

The Impact of Filial Piety and Parental Involvement on Academic Achievement Motivation in Chinese Secondary School Students

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The present study examined the predictive value of filial piety and parental involvement with respect to students' academic behavior — orientation of achievement motivation and amotivation. Parental involvement was defined as the parents' expectation, value on education and feedback perceived by the students. This study was conducted in Hong Kong by gathering data from a questionnaire survey at three secondary schools, one all-male and two co-educational schools, across three school bandings (academic standards) and at different school districts. The final sample size was 299. Participants were from Form 2, Form 4, and Form 6. Results showed a positive and significant contribution from filial piety and parental value on education in academic achievement motivation. However, a perceived high parental expectation and insufficient parental feedback on performance, along with less caring for parents and mothers with lower educational level contributed significantly to students'

academic amotivation. Rather than understanding filial piety as a general concept, we conducted a principal component analysis of filial piety and four factors were extracted. Of the four factors, the models in this article singled out “self-sacrificing obedience” as a motivating factor, whereas absence of or insufficient caring for one’s parents appeared to be a factor that discourages academic achievement.

Academic achievement motivation has long been of interest to researchers in the field of cross-cultural studies. Asian students are often found to surpass their American counterparts on standardized achievement tests and the strong learning motivation of Asian students is considered to be related to the Asian culture (Hong & Salili, 2000; Sue & Abe, 1988). It is believed that cultural differences have an important role to play in achievement behavior. In fact, study is traditionally accorded higher than other income-bearing careers in the Chinese culture (Ho, 1981). For Chinese students, working hard to achieve is more important than relying on their intellectual ability (Hau & Salili, 1990; Salili & Tse-Mak, 1988).

Another of these cultural differences is parental style and influence (Chao & Sue, 1996; C. Y. C. Lin & Fu, 1990). Chinese parents influence their children by focusing them much earlier and more intensely on their school work, as well as preparing them for university study earlier (Chao & Sue, 1996; C. S. Chen, Lee, & Stevenson, 1996). Through their parents’ involvement, Chinese children are influenced by their parents’ value on education, parental expectation on their academic endeavor, and the quality of feedback on their academic performance. Compared to Caucasian parents, Chinese parents exert more control over their children’s achievement at school, which is thought to be connected with the traditional filial-piety practice (C. Y. C. Lin & Fu, 1990).

For centuries, filial piety has served as a guiding principle governing Chinese patterns of socialization as well as intergenerational relations throughout the life span (Ho, 1987). It prescribes how children should love and respect their parents as well as toward their ancestors. Chinese students seek to fulfill their filial obligation through academic achievement as an important form to repay their parents.

Although some component values of filial piety (e.g., obedience, giving support, displaying courtesy) are shared by other cultures, many Chinese scholars believe that filial piety is more indigenous than universal (Ho, 1996; Hsieh, 1967; Yeh & Yang, 1989; Zhang & Bond, 1998). As the first virtue of Chinese culture, it goes far beyond the demand of simply obeying and honoring one's parents. It also demands taking good care of aging parents, and in general conducting oneself so as to bring honor and avoid disgrace to the family name.

Undoubtedly, filial beliefs and actions among contemporary Chinese people differ from those of their forebears. Nevertheless, the significance of filial piety, so deeply rooted in Chinese society, remains evident. Some studies suggest that filial piety remains a durable ethic in Taiwan (Hwang, 1977; Yu, 1974), in Singapore (Thomas, 1989), and among Chinese immigrants in the United States (C. Lin, 1985).

Hence, we want to investigate if, and in what manners, family factors in the form of parental involvement as well as the Chinese students' attitude toward filial piety may contribute to their academic achievement motivation and amotivation.

Family Factors in Academic Achievement Motivation

Achievement motivation and school achievement have long been studied in the fields of education and psychology (e.g., Alschuler, 1969; Maehr & Sjogren, 1971). It has also become clear that achievement

motivation is a construct influenced by a number of factors such as “human development” (Lepper, Corpus, & Iyengar, 2005; Otis, Grouzet, & Pelletier, 2005; Zanobini & Usai, 2002), “locus of control in motivation” (Au, 1995; Chan, 1978; Lepper et al., 2005; Otis et al., 2005; Tyler & Vasu, 1995), and “cultural differences” particularly for Asian students (Eaton & Dembo, 1997; Salili, 1996). One of the factors which we are focusing on in the present study is “parental involvement.”

A review of literature indicated that family background is related to adolescents’ achievement motivation (Eccles & Harold, 1993; Eccles & Wigfield, 1985; Hanson, 1994; Hossler & Stage, 1992). Parents were found to have a stronger influence on achievement motivation of students who lived at home versus students who lived in boarding schools (Maqsud & Coleman, 1993). Within the parental factor are the parental level of education, parental educational expectations, and parental feedback.

Research findings suggested that a significant relationship between parents’ level of education and children’s achievement motivation existed because more educated parents might be more involved in their children’s education than less educated parents (Beyer, 1995). Paulson (1996) indicated that parental involvement has a positive effect in adolescent achievement. According to Hossler and Stage (1992), there is a positive relationship between the level of parental education and adolescents’ predisposition to enroll in post-secondary institutions.

Beyer (1995) explained that parental expectation and encouraging parental academic feedback fostered children’s cognitive development, grades, scores on standardized tests, and educational aspirations. With the Chinese cultural emphasis on education, we propose parental involvement an overarching construct, which includes parental expectation, value on education, and feedback on their children’s academic achievement.

Theoretical Background of Filial Piety

Ho (1994) argues that authoritarian moralism is a central characteristic of Chinese patterns of socialization guided by filial piety. In Chinese communities, parents and teachers are regarded to be authority figures, from whom children learn the rules of respectfulness. Chinese parents are moralistic, rather than psychologically oriented in rearing their children: to treat their children in terms of whether they live in accordance to the moral criteria, rather than in terms of sensitivity to their psychological needs. Children are brought up to become responsible women and men who exercise self-control, behave properly, and fulfill their obligations — above all, filial obligations (Ho, 1987).

Data assembled by Ho (1994; see also Boey, 1976) show that attitudes toward filial piety is moderately associated with traditional parental attitudes and parenting styles. The findings support the view that filial piety underlies socialization characterized by authoritarian moralism — putting the obedience to parents and moral conduct on top of attaining self-fulfillment and meeting psychological needs. Such a pattern of socialization is in line with the demands of Confucian societies.

Based on the above review that Chinese students study hard as a way to undertake their filial obligation, we postulate that filial piety is an important predictor of academic achievement motivation. If students obtain good results in examinations, it is a way to bring honor to their family and repay parents. Unlike their Western counterparts, Chinese students study not simply for their own self-fulfillment, but also for fulfilling filial obligation.

Constructs of Filial Piety

The review of literature reveals that there are two broad approaches to the measurement of filial piety. The first approach to measurement

uses stories of filial piety involving moral dilemmas to study filial cognition. It enables researchers to study the process of moral reasoning involved.

The second approach, adopted by the present study, relies on the development of scales as instruments to measure attitudes or beliefs toward filial piety. Following a psychometric approach, Ho and Lee (1974) developed the Filial Piety Scale as a measure of traditional filial attitudes rooted in Confucianism.

Relatedness and Motivation

Relationship is the underlying reality in parental involvement and filial piety. These two factors have the power to motivate or de-motivate children by the quality of relatedness existing between the parents and their children. According to the self-determination theory of Ryan and Deci (2000), the quality of relatedness to others is a major influence on processes of internalization such that values and practices are more likely to be adopted as one's own and experienced as self-determined when conveyed by adults to whom one feels positively related.

Positive experience of parental involvement and disposition to filial piety may work for positive internalization of the need to achieve, and therefore better motivated. Connell and Wellborn (1990) also support the view that relatedness will facilitate engagement in domain-specific activities such that one will be more motivated in contexts where positive relatedness is experienced. Avery and Ryan (1988) measured representations of mothers and fathers in a sample of primary school students. Their findings supported that the quality of relatedness depicted in parental representations may influence the motivational and affective resources a student brings to the classroom. Hence, we decided to measure academic achievement motivation using a scale that was

developed based on the conceptual framework of the self-determination theory (Ryan & Deci, 2000).

Purpose of the Study

The purpose of the study was to explore the relationships among factors that affect students' academic achievement motivation and amotivation (i.e., decreased or lack of motivation).

Given the fact that few existing studies have explored the psychological implications of filial piety in the learning context, the present study was designed to explore the potential psychological function of filial piety and examined family factors associated with the achievement motivation and amotivation in Chinese secondary school students.

First, we explored the predictive values and relationships among parental involvement, filial piety (e.g., children's obedience to parents), students' age, and parental educational level with respect to students' academic achievement motivation and amotivation. We wanted to look at the effects of the parental factors on students' academic achievement motivation. Parents should be of utmost concern because filial response was usually triggered and preceded by parental involvement. Our study defined parental involvement as the parents' educational expectation, value on education, and feedback on academic performance perceived by the students. We also wanted to identify if developmental differences were to be found with the effects of filial piety on the students, given that filial cognition is a cognitive construct as well as socio-cultural construct. Therefore, we examined first perceived parental involvement followed by filial piety, then the developmental factor and parental educational level in our regression analysis.

Method

Participants

Based on the tri-banding system in Hong Kong, the data were collected from three secondary schools with distinct academic standards (Band 1 = high; Band 2 = middle; and Band 3 = low) and located in different socio-economic areas. A total of 333 secondary school students at Grade 8 (Form 2), Grade 10 (Form 4), and Grade 12 (Form 6) who provided their informed consent along with the consent of their principals participated in the study. Classes of students were randomly selected from their Grades (Forms) to participate in the study. The student ages ranged from 12 to 22 years (mean age = 15.2). Of the total sample, 34 surveys were not usable owing to inadequate or invalid completion for analysis. This self-funded exploratory study was carried out in 2004–2005. Its initial results were first presented at the American Psychological Association Annual Convention in 2005.

Materials and Procedures

A questionnaire survey was administered for data collection. The participants were informed of the purpose of the study and their rights to confidentiality and participation in the study or not. They were given the same instruction before answering the questionnaires, and were provided with explanations for anything unclear during the procedure.

Measurements

The questionnaire consisted of seven scales assessing academic anxiety, parental involvement (i.e., parental expectation, value on education, and feedback on academic performance), filial piety, academic achievement motivation and amotivation. All scales have Cronbach's alphas higher than 0.6. Except for the scales measuring filial piety and academic achievement motivation, all other scales were

constructed by the researchers to assess the variables for the present study.

Filial piety was measured by the Filial Piety Scale developed by Ho (1994). Each item pertains to some aspect of filial piety, material or spiritual. Items are scored on a 7-point scale. Reliabilities range from .45 to .84. Examples of items are: “If there is a quarrel between one’s wife and one’s mother, the husband should advise his wife to listen to his mother,” and “To worship their ancestors regularly on the proper occasions is the primary duty of sons and daughters.” The scale, however, measures only the attitude to filial piety, not the behavioral intention or actual behavior with respect to filial piety by the participants.

Based on the tenets of self-determination theory, Vallerand et al. (1992) developed the academic achievement motivation scale. It is composed of 28 items subdivided into seven sub-scales assessing three types of intrinsic motivation (intrinsic motivation to know, to accomplish, and to experience stimulation), three types of extrinsic motivation (external, introjected, and identified regulation), and amotivation. It has satisfactory levels of internal consistency (mean alpha value = .81) and temporal stability over a one-month period (mean test-retest correlation = .79). Results of a confirmatory factor analysis confirmed the seven-factor structure of the scale and provided adequate support for the factorial validity and reliability of the scale and support its use in educational research on motivation (Vallerand et al., 1992).

Internal Consistencies of Scales

Cronbach’s alpha coefficients of the different scales in the present study were found to be moderate to high. The only moderate alpha coefficient was with the “Parental Feedback” scale, which has an alpha of .64. The other scales have alphas from .73 for “Filial Piety,” to .78 for

“Academic Anxiety,” .80 for “Parental Expectation” and “Parental Value,” .83 for “Academic Amotivation,” which is a subscale of “Academic Motivation” (with an alpha coefficient of .93).

Factor Analysis for Filial Piety

Four factors were identified from the “Filial Piety” scale using principal component analysis and varimax rotation with Kaiser Normalization. The Kaiser-Meyer-Olkin measure of sampling adequacy for the scale was .77, which was acceptable. The Bartlett’s Test of Sphericity was found to be significant ($\chi^2 = 1250.12$, $df = 231$, $p < .001$), indicating the correlation matrix was not an identity matrix. Loadings of the four factors accounted for 42.24 cumulative percents of variance (see Table 1). These four factors have been labeled as “self-sacrificing obedience” (16.38%), “caring for parents” (9.55%), “respecting parental intervention” (9.12%), and “upholding family honor” (7.19%). Only the first two factors were found to contribute significantly in the multiple regression models predicting students’ academic motivation and amotivation.

“Self-sacrificing obedience” was represented by these typical statements: “Any sacrifice is worthwhile for the sake of filial piety,” “As a son or daughter, one must obey one’s parents no matter what,” and “No matter how their parents conduct themselves, sons and daughters must respect them.” Children are, therefore, expected to give up their self-interest for the sake of obeying the desires of their parents.

“Caring for parents” was represented by statements like “After children have grown up, all the money they earn through their own labor do not belong to themselves when their parents are still living,” and “Even if there is a reason for doing so, one may not rely on an old people’s home to provide for one’s aged parents.” It is a moral necessity for children to take care of their parents after they have aged.

These four factors can represent the themes in participants' understanding of filial piety even though only "self-sacrificing obedience" and "caring for parents" were found to be significant in relation to parental involvement predicting academic motivation or amotivation.

Analysis

Since the purpose of the study was to explore relationships among different predictors (i.e., perceived parental involvement, including parental expectation, feedback and value on education; filial piety, including self-sacrificing obedience and caring for parents; and covariates, including age/grade level and parental educational level for academic achievement motivation), correlation analysis was employed to explore significant relationships among predictors and covariates. Two separate hierarchical multiple regression analyses were conducted, one for motivation and one for amotivation using the same blocks. Only predictors (e.g., parental value on education, feedback, self-sacrificing obedience, caring for parents, grade, and the mother's educational level) that were found to have significant correlations with the outcome variables in correlation analysis were included in the regression analysis. Significant predictors were identified in respective best fitted models for motivation and amotivation after series of iterations.

Results

The total number of sample size was 299. Of these, 230 (76.9%) were males and 68 (22.7%) were females. One of the three participating schools was an all-male school. The gender of one participant remains unknown. The distribution of participants from Grade 8 (Form 2) to Grade 12 (Form 6) was fairly even, ranging from 32.4% to 33.8%. Out of 288 mothers of the participants, 54.2% have secondary education and 21.4% have received tertiary education. Of the 290 fathers, more have

Table 1. Summary of Items and Factor Loadings for Principal Component Analysis With Varimax Orthogonal Rotation and Kaiser Normalization Two-Factor Solution for the Filial Piety Scale (FIPi) (n = 299)

Item	Factor loading				Communality
	1	2	3	4	
12. After the father has passed away, sons and daughters must conduct themselves according to the principles and attitudes he followed while he was still living.	.71	.08	.10	.12	.54
4. Any sacrifice is worthwhile for the sake of filial piety.	.68	.12	-.06	-.08	.49
22. As a son or daughter, one must obey one's parents no matter what.	.63	.12	.25	-.08	.48
9. The great debt that you have to repay your parents is as boundless as the sky.	.63	.20	-.15	-.10	.47
13. If there is a quarrel between one's wife and one's mother, the husband should advise his wife to listen to his mother.	.62	-.13	.15	.16	.45
11. No matter how their parents conduct themselves, sons and daughters must respect them.	.61	.17	-.09	.17	.44
5. Sons and daughters should not go to faraway places while their parents are still living.	.58	-.05	.09	.15	.37
16. To worship their ancestors regularly on the proper occasions is the primary duty of sons and daughters.	.45	-.21	.06	-.13	.27
7. The main reason for sons and daughters not to do dangerous things is to avoid getting their parents worried.	.40	.13	-.33	-.19	.32
18. Sons and daughters have to seek parental advice and may not make their own decisions.	-.09	.70	.27	.01	.57
20. After children have grown up, all the money they earn through their own labor do not belong to themselves when their parents are still living.	.13	.62	-.03	-.02	.41

3.	Even if there is a reason for doing so, one may not rely on an old people's home to provide for one's aged parents.	.05	.58	-.10	.14	.36
19.	Sons and daughters have to respect the people respected and loved by their parents.	.24	.49	.24	.25	.42
6.	In choosing a spouse, one should follow "the parents' command."	.01	.46	.44	.17	.43
1.	Sons and daughters may not protest against unreasonable scolding from their parents.	.07	.01	.68	-.02	.47
8.	Parents should interfere with their children's freedom to choose a vocation.	.04	.37	.59	-.11	.50
17.	To continue the family line is the primary purpose of marriage.	.01	-.02	.49	.29	.33
10.	"Rearing sons to provide for oneself in one's old age" should be the main purpose of raising children.	.02	.10	.47	.28	.31
2.	There is no place under the sun for both oneself and the enemy of one's father.	.14	-.28	.34	-.24	.27
14.	After their parents have passed away, sons and daughters have to finish the business left unfinished by their parents.	.25	.08	.09	.65	.50
15.	"Spreading one's fame to glorify one's parents" should be the most important reason for getting ahead.	-.03	.15	.13	.65	.46
21.	There is no crime worse than being unfilial.	.47	-.07	.02	-.48	.45
<i>Eigenvalues</i>		3.60	2.10	2.01	1.58	
<i>% of variance</i>		16.38	9.55	9.12	7.19	
<i>Cumulative %</i>		16.38	25.93	35.05	42.24	

Note: Boldface indicates highest factor loadings. Items without boldface loadings did not reach the minimum coefficient criterion (0.50) for factors.

received tertiary education (27.4%) and a bit less (51.8%) have a secondary education level.

Correlation Analysis

Table 2 showed that academic motivation, one of the two dependent variables besides academic amotivation, was positively correlated with students' perceived parental value on education, their perceived parental feedback on their academic performance, filial piety, and their academic anxiety. Academic motivation was, however, negatively correlated with grade level, suggesting that junior students were more motivated than senior students. Academic amotivation, on the other hand, was found to be positively correlated with grade level and students' perceived parental expectation for their education. Senior students and students who perceived high parental expectations tended to be less motivated academically. However, academic amotivation was negatively correlated with parental feedback, the mother's educational level, gender, and filial piety. Male students, students whose mothers' educational level was low, students who perceived their parents not providing needed feedback on their performance, and students who did not perceive themselves for being filial pious tended to be less academically motivated as well.

Other significant correlations (see Table 2) were the negative relationships for filial piety with banding and grade level, positive relationships for filial piety with academic anxiety and parental feedback, negative relationships for grade level with parental feedback and academic motivation, positive relationships for mother's educational level with parental value on education and parental feedback, and a negative relationship for mother's educational level with academic amotivation. These other correlations are noteworthy for they help substantiate the following analyses of variance.

Table 2. Estimated Correlation Matrix of All Variables

	Band	Grade	Gender	Order	Father	Mother	Income	AcaAnx	ParExp	ParVal	PFdbk	FIPi	AcaMot	Amot
Band	1.00													
Grade	-.034	1.00												
Gender	.629**	-.089	1.00											
Order	.002	-.013	-.055	1.00										
Father	-.172**	-.259**	-.043	-.090	1.00									
Mother	-.068	-.268**	.075	-.040	.586**	1.00								
Income	-.357**	.083	-.236**	-.053	.240**	.217**	1.00							
AcaAnx	-.056	.016	-.025	.035	-.065	-.066	-.154**	1.00						
ParExp	-.040	-.056	-.023	.024	.078	.062	.048	.208**	1.00					
ParVal	-.091	-.087	-.103	.017	.123*	.195**	.098	.274**	.579**	1.00				
PFdbk	.012	-.149**	.107	-.085	.194**	.177**	.024	-.047	-.059	.102	1.00			
FIPi	-.129*	-.316**	-.112	.004	.035	.054	-.016	.176**	.037	.041	.134*	1.00		
AcaMot	-.013	-.252**	-.061	.031	.040	.092	.068	.140*	.098	.242**	.156**	.237**	1.00	
Amot	.026	.132*	-.127*	.002	-.034	-.140*	-.048	.002	.128*	-.023	-.229**	-.117*	-.252**	1.00

* $p < .05$ (2-tailed); ** $p < .01$ (2-tailed)

Note: Band = School banding ($n = 299$); Grade = Grade (Form) in school ($n = 299$); Gender = Gender of participants ($n = 298$); Order = Birth order ($n = 299$); Father = Father's educational level ($n = 290$); Mother = Mother's educational level ($n = 288$); Income = Household monthly income ($n = 283$); AcaAnx = Academic anxiety ($n = 299$); ParExp = Parental expectation ($n = 299$); ParVal = Parental value on education ($n = 299$); PFdbk = Parental feedback on academic performance ($n = 299$); FIPi = Filial piety ($n = 299$); AcaMot = Academic motivation ($n = 299$); and Amot = Amotivation ($n = 299$).

Table 3 showed that out of the four factors extracted from the “Filial Piety” scale, only “self-sacrificing obedience” and “caring for parents” were found to have significant contributions to the predicted variables in the analysis of multiple regressions. When applied in correlation analysis, self-sacrificing obedience was found to correlate mildly with academic motivation, parental feedback, as well as with grade (form). What this could mean was that students who obeyed their parents with a self-sacrificing disposition were also those who were better motivated, whose parents had provided them with needed feedback on their performance, and who tended to be senior students. Self-sacrificing obedience, however, only very mildly correlated with academic anxiety and parental value on education. At the same time, caring for parents was found to possess a mild relationship with academic amotivation and a very mild correlation with grade (form). What this might mean was that students who did not feel much need to take care of their parents in the future were like those who were less motivated and in the senior grade levels. In other words, students who saw the need to take care of their parents were associated with the younger students and who were more motivated.

Interestingly, it was self-sacrificing obedience which had a strong relationship with filial piety ($r = .840, p < .01$) as opposed to the mild relationship between caring for parents and filial piety ($r = .428, p < .01$). In other words, self-sacrificing obedience was a stronger determining factor in what was understood for filial piety than caring for parents among the sampled population.

Regression Analysis

Hierarchical multiple regression analysis was conducted with the intention of identifying a best fitted model to predict Chinese secondary school students’ academic achievement motivation. This was carried

Table 3: Estimated Correlation Matrix “Self-Sacrificing Obedience,” “Caring for Parents” With All Variables

	Self-Sacrif Obedi	Caring for Parents
Band	-.018	-.012
Grade	-.308**	-.140**
Gender	-.037	.065
Order	.021	.008
Father	.028	-.010
Mother	.057	-.007
Income	-.063	.100
AcaAnx	.163**	.032
ParExp	.103	-.051
ParVal	.121*	-.067
PFdbk	.215**	.061
FIPi	.840**	.428**
Self-Sacrif Obedi	1.00	.253**
Caring for Parents	.253**	1.00
AcaMot	.267**	.096
Amot	-.100	-.279**

* $p < .05$ (2-tailed); ** $p < .01$ (2-tailed)

Note: Band = School banding ($n = 299$); Grade = Grade (Form) in school ($n = 299$); Gender = Gender of participants ($n = 298$); Order = Birth order ($n = 299$); Father = Father’s educational level ($n = 290$); Mother = Mother’s educational level ($n = 288$); Income = Household monthly income ($n = 283$); AcaAnx = Academic anxiety ($n = 299$); ParExp = Parental expectation ($n = 299$); ParVal = Parental value on education ($n = 299$); PFdbk = Parental feedback on academic performance ($n = 299$); FIPi = Filial piety ($n = 299$); Self-Sacrif Obedi = Self-sacrificing obedience ($n = 299$); Caring for Parents = Caring for parents ($n = 299$); AcaMot = Academic motivation ($n = 299$); and Amot = Amotivation ($n = 299$).

out through series of iterations with significant variables found in the preceding correlation analysis. The same method was observed when identifying the best fitted model for academic amotivation.

Analyses of main effects and grade with hierarchical multiple regression showed that the best fitted model (see Table 4) for predicting students' estimated academic motivation was:

$$\begin{aligned} \text{Estimated academic motivation} &= 34.683 + .204 (\text{Parental value}) \\ &+ .188 (\text{Self-sacrificing obedience}) - .177 (\text{Grade}) \end{aligned}$$

This best fitted model ($\text{Adj. } R^2 = .14, \Delta F(1, 295) = 9.70, p < .01$) described more specifically that the self-sacrificing obedience factor of filial piety along with parental value and grade could better predict students' estimated academic motivation. No interaction effect was identified.

Developmental effects were found to have an inverse relationship with academic motivation. Senior students who had a lower self-sacrificing attitude in obedience to their parents had a lower academic motivation than their junior counterparts. However, junior students who were strong in self-sacrificial obedience and whose parents held high value on education had the highest academic motivation.

With the similar process of iterations for identifying the best fitted model, "grade" and "mother's educational level" were found to be covariates that could significantly predict students' academic amotivation. However, "mother's educational level" had the largest effect size and F -value, and the smallest error value ($\beta = -1.926, p < .05, R^2 = .02, F(286, 5.757), p < .05$). Thus, mother's educational level was included in the subsequent hierarchical multiple regression modeling for academic amotivation. In fact, grade was found not a significant variable when included in the model predicting academic amotivation. Also,

Table 4. Hierarchical Regression Analysis Predicting Academic Motivation With Parental Value on Education, Self-Sacrificing Obedience, and Grade ($n = 299$)

Variable	B	SEB	β	R^2	Adj. R^2	ΔR^2	ΔF
<i>Step 1</i>				.06	.06	.06	18.53***
Parental value on education	.24	.06	.24***				
<i>Step 2</i>				.12	.11	.06	19.26***
Parental value on education	.21	.06	.21***				
Self-sacrificing obedience	.24	.06	.24***				
<i>Step 3</i>				.14	.14	.03	9.70**
Parental value on education	.20	.05	.20***				
Self-sacrificing obedience	.19	.06	.19**				
Grade	-1.09	.35	-.18**				

** $p < .01$; *** $p < .001$

mother's educational level was found to be significant only in the model predicting academic amotivation.

Further analysis of academic amotivation using hierarchical multiple regression modeling with the main effects and mother's educational level showed that the best fitted model was (see Table 5):

$$\begin{aligned} \text{Estimated academic amotivation} = & 70.891 + .120 \text{ (Parental} \\ & \text{expectation)} - .187 \text{ (Parental feedback)} - .260 \text{ (Caring for parents)} \\ & - .117 \text{ (Mother)} \end{aligned}$$

This best fitted model ($\text{Adj. } R^2 = .14, \Delta F(1, 283) = 4.35, p < .05$) showed that parental expectation, parental feedback, the students' perceived need to care for parents, and the mother's educational level together could best predict estimated academic amotivation. However, no interaction effects were found between mother's educational level and the main effects.

It appeared that perceived parental expectation and mother's educational level could contribute negatively to achievement motivation. The stronger the perceived parental expectation on academic achievement and the lower the mother's educational level, the less academically motivated were the students.

However, a rather different pattern of perceived parental feedback on performance and mother's level of education predicting students' lack of academic motivation was observed in the model. Parents who gave the least feedback on top of mothers with the least educational level were related to students who had the least motivation for academic achievement. The rate of academic amotivation increased noticeably when the perceived parental feedback on their children's academic performance diminished. This suggests a more important role of parental feedback in Chinese secondary school students' academic motivation and amotivation.

Table 5. Hierarchical Regression Analysis Predicting Academic Amotivation With Parental Expectation, Parental Feedback, Caring for Parents, and Mother's Education ($n = 288$)

Variable	B	SEB	β	R^2	Adj. R^2	ΔR^2	ΔF
<i>Step 1</i>				.02	.02	.02	5.34*
Parental expectation for achievement	.13	.06	.14*				
<i>Step 2</i>				.07	.06	.05	15.23***
Parental expectation for achievement	.12	.06	.12*				
Parental feedback to children	-.22	.06	-.22***				
<i>Step 3</i>				.14	.13	.07	21.79***
Parental expectation for achievement	.11	.06	.11*				
Parental feedback to children	-.21	.06	-.21***				
Caring for parents	-.26	.06	-.26**				
<i>Step 4</i>				.15	.14	.01	4.35*
Parental expectation for achievement	.12	.06	.12*				
Parental feedback to children	-.19	.06	-.19**				
Caring for parents	-.26	.06	-.26***				
Mother's educational level	-1.60	.77	-.12*				

* $p < .05$; ** $p < .01$; *** $p < .001$

Finally, students who cared the least for their parents but experienced high parental expectation on academic achievement had the lowest academic motivation. However, students who cared more about their parents but experienced less achievement expectation from them were less amotivated than students who cared less.

Discussion

Chinese parents often have high hopes for their children's academic achievement, which ranked second after filial piety as the most important attribute of an ideal child (Shek & Chan, 1999). On the one hand, filial piety was regarded as the motivation behind Chinese students' academic achievement (Salili, 1994, 1995). This mild but rather significant relationship between Chinese secondary school students' academic motivation and their filial piety ($r = .24, p < .01$) is confirmed by the present study. Together with the high parental value on education ($\beta = .20, p < .001$), a positive development in a factor of filial piety, self-sacrificing obedience ($\beta = .19, p < .01$) is found to have contributed to the increase in academic motivation among secondary students in Hong Kong. However, this positive relationship is stronger among younger students when compared with their senior counterparts as shown in the "grade" ($\beta = -.18, p < .01$).

This developmental difference was substantiated by the studies of Lepper et al. (2005) and Otis et al. (2005). The effects of intrinsic motivation for positive academic outcomes tended to decrease with age among students, while the effects of extrinsic motivation either decreased or remained practically ineffective with senior students. Hence, the intrinsic or extrinsic motivation effects that came from parental value on education and filial piety could possibly subside when the students became older. "Cognitive conservatism" borrowed from Greenwald (1980) by Ho (1994, 1996) also argued for students at the lower grades being less cognitively complex, i.e., less critical

and independent thinking, than their senior counterparts. They were, therefore, more inclined to be dogmatic and conforming to the morality of filial piety, which in turn pushed them to achieve academically.

Previous studies conducted in the West have identified the role of parental value on education as a contributing factor to Chinese students' academic achievement (e.g., H. Chen & Lan, 1998; Zhou, 1998). However, none of them have associated these two factors with the psychology of filial piety. For example, academic achievement was considered as the best repayment from Chinese children to their parents. Also, it was found to be morally desirable with the students in Hong Kong (Tao & Hong, 2000). Morally desirable was also for students to be filially obliged to their parents and teachers, as well as bringing honor to their family name (Ho, 1994, 1996).

Whether or not decreasing academic motivation with increasing age is due to shifting parental emphasis on education with older children, or to changing disposition to self-sacrificing obedience, or both, should be further investigated. Also, how much is filial piety an internal or external motivating factor for the contemporary Chinese secondary school students? If filial piety were not a strong internalized value, but rather an external imposition, increasing individuation and identity formation in the developing child might undermine its effectiveness considerably.

The four themes identified from the Filial Piety Scale of this study provided further understanding of what filial piety means to Chinese secondary school students. Interestingly, it was the self-sacrificing obedience that was found to have a significant contribution to students' academic motivation, while diminishing the need to care for one's parents was also seen to contribute significantly to students' academic amotivation.

Findings from the present study have yielded an interesting observation of students becoming less motivated if they did not see or feel the need to have to care for their parents. Would the factor of not being needed, i.e., a negative affective experience, decrease the child's motivation to achieve? Instead of motivating their children, parental statements like "We don't expect you to take care of us, and you only need to take care of yourself" might generate de-motivating effects. This interpretation also carries a "class" dimension. Chinese secondary school students coming from the low socio-economic class could be more motivated when they realize that their parents would need their financial support in the future. There is also another psychological dimension with this factor. Students who are emotionally distanced from their parents may be less motivated to achieve. An example is children who have little care of their parents' feelings toward their academic performance. In other words, lacking intimate parent-child experiences can be de-motivating for academic achievement.

After studying different motivation theories, Seifert (2004) concluded that emotion and beliefs elicited differences in behavioral patterns, including learned helplessness and passive aggression. In particular, students who felt negatively toward making mistakes also have lower self-efficacy, a weaker self-imposed belief on achievement, and are less likely to act for achievement (Turner, Thorpe, & Meyer, 1998). Hence, Chinese students who were not academically motivated might see themselves not valued by their parents or lack the necessary ability to meet their academic challenges. These students would rather not try to achieve in order to protect their self-worth (Turner et al., 1998).

Besides the need to take care of one's parents, this amotivation factor was also related to increasing parental expectation in their children's achievement, insufficient parental feedback on academic

performance, and a lower educational level of the mother. While parental expectation appeared to be a discouraging factor for academic achievement in this study, how much is too much and in what way should be an interesting consideration for future research. For teachers who could provide non-evaluative and understanding comments while encouraging their less motivated students to handle problems with multiple approaches, they appeared to be helpful to these students (Turner et al., 1998). Hence, parents who regularly (directly or indirectly) load their children with their academic expectations while offering them little constructive and timely feedback will find that their expectation and insufficient feedback can be, in fact, pushing their children into amotivation.

Furthermore, it was also interesting to see how the fathers' educational levels did not seem to yield significant contribution to their children's academic amotivation, but only the mothers'. This might be due to the fact that gender was not a significant factor in the present model, and the mothers' academic assistance and supervision were more prevalent and influential in their children's academic pursuits. Thus, mothers who were less educated or had a poorer academic experience might know less effective ways to help and motivate their children. However, mothers who were more educated also had children who were least motivated in the upper 25% of the amotivation group. Would that be due to the absence of the mother if she had a full career to contend with? Or, would that be due to a particular style of pedagogy usually associated with tertiary educated mothers?

If motivation and amotivation were indicators of children's psychological well-being (e.g., life satisfaction, hopefulness, and self-esteem), such as depression and sadness can conceivably lead to amotivation, then it was argued that these indicators were related to parental qualities (e.g., parenting styles, support and help from parents)

(Skek, 1997, 2002). Forms of parental involvement can be understood as parenting styles, which is also in line with the relatedness and motivation construct of the self-determination theory (Ryan & Deci, 2000). Children are more motivated if they can relate with their parents more closely and positively, whereas parental qualities would have meaningful contributions to the quality of the parent-child relationship. However, the present study also demonstrates how this Chinese parent-child relationship has or has not worked for achievement motivation through the lens of filial piety. What contributes to the Chinese secondary school students' achievement motivation is not the effect of a unidirectional movement from parents to their adolescent children, but also the adolescents' filial attitude to their parents.

How can guidance and counselors help promote a healthy formation of filial piety in our Chinese adolescents, especially in an individualistically inclined culture? This can be partially addressed by including healthy filial piety in our counseling philosophy, so that counseling psychology can become more culturally relevant in societies that are basically Confucian. Counseling psychologists in these societies are asked to help these younger clients to identify their balance between individuality and filial piety — a balance that older Chinese are constantly addressing.

Conclusion

This study has offered a more specific view of how Chinese secondary school students are motivated or unmotivated by different parental interventions or insufficient interventions. Besides that, this study also offers a couple of specific factors regarding filial piety that have played significant roles in motivating or discouraging these students' academic motivation. Rather than understanding filial piety as a general concept, the models in this article have singled out “self-sacrificing obedience” as a motivating factor, whereas a perceived

absence or insufficient need for caring one's parents appear to be a factor that discourages academic achievement. Why would they need to excel academically if they do not need to become financially viable in order to take care of their parents as they grow old? Filial piety has provided the need and motivation for one to take care of one's aging parents.

Suggestions for Further Studies

Given the cross-sectional nature and methodological limitations of this study, causal-effective relationships among the variables could not be established. Future studies should include other age groups within the Chinese student populations, as well as other regions influenced by the Confucian culture. Also, qualitative research should provide the depth for our understanding of the variables and their contributions to achievement motivation in the contemporary culture.

Furthermore, cross-cultural studies of filial piety are virtually non-existent. Some researchers argue that the concept of filial piety is indigenous to China, suggesting that there is no real conceptual equivalent in non-Confucian cultures. However, Ho (1996) has established that filial piety is related to two concepts, authoritarian moralism and cognitive conservatism, which are not unique to the Chinese culture. It should be interesting to conduct cross-cultural studies with these two psychological constructs and achievement motivation among students of other cultures.

Studies on filial piety (Chuang & Yang, 1990; Ho, 1990) showed that the level of filial behavior did not correspond to that of filial belief. That is, the extent to which traditional filial attitudes are reflected in actual behavior seems rather limited. It is considered that Chinese people nowadays are more selective in their filial beliefs and actions. Further studies should be conducted to investigate the actual filial

behaviors instead of the filial attitudes as measured by the Filial Piety Scale in the present study. All of these may give us meaningful knowledge about the impact of filial piety on students' academic behaviors.

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孝道及家長的參與對華人中學生學習動機的影響

本研究探討孝道及家長的參與對學生學習行為（包括學習動機和缺乏學習動機）的影響。本研究把家長的參與界定為：在學生眼中父母對自己的期望，對教育的價值觀，以及給予自己的回饋。研究數據來自299份學生問卷。填寫問卷的是香港三所中學（一所全男校，兩所男女校）的中二、中四及中六學生。這三所學校所處地區及其學生成績組別都不同。研究發現，孝道和父母對教育的價值觀為學生的學習動機帶來正面影響。另一方面，父母的期望過高，父母對子女的回饋不足，學生對父母的關懷不夠，以及母親的教育水平這四項，均與學生缺乏學習動機有關。就孝道而言，本研究分析出孝道可包含四種因素，其中「自我犧牲形式的服從」能提升學習動機；但若學生對父母缺乏關懷或關懷不足，則會降低他們的學習動機。