

Taking Cram School Courses and Negative Emotion in Middle School Students: The Moderating Role of Parent-Child Relationships

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ABSTRACT

Although previous studies have shown that students' participation in shadow education leads to higher academic achievement, the effect of excessive tutoring on the mental health of students is unclear. The purpose of this study was to explore the role parents play in students' tutoring and negative emotion. Data from the 2015 China Education Panel Survey (CEPS) were used, and a total of 10750 8th grade students completed questionnaires. Results revealed that taking cram school courses was not significantly related to negative emotions. In addition, moderation analyses showed that the relation between taking cram school courses and negative emotions was moderated by the father-child relationship but not by the mother-child relationship. These findings rely on a large sample size at the national level, which was convinced about generalizability. The present study emphasizes the unique role of fathers in the relationship between their children's education and mental health.

Keywords: Shadow education, Negative emotion, Parent-child relationship, Moderator effect

1. INTRODUCTION

Shadow Education has been called Private Supplementary Education or Extra Curriculum, which means in terms of school education, an increasing number of students join cram Schools to improve academic grades and skills as much as possible in outside schools hours [1]. A survey on Dec. of 2016 including extra curriculum illustrated in China, the population of joining extra courses in cram schools had approximately 137 million students [2]. Almost students join a lot of extra courses to fill in their academic shortcomings and deficiencies, which can order to promote the raising of grades in terms of admission examinations, such us Senior High School and National College entrance examination and something like this. However, research shows Junior high school students in extracurricular learning have more heavy psychological pressure to exist, which could be organed excessive extra learning tasks, short sleep time, unsatisfactory effects of tutoring [3]. Therefore, nowadays, the pressure on students is common in China, and most junior high school students are under the pressure of learning.

However, the influences of shadow education still have controversial views for students. On the one hand, although joining shadow education was occupied students' break time. It will be further increased objectively the academic pressure to students [4], and it also reduces students' pressure because of the improvement to academic performance [5]. In addition, the article shows, learning from shadow education has positive influences in parts of psychological health for junior high school students [6], it is not the only reason for positive influence, which is raising personal grades to lead to happiness. As stated by the Oxford Learning staff, tutorials contribute to nurturing children's enthusiasm for learning, developing critical thinking, and improving problem-solving skills [7]. These skills, especially critical thinking, can help students reduce the psychological burden, academic stress, and challenges they face in school education [8]. On the other hand, some research show and evident extra-curriculum has much more negative effects on students. For example, whether they are honor students or ordinary students, they will produce some of the resistance and negative psychological changes when they study at cram

schools face to face. This is because some extra curriculum has higher standards, which leads to the honor students being more depressed on it, while the relatively ordinary students have more depressed emotions due to large amounts of academic pressure in cram schools and the higher expectations from their parents [9].

Secondly, there are serious factors that may also contribute to students' psychological problems that attending cram schools, expect negative emotions. For example, excessive academic stress could lead to student anxiety, depression, even suicidal ideation, and so on. A project led by the Chinese Youth and Children Research Center (CYCRC) showed that Chinese students have the highest academic burden and pressure. Nearly ninety percent (86.6%) of the Chinese participants felt high or very high pressure because of academic matters [10]. Lower educational achievement can increase the risk of depression by incurring more peers' unfriendliness, more pressure from parents' expectations, and more teachers' criticism. Another research shows that children from lower-SES families are under more pressure due to parents' high educational expectations [11].

Students in junior educational backgrounds have been facing large psychological problems from a variety of stress-related to academic demands, it is not only resulting in lower motivation, dropout, and problems of mental health [12]. Therefore, it is important to pay attention and alleviate the negative psychological impact of junior high school students participating in shadow education.

There are individual differences for negative emotions in the effects of taking cram school courses. It indicates attendance of taking cram school courses was not always associated with negative emotions. The relationship between taking cram school courses and negative emotion is likely to be influenced by other factors. Based on the literature review, this research suggests that the parent-child relationship could be an important moderator between shadow education and negative emotions.

The parent-child relationship is the interpersonal relationship formed by parents and children in daily interaction [13]. For negative emotions, it is more possible that the parent-child relationship might have some protective and buffer effects for students who participate in tutoring. The research demonstrated a good parent-child relationship could create a relaxed studying atmosphere for their children. In a harmonious atmosphere, children do not have to worry about dealing with their parents, and it has benefits for them to get more time into learning states [14]. Furthermore, for example, parent-child communication is negatively correlated with negative academic emotions, and it is also positively correlated with positive academic emotions [15]. D. Y. Chen found students who have better parent-child communication could experience more positive and good academic emotions rather than negative academic emotions [16]. Meanwhile, if parents over-expect and

over-protect their children, children are more likely to feel anxious, which affects their learning efficiency. Especially when parents punish or deny their children harshly, children may feel frustrated, which affects learning motivation [17]. The parent-child relationship is one significant factor, which can cause academic stress. In previous studies conducted in the US and Canada, researchers have assumed that adolescents' parental emotional relationships positively or negatively impact the adolescents' stress related to academic issues [18].

The role of parents is most important for children's mental health and adjustment of psychological needs. It also has "elasticity of education" and key influences [19]. Duchesne, Ratelle, Poitras, and Drousin illustrated the relationship of mother-child attachment was significantly correlated with academic anxiety [20]. At the same time, a previous study, also shows that teenagers with high-quality mother-child relationships tend to absorb more characteristics, like gentleness and tolerance from their mother. Thus, teenagers who have higher-quality relationships with their mothers usually have better peer acceptance [21]. Otherwise, children who are reared and guided by their father are more compassionate, and they have more control over their own life of blueprint [22]. Furthermore, active involvement on the part of the father indeed promotes positive development and outcomes for children, maybe is because father-child relationships are complex, dynamic, and more contextually sensitive than mother-child relationships [23].

The purpose of this study was to investigate the relationship between participation in supplementary tutoring and negative emotions in the context of Chinese education, as well as the moderator effects of the father-child relationship and mother-child relationship. The basic hypothesis is that participating in supplementary education may be a predictor of negative emotions, and a good parent-child relationship could alleviate or reduce the negative emotions caused by participating in extra curriculum.

2. METHOD

2.1. Participants

The data of the research comes from China Education Panel Survey (CEPS), which is the lasted data. CEPS is a large-scale, nationally representative, longitudinal survey starting with the 7th and 9th graders in the 2013-2014 academic year, aiming at explaining the linkages between individuals' educational outcomes and multiple contexts of families, school processes, communities, and social structure. The sample included 112 schools, 438 classes, and approximately 20,000 junior high school students. The follow-up investigation in the 2014-2015 academic year tracked 10,750 students in grade 8 (they were in grade 7 in the 2013-2014 academic year). The

number of students who were successfully followed was 9,858, the follow-up rate was 91.7 %.

2.2. Questionnaire

The sample comprises all individuals who presented in the second waves of the survey (N = 10750). Respondents reported the average number of hours on weekends spent on tutorial classes and this number was used as the measure of time on shadow education. The item is “How much time did you take cram school courses (related to schoolwork) on weekends? ”, with a scale of 1–6 denoting none, less than 2 hours, about 2-4 hours, about 4-6 hours, about 6-8 hours, and more than 8 hours. Thus, higher numbers represented more cram school courses.

Negative emotions were measured using the frequencies of experiencing the following ten feelings in one week: feeling blue, too depressed to focus on anything, unhappy, not enjoying life, having no passion to do anything, sad & sorrowful, nervous, excessive worry, feeling something bad will happen, too energetic to concentrate in class. Respondents reported these frequencies using a scale of 1–5 denoting never, seldom, sometimes, often, and always, respectively.

The item used to measure the parent-child relationship is “How is the general relationship between you and your father/mother?” Respondents rated these statements on a scale of 1-3 denoting not close, not too close nor too far, and very close.

3. RESULTS

3.1. Relations between taking cram school courses and negative emotions

Table 1 presents the results of the mean, standard deviation, and Pearson correlation coefficient of taking cram school courses and negative emotions. In the overall sample, taking cram school courses is not related to negative emotions ($p > 0.05$). There is a positive and significant effect of taking cram school courses on negative emotions ($p < 0.001$, $p < 0.01$). As expected, there is a negative and significant effect of the father-child relationship and mother-child relationship on negative emotions ($p < 0.01$, $p < 0.01$).

3.2. Moderator effect of the father-child relationship

The father-child relationship was used as a moderator variable to test the relations between taking cram school courses and negative emotions. First, coded the independent variable as dummy variables, which are D1 and D2. We coded “Not close” as the control group and “Not too close nor too far” and “Very close” as the experimental group. Second, get a zero-centered independent variable. Third, made a hierarchical multiple regression to examine the moderator effect of the father-child relationship at different levels.

Put D1, D2, and the zero-centered independent variable in the first level and put interactions which are “taking cram school courses×D1” and “taking cram school courses×D2” in the second level. The hierarchical multiple regression results showed that D1 ($\beta = -0.249$, $p < 0.001$), D2 ($\beta = -0.411$, $p < 0.001$), and the interactions ($p < 0.05$) are significant predictors of negative emotions. So, taking cram school courses is related to negative emotions with the moderator effect of the father-child relationship.

A simple slope test is used to reveal the relation clearly between taking cram school courses and negative emotions when it is in a bad father-child relationship (M-1SD) and a good father-child relationship (M+1SD).

For the negative emotions affected by taking cram school courses, the directions and degrees will change because of the level of the father-child relationship. When the relation is in “Not close” level, taking cram school courses has a positive and significant effect on negative emotions (simple slope = 0.064, $p < 0.05$), which means the more the students take cram school courses, the more negative emotions they will suffer. When the relation is in “Not too close nor too far (simple slope = -0.005, $p > 0.05$)” and “Very close (simple slope = -0.002, $p > 0.05$)” level, taking cram school courses has a little negative effect on negative emotions, but not significant, which means negative emotions will decrease by cram school courses time increase.

As the results showed, the father-child relationship has a moderator effect on taking cram school courses and negative emotions. When the relationship between fathers and their child is not close, the child will suffer more negative feelings when they are taking cram school courses.

Table 1. Descriptive statistics and correlation matrix among variables

		M	SE	1	2	3	4
1	Taking cram school courses	1.68	1.15	1			
2	Negative emotions	2.17	0.82	-0.01	1		

3	Father-child relationship	2.50	0.58	0.04***	-0.21**	1
4	Mother-child relationship	2.70	0.50	0.07**	-0.18**	0.44** 1

Note: *P<0.05 **P<0.01, ***P<0.001

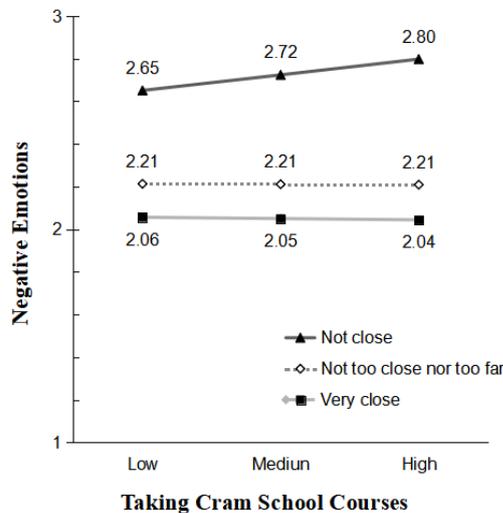


Figure 1. Moderator effect of the father-child relationship on taking cram school courses and negative emotions.

3.3. Moderator effect of the mother-child relationship

Use the same method to make a hierarchical multiple regression of the mother-child relationship’s moderator effect. Put d1, d2, and the zero-centered independent variable on the first page and put interactions which are “taking cram school courses×d1” and “taking cram school courses×d2” on the second page. The hierarchical multiple regression results showed that d1 ($\beta=-0.201, p<0.001$), d2 ($\beta=-0.364, p<0.001$) and the interactions “taking cram school courses×d1 ($\beta=-0.027, p>0.05$)” and “taking cram school courses×d2 ($\beta=-0.076, p>0.05$)” which are not significant predictors of negative emotions. So, taking cram school courses is not related to negative emotions with the moderator effect of the mother-child relationship.

4. DISCUSSION

4.1. Relation between taking cram courses and negative emotions

Contrary to expectation, the relationship between taking cram school courses and negative emotions is not related. Possible explanations for this might be that students’ bad feelings were not all caused by shadow education, there are still other unconcerned reasons. The previous study proved that adolescents’ academic stress was linked to various negative outcomes, including poor

health and depression [24]. What’s more, parents with high academic expectations could add to students’ academic stress and guilty feeling when they fail [25] [26]. Peer rejection and less competent interactions with peers will also cause negative emotional tendencies [27]. Second, typical emotions are essentially transient. The research investigates an overall emotional condition in one week rather than temporary feelings after a tutoring course. The long waiting time causes a relatively decay of possible negative emotions. Third, for the item of negative emotions, previous literature uses only two or three sub-questions to investigate students’ psychological benefits from private supplementary tutoring [6] and subsequent depression of education outcomes [28], which both neglected the integrity of the questionnaire. In this paper, we investigated all negative emotions students will possibly suffer. Although taking cram school courses was not associated with negative emotions, it was comprehensive and convincing.

4.2. A comparison of the moderator effects of the father-child relationship and mother-child relationship

According to the results of the moderator effect about father-child relationship and mother-child relationship showed, the father-child relationship has a moderator effect on taking cram school courses and negative emotions. When the relationship between fathers and their child is not close, the child will suffer more negative feelings when they are taking cram school courses. However, for the mother-child relationship, it did not significantly predict the relationship between taking cram school courses and negative emotions. The reasons are as below.

On one hand, In East Asian academia, Zhang reveals that Confucianism considers parents the first and most important teachers in their children's education [29]. ‘Intensive mothering’ is based on the lifestyle of middle-class households, where the father provides significant financial support [30,31]. While mother spends much more time staying at home accompanying their children to study, that might make children have adapted to their mother's demands for academic achievement. Lower-middle-class mothers presumed tutors as an aid which can help children’s academic and maintain a good parent-child relationship; Upper-class mothers considered that increased teaching demands in parenting will lead to a role tension. Thus, they hire tutors to avoid parent-child tension [32]. Therefore, when mothers enroll their children in cram school courses to improve their grades,

children may be used to it already, so there is not much psychological change.

On the other hand, the parent-child relationship is one of the reasons why middle-high school students will produce psychological fluctuations and pressure of the biggest obstacle. Students who are in adolescence are more easily enter the stage of psychological instability and emotional sensitivity than ordinary people, just like middle-high school students. Due to this, changes in the parent-child relationship will be the most significant cause of their negative emotions and stress. Research has found that fathers are more likely to influence their children's dynamic development and subtle interactions over time than mothers [33]. When the father-child relationship is close, middle-high school students will seek approval from their fathers by doing something, such as taking cram school courses that are supported by their fathers. And when fathers are affectionate and supportive, it greatly affects a child's cognitive and social development [34]. Besides, it also instills an overall sense of well-being and self-confidence.

Individuals who enjoyed an excellent or trustworthy relationship with their fathers are more likely to perform remarkably in their academic endeavors after receiving an adequate education in their adolescence. They are also unlikely to disobey authorities or feel frustrated. On the contrary, children who lacked paternal affection are prone to have a deficiency in self-confidence and willpower, both of which are signs of insecure personalities. These children are more inclined to experience depression, solitude, caprice, and reliance on others [35]. When the father-child relationship is in a precarious situation, students could potentially disobey their father's instructions, neglect the father's expectations, and carry negative sentiment towards tutoring courses arranged by the father.

5. LIMITATION AND IMPLICATION

The shadow education policies in China are still in the stage of reforming because of the high tutoring fees and bad competition in the tutoring industries. From 2018 to 2021, the Chinese Ministry of Education published many forbidden laws to restrict supplementary education companies, so the middle school students' after-school activities have changed a lot. However, some new tutoring forms merged, such as recruiting home-stay teachers and online one-on-one courses, which rarely exist in China before. Regrettably, at the time of this research, only the second wave of data (2015) was the latest and publicly available. Thus, the results were limited and lagging due to the datasets.

Also, chosen areas of participants of the CEPS survey are random, so the researchers cannot analyze the confounding factors of areas that affect the negative emotions. For example, the eastern region has a higher

education level than the western region in China, so the students from the eastern region enjoy better education resources and also suffer from heavy academic stress. This kind of complex condition leads to mixing emotions.

Given these limitations, future research needs to take related policies as a moderator variable into consideration. Researchers need to put an eye on students' willingness the restriction of supplementary education, which will be a hot topic in the future. What's more, additional rounds of the CEPS could permit inquiry into the participants' region to investigate whether the region could cause different levels of negative emotion. Together, future research needs additional rounds of the CEPS to repeat measures and experiments to gain a compelling answer.

This study also provides some important practical implications for parents, especially for fathers. First, the father influences children a lot not only in enriching knowledge but also in cultivating positive emotions. The level of father participation in rearing is highly related to children's mental health in statistics [36]. The emotional satisfaction from the father will bring adolescents great mental resilience, including decreasing stress and bad feelings, which will bring positive psychological development. Hence, the father needs to communicate and interact with their children actively, knowing their academic stress and problems to offer solid help in need. Additionally, a good parent-child relationship is a strong backup in case children have an emotional challenge. Parents should give children opportunities to make their own decision on school things and respect their wishes in whether sign up for cram school courses.

6. CONCLUSION

Many Chinese middle-high school students take cram courses to get high scores in admission examinations, whether they suffer from loads of psychological burden is a controversial problem. The research showed that taking supplementary courses is not related to students' negative emotions. However, the father-child relationship (rather than the mother-child relationship) has a moderator effect on taking cram school courses and negative emotions. The intimate relationship between father and child will give the child a release from negative emotions caused by tutoring courses. This study highlights the importance of fathers in their children's education. It has educational implications for parents, suggesting that they should focus on their children's learning as well as their mental health.

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