suggested that parental sacrifice for child's education went beyond the family distribution of financial resources and parental involvement in the child's education suggested by literature on the family capital theory (6, 7) and family investment model (8). It involves restructuring of daily routine, sacrifice of lifestyle and aspiration, as well as the shielding of worries from their children. Actually, the "insider" perspective enriched our understandings on Chinese family behaviors and phenomena.

However, there were discrepancies in the perceptions of parents and adolescents regarding parental sacrifices for children's education. Adolescents perceived more from the angle of financial resources, whereas parents described little on this dimension. It was suggested that adolescents may take a more direct, observable, and instrumental view of their understanding of parental sacrifice. Parents may consider striving for financial resources for families as a normal parental role to nurture their children, instead of considering these as sacrifices. In contrast, parents took a more sentimental and passionate view of parental sacrifices for children's education. They took time involvement and accommodation of daily routine and lifestyle as the most salient attributes for parental sacrifice for child's education, which involved effort and personal expense of lifestyle, hobbies, social life and even aspiration. However, adolescents may find that time involvement of parents as a restriction of their autonomy and a manifestation of mistrust. This discrepancy can be explained by developmental theory on adolescence. Adolescence is the stage of searching for self-identity and autonomy. They may consider that parental involvement in school work, especially the dimensions of supervision and monitoring, as manifestations of mistrust and restriction. Also, the study of Chao and Sue (2) on parental involvement in school suggested that parent's involvement in homework and school-related performance occurred at an earlier age for Chinese. When Chinese students reach adolescence, the roles of parents in helping their children in schoolwork diminished. Thus, adolescents were less ready to consider time involvement in their schoolwork as a parental sacrifice.

Table 4 Modifications of the scale on parental sacrifice for child's education.

Item no.	Problem and suggestions made	Modifications suggested
16	The item was not related to education. It focuses on the caring and nurturing roles of parents	Delete the item
	Adding items on parental sacrifice of social life so as to improve the representativeness of "sacrifice of lifestyle and aspiration" domain	Add an item: "I give up my social life for the education of my child"

The content validation by experts showed that the measure had good content validity in aspects of relevance, clarity, and representativeness. This step was important as it ensured that the items developed were valid from the perspectives of the judges. The modification of the items based on the views of the judges further improved the validity of the measure.

There are three implications to the present studies. First, the study helps us to conceptualize and measure the construct of parental sacrifice for child's education which deepens our understanding of family processes on child development. The domains and themes of parental sacrifices are derived from the focus groups and experts. This helps to fill the conceptual gap on understanding parental sacrifice. Second, this study helps in the formulation and development of an indigenous measurement tool that can facilitate our further exploration on indigenous Chinese concepts as well as construction of family models applicable to the Chinese context. Third, development of the measurement tool may bring special value for further research on family contribution to children's development in socio-economically disadvantaged families. As suggested from the family investment model, poor families may have restricted resources for investment in cognitive development of their children (8); there are counter-arguments that families at socio-economic disadvantage do invest for the development of children (18, 29). Becker and Tomes (30) also suggested that it was investment preference rather than income that affected the education of children in economic disadvantage. Regardless of income, parents who highly value their children devote more resources to the development of the children, though investment in children's education required parental self-sacrifice in low-income families (29). Davis-Kean (31) optimistically concluded that economic difficulties did not necessarily constrain the academic development of children. Parents could also provide a stable and stimulating environment despite restricted material resources. Thus, parental sacrifice for child's education may be important for researchers to understand the family contribution for the development of children in socio-economic disadvantage, as well as for social workers to help poor families in breaking the intergenerational cycle of poverty.

There are several limitations in the present findings. First, qualitative findings based on the focus groups may have the inherent limitation of generalizability. Second, the parent sample was mainly confined to mothers, which would bring overrepresentation of maternal perception on the construct and underrepresentation of paternal views. Third, the use of focus groups may hinder the participant's involvement, as the participants need to expose their identities and experiences in front of other people. This may be the reason why parents with economic disadvantage seldom mentioned the domain on financial resources. As there is social stigmatization of poor people in Hong Kong, parents experiencing economic disadvantage might try to hide their identities and hesitate to share their experiences. Fourth, as the findings presented in the study were based on adolescents and parents in Hong Kong, there is a need to assess the generalizability of the findings in different Chinese communities (e.g., mainland China).

Despite the above limitations, this study can be considered as pioneering in exploring the concept of parental sacrifice on

child's education as well as development of a measure that is indigenous in the Chinese context. The measure was based on qualitative data of parents and adolescents and validated by a panel of experts. Essentially, the study can be regarded as a positive response to the urge on "open[ing] new paths to a deeper understanding of Chinese cultural, social, and psychological processes and patterns" (p. 182) (21).

Conflict of interest statement

Authors' conflict of interest disclosure: The authors stated that there are no conflicts of interest regarding the publication of this article.

Research funding: None declared.

Employment or leadership: None declared.

Honorarium: None declared.

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